HIGHER SPECIALIST TRAINING IN

GASTROENTEROLOGY
This curriculum of training in Gastroenterology was developed in 2010 and undergoes an annual review by Dr Jan Leyden & Dr Eoin Slattery National Specialty Directors, Leah O’Toole, Head of Postgraduate Training and Education, and by the Gastroenterology Training Committee. The curriculum is approved by the Irish Committee on Higher Medical Training.

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Introduction

A trainee in Gastroenterology must have expertise in the management and diagnosis of disease of the gastrointestinal tract, liver and pancreas and be competent in the diagnosis, and treatment of intra abdominal malignancy. Proficiency in diagnostic and therapeutic upper and lower endoscopy is also essential.

During training for basic proficiency it is envisaged that trainees may develop subspecialty expertise which would include pancreatico-biliary disease, ERCP, advanced Hepatology IBD, functional bowel disease and nutrition.

Trainees will be required to develop skills in both diagnostic and therapeutic endoscopy. These endoscopic procedures within the core training programme will include oesophago-gastro-duodenoscopy and full colonoscopy. Therapeutic skills would include oesophageal stricture dilatation, injection or banding of varices, the insertion of gastrostomy feeding tubes and colonoscopic polypectomy. The minimum numbers of procedures recommended for adequate training are outlined in the Minimum Requirements Section.
Aims

Upon satisfactory completion of specialist training in Gastroenterology a 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 Gastroenterology 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 Gastroenterology.
- 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 Gastroenterology must have a certificate of completion in Basic Specialist Training (BST) in General Internal Medicine and obtained the MRCPI.

Those who do not hold a BST certificate and MRCPI must provide evidence of equivalency.

Entry on the training programme is at year 1. Deferrals are not allowed on entry to Higher Specialist Training.
Duration & Organisation of Training

The duration of HST in Gastroenterology and General Internal Medicine is five years, one year of which may be gained from a period of full-time research.

HST will provide experience in both teaching hospitals (or other major centres with academic activity) and regional hospitals. The posts within the programme to which the trainee is appointed will have named consultant trainers. In addition, one consultant will act as a Programme Director who will co-ordinate the training and report to the National Specialty Director for Gastroenterology, appointed by the ICHMT.

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

The Conjoint Board of the Royal College of Physicians of Ireland (RCPI) and the Royal College of Surgeons in Ireland (RCSI) oversee training in Endoscopy in Ireland for SpRs who are registered on a RCPI or RCSI Higher Specialist Training (HST) programme.

Trainees are expected to complete their endoscopic training within a 5 year period while registered on a HST programme. Accreditation will be awarded at two levels: General and Specialist level.

Procedure requirements for General level of training:
The following requirements must be met for General level of training:

- **Upper gastrointestinal endoscopy:**
  - perform at least 200 unassisted and completed examinations independently under supervision.
  - a minimum of 20 therapeutic procedures excluding polypectomy; of these 10 must involve control of upper gastrointestinal haemorrhage.
  - DOPS assessments annually at 1 month, 6 months and at end of year. Additional DOPS assessments may be required at the discretion of the trainer

- **Colonoscopy:**
  - perform a minimum of 200 unassisted, supervised, complete colonoscopies to the caecum in patients with intact colons (i.e. no previous colonic resection)
  - perform snare polypectomies in a minimum of 30 patients.
  - achieve at least a 90% caecal intubation rate by the completion of training

For further details see the Endoscopy module in the Speciality section of the curriculum. Trainees must spend the first two years of training in clinical posts in Ireland before undertaking any period of research or Out of Programme Clinical Experience (OCPE). The earlier years of training will usually be directed towards acquiring a broad general experience of Gastroenterology under appropriate supervision. An increase in the content of hands-on experience follows naturally, and, as confidence is gained and abilities are acquired, the trainee will be encouraged to assume a greater degree of responsibility and independence.

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

Trainees on HST programme in Gastroenterology are given a rotation of posts at the start of the programme. Each rotation will provide the trainee with experience in different hospitals so as to acquire the broad range of training required. A degree of flexibility to meet the individuals training needs is possible especially towards the end of the training programme following discussion with the NSDs.

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

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

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

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

Dual Specialty Training

GIM training is expected to be completed in the first 3 years of the programme. One of these years is a GIM specific year. During the other 2 years trainees must complete their GIM training as per the minimum requirements.

Each post must include general medicine on-call commitment for acute unscheduled/emergency care with attendance at relevant post-take rounds.

Acute Medicine:
There must be evidence of direct supervision of the activity of the more junior members of the “on-take” team and a minimum of 10 (480 per year) new acute medical assessments and admissions during the 24-hour period are expected. In addition, the trainee will be expected to have ongoing care/responsibility for a proportion of the patients for the duration of the clinical inpatient journey as well as follow up post discharge. In this capacity you should develop skills in non-technical aspects of care including discharge planning and end of life care.

Inpatient Responsibilities:
The trainee will have front line supervisory responsibilities for general medical inpatients. This will require supervising the activities (e.g. being available for advice) of the more junior members (SHO/Intern) of the clinical team at all times. In addition to personal ward rounds, a minimum of two ward rounds with the consultant each week is expected for educational experience. Ongoing responsibility for shared care of the team’s inpatients whilst in the ITU/HDU/CCU is also essential. If this is not possible in a particular hospital/training institution then a period of secondment to the appropriate unit will be required.

Outpatient Responsibilities:
The trainee is expected to have personal responsibilities for the assessment and review of general medicine outpatients with a minimum of at least one consultant led GIM clinic per week. The trainee should assess new patients; access to consultant opinion/supervision during the clinic is essential. In the event of clinics being predominantly subspecialty orientated, a trainee must attend other clinics to ensure comprehensive General Internal Medicine training.

General Education in Training:
The trainee is expected to spend four hours per week, in formal general professional education for certification of training. In the types of experience noted below, time must be fairly distributed between GIM and the other specialty in dual training programmes. Review of all these activities will form part of the training record for each trainee.

All trainees are required to undergo training in management. This will take the form of day-to-day involvement in the administration of the team/firm and must include attendance at a management course during the training period.

Trainees are expected to be actively involved in audit throughout their training and should have experience of running the unit’s audit programme and presenting results of projects at audit meetings.
They should also regularly attend other activities, journal clubs, X-ray conferences, pathology meetings etc.

Trainees should be expected to show evidence of the development of effective communication skills. This can be assessed from taking part in formal case presentations or in giving lectures/seminars to other staff or research/audit presentations at unit meetings.

All trainees must have a current ACLS certificate throughout their HST.

**Procedures:**
During training the trainee should acquire those practical skills that are needed in the management of medical emergencies, particularly those occurring out of normal working hours. Some exposure to these skills may have occurred during the period of BST but experience must be consolidated and competencies reviewed during HST. The procedures, with which the trainee must be familiar and show competencies in, either as essential to acquire, or as additional procedural skills i.e. desirable to acquire.

**Essential & Additional Experience:**

The trainee will be expected to have had experience of/be familiar with the management of a wide range of cases presenting to hospitals as part of an unselected acute medical emergency “take”. Whilst trainees will not need to be expert in all of these areas they will be expected to be able to plan and interpret the results of immediate investigations, initiate emergency therapy and triage cases to the appropriate specialist care. These emergency situations have been considered under each specialty section and are indicative of what should be covered but are not prescriptive. It should form the basis of regular discussions between the trainee and trainers as training progresses. The various clinical situations listed for experience have been divided into those, which are considered “essential” and others, which are “additional”.
Assessment Process

The methods used to assess progress through training must be valid and reliable. The Gastroenterology Curriculum has been re-written, describing the levels of competence which can be recognised. 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 may utilise the Mini-CEX, DOPS and Case Based Discussions (CBD) methods adapted for the purpose. 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.
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

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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-malefeasance 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 cooperation, 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 everyday 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 references 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)
General Internal Medicine Section

Objective: On completion of Higher Specialist Training the trainee will be able to identify and treat immediate life threatening causes of common medical presentations, form a differential diagnosis for non-life threatening cases and effectively manage the patient including further investigation and appropriate referral. They will have acquired a broad range of procedural and clinical skills to manage diverse presentations.
Assessment and Learning Methods
Learning opportunities during HST are through:

- Self-Directed Learning
- Attendance at Study days
- Participation in In-house activities
- Unselected acute on call
- General Medicine outpatient clinics
- Department education sessions (black box, journal club, tutorials)
- Completion of Required courses
- Attendance at additional learning events such as recommended courses and masterclasses

Progress is assessed through:

- Case Based Discussion
- ePortfolio
- Annual assessment
- DOPS

In the Acute setting
During the course of HST the trainee will encounter common acute presentations and demonstrate the following competencies:

- Recognising and assessing urgency
- Stabilising the patient
- Prioritising
  - Tasks
  - Investigations
- Managing co-existing morbidities
- Making appropriate referrals
- Decision making and appropriate delegation

The presentations listed in this section represent the most common acute presentations and conditions currently seen in Irish hospitals, accounting for over 95% of admissions. It is expected that HST trainees in general internal medicine will have a comprehensive knowledge of, and be able to provide a differential diagnosis for, these conditions.
Presentations

1. Shortness of breath
2. Cough
3. Chest Pain
4. Blackout/ Collapse/ Dizziness
5. The frail older patient in the acute setting
6. Abdominal Pain
7. Fever
8. Alcohol and substance dependence or withdrawal
9. Falls and Decreased mobility
10. Weakness and Paralysis
11. Headache
12. Limb Pain and/or Swelling
13. Nausea and Vomiting
14. Seizure
15. Diarrhoea
16. Delirium/Acute confusion
17. Acute Psychological illness
18. Palpitations
19. Hepatitis or Jaundice
20. Gastrointestinal Bleeding
21. Haemoptysis
22. Rash
23. Acute Back Pain
24. Poisoning and Drug Overdose
25. Hyper-glycaemia
Emergency management

Recognising and managing emergency cases including:

- Acute Coronary Syndrome
- Acute Kidney Injury
- Acute Respiratory Failure
- Acute Seizure
- Anaphylaxis / Angioedema
- Cardio-respiratory arrest
- Critical electrolyte abnormalities (calcium, sodium, potassium)
- Hypo- or Hyperglycaemia
- Sepsis and septic shock
- Stroke/ TIA
- The unconscious patient
- Unstable hypotensive patient
Skills and Knowledge in the General Medicine Setting

On completion of HST the trainee should know life threatening causes, clinical feature, classifications, investigations and management, including indications for urgent referral, for common general medicine presentations. The following outlines commonly associated features, causes and/or routes of investigation for these presentations, both acutely and for ongoing case management, the trainee is expected to know and the competencies they are expected to demonstrate.

When a patient presents with a general medicine complaint the trainee should demonstrate an ability to:

- Assess their signs and symptoms; formulating a differential diagnosis
  - Take history as part of an investigation
  - Undertake primary assessment
  - Recognise and assess urgency
  - Undertake secondary assessment
- Initiate appropriate investigations
  - Interpret results for common investigations
- Initiate appropriate treatment, including stabilising the patient where necessary
- Manage co-existing morbidities
- Manage on-going cases including
  - confirming a diagnosis for those not requiring urgent referral
  - assessing response to initial treatment
  - recognising signs to escalate management when needed
- Appropriately refer based on:
  - Response to treatment
  - Local guidelines
  - Culture
  - Self-awareness of their own knowledge and ability
  - Services available
- Provide ongoing management of the case
Shortness of breath

When a patient presents with shortness of breath a trainee should demonstrate knowledge of the clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for common causes.

- Life threatening causes of breathlessness
  - Airway obstruction
  - Acute severe asthma
  - Acute exacerbation of COPD
  - Pulmonary oedema
  - Tension pneumothorax
  - Acute presentations of Ischaemic heart disease
  - Acute severe left ventricular failure
  - Dysrhythmia
  - Pulmonary embolus
  - Cardiac tamponade
  - Metabolic acidosis

Cough

When a patient presents a cough a trainee should demonstrate knowledge of the clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Common causes of acute cough
  - Viral and Pertussis type cough
  - Acute bronchitis
  - Pneumonia
  - Tuberculosis
  - Lung cancer
  - Understand the relevance of subacute and chronic cough
  - Common causes (Asthma, Upper airway, GORD)
  - When to refer for assessment of lung cancer
  - Consideration of Interstitial lung disease
Chest Pain

When a patient presents with chest pain a trainee should demonstrate knowledge of the clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for common causes.

- Life threatening causes of chest pain
  - Myocardial infarction
  - Dissecting aortic aneurysm
  - Pulmonary emboli
  - Tension pneumothorax
  - Oesophageal rupture
- Clinical features of:
  - Cardiac chest pain
  - Chest pain caused by respiratory disease and oesophageal rupture
  - Chest pain caused by gastrointestinal disease
  - Chest wall pain
  - Functional chest pain

Blackout / Collapse / Dizziness

When a patient blacks out, collapses or presents with dizziness a trainee should demonstrate that they know the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Stroke
  - Cerebral infarction
  - Primary intracerebral haemorrhage
  - Subarachnoid haemorrhage
- Syncope
  - Cardiac causes (arrhythmia, cardiogenic shock)
  - Vasovagal syncope
  - Postural hypotension (e.g., drugs, neurocardiac, autonomic)
  - Localised vascular disease (posterior circulation)
  - Metabolic causes (e.g., hypoglycaemia)
- Seizures and epilepsy
Management of the frail older patient in the acute setting

When a frail older patient presents a trainee should demonstrate knowledge of the appropriate approach to assessment, risk factors, appropriate investigations and necessary management, including indications for urgent referral, for this population.

- Understand the broad differential diagnosis and management of complex multi-morbid illness in older patients
- Approach to investigation and management of recurrent Falls
- Non-pharmacological and pharmacological management of behavioural complications of dementia
- Investigation of causes, non-pharmacological and pharmacological management of Delirium
- Polypharmacy and inappropriate prescribing in older patients (e.g. renal dose adjustment)
- Medical management of nursing home residents - identifying aspiration risk
- Palliative care and pain management in the acute setting
- Acute stroke thrombolysis delivery and criteria for referral for intravascular intervention
- Completion of NIHSS stroke scale

Abdominal Pain

When a patient presents with abdominal pain a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Initial assessment of abdominal pain
- Differential Diagnosis:
  - Intra-abdominal
    - Gastrointestinal
    - Vascular (aneurysm, ischemia)
    - Urological
    - Gynaecological
  - Extraabdominal causes of pain
- Ability to identify and initiate management of life threatening conditions causes of abdominal pain
- Indications for surgical consultation and urgent referral
- Identifying constipation and urinary retention in older patients
Fever

When a patient presents with fever a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Recognize the symptoms and signs of sepsis
- Identify common causes of fever
  - Infection
  - Non-infectious including PE, Drugs, vasculitis,
- Delivery of initial management of septic patient
- Knowledge of the choice of empiric and infection targeted antibiotics

Alcohol and substance dependence or withdrawal

When a patient presents with dependence or withdrawal a trainee should demonstrate that they know the classifications and necessary management, including indications for referral.

- Recognition
- Psychosocial dysfunction
- Autonomic disturbances
- Stress and panic disorders
- Insomnia and sleep disturbance
- Understand the role of psychiatrist and referral to rehabilitation services

Falls and Decreased mobility

When a patient falls or presents with decreased mobility a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Common medical and social causes of falls in medical patients
- Complications of falls
  - Fractures including the neck of the femur
  - Intracranial injury
  - Rib fracture and pneumothorax
  - Loss of mobility and independence
Weakness and Paralysis

When a patient presents with weakness or paralysis a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Stroke/ space occupying lesion
- Spinal cord injury
- Underlying neurological causes: e.g. multiple sclerosis, Guillain-Barre syndrome
- Infections and disease causing weakness

Headache

When a patient presents with headache a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Clinical classifications of headache
- Headache with altered neurological and focal signs
- Headache with features suggestive of raised intracranial pressure
- Headache with papilloedema
- Headache with fever
- Headache with extracranial signs
- Headache with no abnormal signs
- Drugs and toxins

Limb Pain and/or Swelling

When a patient presents with limb pain or swelling a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- As a result of injury
- As a result of an underlying medical condition
  - Undifferentiated inflammatory arthritis
Nausea and Vomiting

When a patient with nausea and vomiting a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Understanding of common causes
  - Abdominal
    - Acute Gastroenteritis
    - PUD
    - Pancreatitis
    - Acute hepatitis
    - Bowel obstruction
  - Central Causes (CNS)
  - Poisoning and Medications
- Management
  - Identification of underlying cause
  - Control of symptoms
  - Treating dehydration

Seizure

When a patient presents with seizures a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Causes
  - Unprovoked seizures/epilepsy
  - Seizures associated with metabolic, toxic and system illness
  - Cerebral hypoxia
  - Seizures associated with drugs and toxic substances
- Management
  - Emergency supportive treatment
  - Anticonvulsant treatment
  - Work up of first presentation with seizure
  - Understand driving implications for patients with seizures
Diarrhoea

When a patient presents with diarrhoea a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- **Classification**
  - Osmotic
  - Secretory
  - Exudative
- **Causes**
  - Infectious
  - Inflammatory
  - Ischemic
  - Malignant
- **Complications**
- **Management**
  - Acute management
  - Knowledge of appropriate investigations
  - Recognition of associated complications
  - Role of antibiotics
  - When to refer to gastroenterology.

Delirium/Acute confusion

When a patient presents with delirium or acute confusion a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Clinical features of acute confused state - differentiating delirium, dementia, depression and psychosis
- Causes of delirium
- Use of screening instruments for delirium and/or cognitive impairment
- Clinical features of acute delirium
- Clinical features of acute functional psychosis
- Causes of confused state associated with alcohol abuse - delirium tremens, Wernicke’s encephalopathy
- Drug induced/related confusion/delirium
- Bacterial meningitis, Viral encephalitis
- Subarachnoid haemorrhage/ subdural haematoma
Social issues

When a patient presents with social issues a trainee should demonstrate knowledge of the appropriate approach to assessment, risk factors, appropriate investigations and necessary management, including indications for urgent referral, for this population.

- Managing medical conditions with an uncooperative patient
- Identifying potential elder abuse
- Recognising substance abuse
- Basic principles of psychiatry
- Recognising an at risk patient

Palpitations

When a patient presents with palpitations a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Anxiety
- Exercise induced
- In relation to pre-existing conditions including
  - Thyroid disease
  - Anaemia
  - Fever
  - Dehydration
  - Low blood sugar
  - Low blood pressure
- Resulting from medications or toxins
- Hormonal changes
- After prior myocardial infarct
- Coronary artery disease
- Other heart problems including congestive heart failure, heart valve or heart muscle problems
Hepatitis or Jaundice

When a patient presents with hepatitis or jaundice a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Incubation and prodromal phase
- Virus-specific
- Toxic hepatitis
- Autoimmune
- Acute liver failure

Gastrointestinal Bleeding

When a patient presents with gastrointestinal bleeding a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Understanding of the initial assessment and stabilization of patients with GI bleeding
- Understanding of haemovigilance and blood transfusion protocols
- Upper gastrointestinal bleeding including
  - Peptic ulcer Disease
  - Gastritis
  - Esophageal varices
  - Mallory-Weiss tears
  - Gastrointestinal cancers
  - Inflammation of the gastrointestinal lining from ingested material
- Lower gastrointestinal bleeding including
  - Diverticular disease
  - Gastrointestinal cancers
  - Inflammatory bowel disease (IBD)
  - Infectious diarrhoea
  - Angiodysplasia
  - Polyps
  - Haemorrhoids and anal fissures
Haemoptysis

When a patient presents with haemoptysis a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Recognition and Management of massive Haemoptysis
- Common causes of haemoptysis
  - Acute and chronic bronchitis
  - Tuberculosis
  - Lung cancer
  - Pneumonia
  - Bronchiectasis
  - Pulmonary Embolus
  - Alveolar Haemorrhage (vasculitis)

Rash

When a patient presents with a rash a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Urticaria
- Anaphylaxis and Angio Oedema
- Erythroderma and exfoliation
- Psoriasis and seborrhoeic/contact dermatitis
- Purpura and vasculitis
- Blistering eruptions
- Infections and the skin

Acute Back Pain

When a patient presents with acute back pain a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Non-specific acute back pain
- Causes of chronic low back pain
- Neurologic findings in back pain
- Identifying serious etiologies of back pain e.g.,
  - Cancer
  - Fracture
  - Infection
  - Cauda equina syndrome

Poisoning and Drug Overdose
When a patient presents with poisoning or overdose a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Diagnostic clues in the assessment of overdoses
- Identification of toxic agent (paracetamol, SSRI, benzodiazepines, opiates, amphetamines, TCAD)
- Immediate management
- Mental health assessment and definitive care

### Hyper-glycaemia

When a patient presents with hyper-glycaemia a trainee should demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Symptoms of acute hyper-glycaemia
- Recognition and Management of diabetic ketoacidosis
- Recognition and management of Hyperosmolar non ketotic hyperglycemic states
Procedures

Objectives: To develop proficiency in common procedures required for general internal medicine.

Knowledge and Skills

Abdominal paracentesis under ultrasound

ECG Interpretation

Emergency DC cardioversion

- Up to date ACLS training to cover:
  - Necessity of Synchronised Shock
  - Starting voltage
  - Safe use of Defibrillator

Emergency care of tracheostomy

- In cases of:
  - Cardiac arrest
  - Dealing with a compromised airway

Femoral venous lines with ultrasound guidance

- Ultrasound guided femoral venous line placement
- Anatomical markers for femoral veins
- Safe cannulation of vein
- Secure line in place/review position on X-ray

Intercostal drain under ultrasound

- Anatomical markings
- Insertion of intercostal tube (small bore seldinger)
- Connection to underwater seal and secure in place
- Assessment and management of drain
- Safe removal of the tube

Joint aspiration

- Sterile field
- Fluid analysis
- Injectable compounds

Lumbar puncture

- Anatomical markers
- Cannula selection
- Safe puncture including appropriate preparation
- Measurement of CSF pressure
- Removal of samples and interpretation of results
- Management of post lumbar puncture headache

Non-invasive Ventilation

- Principles of BIPAP and CPAP
- Monitoring and limitations
- Mask fitting
- Understanding of pressures
Pleural and ascitic fluid aspiration under ultrasound

- Safe approach and role of ultrasound guidance
- Puncture pleural / peritoneal space
- Withdrawal of fluid
Specialty Section
Upper GI Tract

Objective: To be capable of evaluating the significance of symptoms referable to the upper GI tract and providing effective management of patients

Dysphagia, Reflux and Non-Cardiac Chest Pain

Objective: To be capable of assessing the significance of symptoms such as dysphagia and retrosternal pain, and arranging appropriate investigations with a view to providing effective management

**KNOWLEDGE**

- Physiology of swallowing and reflux; benign and malignant causes and presentation of dysphagia and its management
- Physiology of oesophagus and gastro-oesophageal junction; gastro-oesophageal reflux disease including symptoms (e.g. heartburn) and endoscopic finding;
- Management of Barrett’s oesophagus
- Diagnosis and treatment of non-cardiac chest pain

**SKILLS**

- Elicit history, investigate appropriately and define medical endoscopic, radiological and surgical treatment strategies
- Recognise symptom complex, arrange appropriate investigations including Ph monitoring, motility studies and endoscopy and interpret findings

**ASSESSMENT & LEARNING METHODS**

- Case Based Discussion (CBD)
- Mini-CEX
Upper Abdominal Pain/Dyspepsia

Objective: To be able to assess the significance of symptoms of upper abdominal pain and dyspepsia and arrange for appropriate investigation, with a view to providing effective management

**KNOWLEDGE**

**Peptic ulcer and non-ulcer dyspepsia:**
- Physiology of gastric acid secretion;
- Role of Helicobacter pylori and its detection and treatment
- Effect of aspirin non-steroidal anti-inflammatory drugs and drugs which inhibit gastric acid production and stimulate mucosal protection
- Can describe physiology of motor disorders of upper GI Tract including achalasia and diffuse oesphagheal spasm
- Demonstrates willingness to manage dyspeptic patients appropriately

**Gall bladder disease:**
- Physiology of bile, gallstone formation, biliary colic and gall bladder neoplasia
- Demonstrates willingness to investigate, treat and refer to surgeons/radiologists as appropriate

**Pancreatic disease:**
- Physiology of pancreatic function, recognition of pancreatic pain and/or insufficiency
- Recognises and demonstrates willingness to assess and fully investigate symptoms of pancreatic disease, pancreatic function and structure and to refer appropriately

**SKILLS**

- Be able to identify appropriate investigations, make differential diagnosis, identify success of treatment and recognise complications such as gastric outlet obstruction, perforation and bleeding
- Be able to diagnose and treat dysmotility type symptoms
- Be able to recognise gall bladder symptoms and signs, investigate appropriately and instigate medical or surgical treatment
- Approved investigation of pancreatic structure and function, institute medical/surgical management

**ASSESSMENT & LEARNING METHODS**

- Mini-CEX
- CBD
Nausea and Vomiting
Objective: To be able to assess the significance of symptoms such as dyspepsia, nausea and vomiting in relation to disease of the GI tract, to investigate them appropriately and to manage patient’s with these symptoms effectively and safely

KNOWLEDGE

- Non-organic causes of upper GI symptoms and their management
- Nausea, vomiting occurring in GI diseases
- Metabolic and neurological causes of nausea and vomiting as a manifestation of systemic disease
- Demonstrates a willingness to manage upper gastrointestinal symptoms appropriately

SKILLS

- Diagnose and manage upper gastrointestinal symptoms
- Be able to diagnose functional disorders and initiate symptomatic treatment
- Be able to apply the wide differential diagnosis applicable to these symptoms

ASSESSMENT & LEARNING METHODS

- Mini-CEX
- Case presentations
- CBD
Gastric and Oesophageal Cancers

Objective: To be competent to recognize presenting features of upper GI cancers and to obtain evidence to confirm the diagnosis: to advise and initiate treatment which is appropriate to the patient’s needs

**KNOWLEDGE**

- Pathology (types) pathogenesis, clinical, radiological features, complications, medical and surgical options, palliative care, prognosis
- Communication with patients and their relatives and with colleagues e.g. in breaking bad news, in a multidisciplinary approach
- Appreciate potential value of contributions from colleagues and other health professionals
- Acknowledge patients’ right to be involved in decisions

**SKILLS**

- Assess, investigate and stage upper GI cancers and make appropriate decisions regarding treatment modalities

**ASSESSMENT & LEARNING METHODS**

- Case presentations
- CBD
Upper Gastrointestinal Bleeding

Objective: To be competent to determine the cause and deal with the effects of acute and chronic bleeding from sources in the upper GI tract such as hiatus hernia, peptic ulcer, varices, tumours and vascular abnormalities

**KNOWLEDGE**

Assessment and management of patients with upper GI bleeding

- Knowledge of risk factors for death, pathophysiology of shock and its measurement, resuscitation
- Pathophysiology of arterial bleeding in PUD, endoscopic and radiological diagnosis of PUD, endoscopic and surgical elements treatments for PUD
- Anatomy and physiology of varices, risk factors for bleeding including size, portal pressure and endoscopic stigmata, coagulation abnormalities
- Clinical features of vascular anomalies and tumours and risks of bleeding
- Demonstrates willingness to recognise severity of condition and take prompt action as necessary
- Demonstrates willingness to recommend prompt endoscopic action and liaise with surgical colleagues as necessary
- Demonstrates willingness to participate in management of variceal haemorrhage and liaise with a specialist liver unit for TIPS or other measures when necessary
- Demonstrates willingness to participate in endoscopic management

**SKILLS**

- Diagnose and manage upper gastrointestinal bleeding
- Recognise, assess and manage shocked patients adequately
- Recommend urgent endoscopy for diagnosis and treatment of bleeding peptic ulcer
- Recommend use of endoscopic therapy when necessary and administer prophylactic treatments and vasoconstrictor agents as necessary for bleeding varices
- *Undertake endoscopic diagnosis and recommend treatment with thermal or other methods as appropriate for bleeding from vascular anomalies

**ASSESSMENT & LEARNING METHODS**

- Mini-CEX
- CBD
Clinical and Laboratory Tests of GI Structure and Function

Objective: To be competent in the selection, application and correct interpretation of tests of GI structure and their function which are appropriate to the patient’s needs

KNOWLEDGE

Oesophageal, gastric & anorectal function:
- Knowledge of oesophageal pH monitoring, oesophageal and anorectal motility/manometry, gastric emptying studies
- Be able to recommend use in suitable patients: able to explain and obtain informed consent
- Demonstrates willingness to use tests when necessary and appropriate: and to respond to patient’s rights to be fully informed

Gastric secretion:
- Can discuss 24-hour intragastric H+ concentration, maximal acid output, effect of pentagastrin and gastrin releasing peptide
- Be able to recognise value for drug testing and research and evaluate results
- Appreciates the need to fully inform patients concerning procedure and obtain consent

Tests for malabsorption:
- Can describe SeHCAT, PABA, lactose tolerance test, H2 breath test, faecal elastase
- Be able to recommend use of and interpret results of tests
- Willing to discuss procedure and value of results with patients

Tests for inflammation
- Can describe serological and nuclear medicine testing including Tc WBC scans
- Be able to make appropriate use of as indicated
- Willing to discuss procedure and value of results with patients

Radiological evaluation
- Can interpret plain x-rays of abdomen, barium studies of GI tract CT, MRI and ultrasound, endoscopic ultrasound (EUS),
- Demonstrates competency in ordering ultrasounds, viewing the images and aiding the interpretation with radiologists
- Be able to recommend use of tests and interpret results
- Demonstrates willingness to explain the procedure, any risks and the results with the patient
- Respects patient’s right to fully understand purpose and outcome

Histopathological evaluation
- Has knowledge of the histological features of common gastroenterology and liver diseases
- Can appreciate the histological findings in discussion with histopathologists

SKILLS
- Recommend and Interpretation of GI tests
- Informed consent

ASSESSMENT & LEARNING METHODS
- Mini-CEX
- Study day (Held every 2nd year)
Absorption and Nutrition

Objective: To understand the anatomy and physiology of digestion and intestinal absorption, and the pathological processes that may interfere. To be competent to recognise, assess and manage the underlying cause, and of providing an appropriate response to the patient’s needs.

Malabsorption, Anorexia and Weight Loss

Objective: To be able to recognise the potential significance of steatorrhoea and other features of malabsorption, anorexia and weight loss; to investigate the cause and to plan management which is appropriate.

KNOWLEDGE

Steatorrhoea:
- Can define the physiology of absorption and pathophysiology of malabsorption
- Understand causes including parasites, coeliac disease, bacterial overgrowth, Crohn’s disease, chronic pancreatitis and neoplasia
- Be able to recognise symptom patterns, investigate with barium studies, EUS and endoscopy, microbiological and biochemical tests, and give appropriate treatment
- Demonstrates willingness to recognise and treat small intestinal, pancreatic and other disorders and understand patients’ needs

Anorexia and weight loss
- Differential diagnosis including GI and non-GI causes; knowledge of eating disorders
- Be able to arrange investigation, recognise organic from non-organic causes, and plan treatment accordingly
- Demonstrates willingness to explain potential causes and management with patient

SKILLS

- Diagnose and manage patients with malabsorption, anorexia and weight loss

ASSESSMENT & LEARNING METHODS

- Mini-CEX
- CBD
Short Bowel Syndrome and Ileostomy

Objective: To understand the fluid, electrolyte and metabolic consequences and to be capable of providing appropriate supporting measures

**KNOWLEDGE**

- Can explain fluid and electrolyte balance and its maintenance, can identify malnutrition and micronutrient deficiency, causes of short bowel syndrome, can discuss role of stomatherapy
- Be able to detect fluid and electrolyte deficiency, investigate malnutrition appropriately, and plan treatment
- Demonstrates willingness to manage and refer patients appropriately

**SKILLS**

- Knowledge of short bowel syndrome and ileostomy
- Performance of ileostomy

**ASSESSMENT & LEARNING METHODS**

- Clinical presentations
- CBD
- DOPS –see endoscopy curriculum
- Year 3 - 4: Performance of ileostomy
Evaluation of Anaemia

Objective: To recognise different types of anaemia, understand their pathogenesis and be capable of determining the cause and arranging treatment

**KNOWLEDGE**

Anaemias, diagnosis and management

- Definition and types including bone marrow disorders and haemolysis
- For iron deficiency anaemia, demonstrate knowledge of iron metabolism, absorption and bioavailability, iron stores, red cell indices, iron absorption, physiological and GI causes of iron losses
- For macrocytic anaemia, demonstrate knowledge of B12 and folate metabolism, absorption or malabsorption, pernicious anaemia, ileal disorders, alcoholism
- Demonstrates willingness to investigate and treat anaemia associated GI disease appropriately

**SKILLS**

- Diagnosis and management of anaemia
- Be able to recognise anaemia and possible causes
- Be able to recognise iron deficiency, plan appropriate GI investigations, and give necessary treatment
- Be able to recognise causes of macrocytic anaemia, confirm by investigation and take necessary action

**ASSESSMENT & LEARNING METHODS**

- Mini-CEX
- Clinical presentations
- CBD
Nutritional Support

Objective: To understand energy homeostasis, under nutrition and be capable of determining nutritional status, applying that knowledge and appropriate skills to providing additional nutritional support, when that is in the patients’ best interests

KNOWLEDGE

Nutritional assessment and support

- Can describe body composition, energy homeostasis, consequences of under nutrition, screening
- Can evaluate the type of food available and routes of administration, use of intravenous nutrition and its complications, enteral feeding nasogastric and jejunal administration
- Demonstrates willingness to assess nutritional needs and involve nutritional support team

PEG

- Can identify and describe ethics and indications; anatomy of relevant area, types of PEG tubes, disadvantages and complications
- Be able to recommend and insert PEG feeding when appropriate and supervise follow up care
- Demonstrates willingness to consider PEG support in appropriate cases and listen to relatives’ fears and expectations

Obesity

- Can describe the risks of obesity, and evaluate the measurement tools
- Is aware of the dietary, pharmacological, surgical methods of treatment and can refer to obesity service when appropriate

SKILLS

- Assess nutritional status
- Be able to detect under nutrition and apply knowledge to individual patients
- Be able to choose appropriate route for nutritional support, insert appropriate feeding lines, supervise their use and prescribe appropriate IV and enteral feeding regime
- Recommend and insert PEG feeding
- Recognises obesity as an illness and will treat patient in sympathetic manner

ASSESSMENT & LEARNING METHODS

- Mandatory Nutrition Course
- DOPS: Insertion of PEG
- Case presentations
- CBD
Abdominal Pain

Objective: To be able to differentiate the various causes of acute, recurrent and chronic abdominal pains; to arrange and interpret investigations appropriately and interpret the results and to recommend treatment

KNOWLEDGE

Acute and chronic abdominal pain

- Pathophysiology of organ specific causes including biliary colic, hollow viscus obstruction, pancreatitis and non-GI causes (renal colic)
- Pathophysiology of Crohn’s disease, diverticulitis; intra abdominal neoplasia and pancreatitis (acute and chronic)
- Knowledge of analgesics (administration and safety), medical and surgical nerve blocks
- Be able to investigate abdominal pain appropriately, construct differential diagnosis
- Demonstrates willingness to understand physical and mental responses to pain and its causes
- Demonstrates willingness to treat and refer to surgeons, psychiatrists, pain clinics and palliative care teams as necessary
- Demonstrate ability to confidently diagnose functional abdominal disorders and pain using criteria such as the Rome or Manning criteria and to avoid over investigation,
- Demonstrate ability to explore successfully the emotional and psychological backgrounds of patients with functional bowel disorders and to liaise with and/or refer to psychiatrists as necessary

SKILLS

- Investigate and manage abdominal pain
- Be able to elicit and interpret abdominal signs including an acute abdomen, order investigations correctly and recommend medical or surgical treatment
- Be able to treat abdominal pain appropriately for individual patients with different disease processes

ASSESSMENT & LEARNING METHODS

- Mini-CEX
- Clinical presentations,
- CBD
Constipation, Diarrhoea or Change in Bowel Habit

**Objective:** To recognise symptoms of colonic dysfunction and be able to differentiate between the potential causes using appropriate examinations and investigations, in order to arrange or recommend treatment

### KNOWLEDGE

**Constipation and diarrhoea**

- Knowledge of physiology and motility of normal colon
- Knowledge of the role of dietary fibre in influencing colonic function and motility
- Causes of obstructed defecation; Hirschsprung’s
- Identifies infective diarrhoea (viral, bacterial and protozoal) from secretory and osmotic diarrhoea (inflammatory bowel disease, neoplasia)
- Knowledge of presentation and appropriate investigation of intestinal ischaemia, neoplastic and infiltrative disorders
- Medical and surgical options for treatment of ulcerative and Crohn’s colitis, use of and safety issues of antimicrobials, anti diarrhoeals, immune modulators and biological therapies
- Demonstrates willingness to investigate and counsel as appropriate
- Demonstrates willingness to appreciate discomfort associated with diarrhoea and incontinence and take sympathetic action
- Demonstrates willingness to consult with surgical colleagues when necessary

**Change in bowel habit**

- Can discuss functional disorders of colon, spurious diarrhoea, autonomic disorders, laxative abuse, diverticulosis and malignancy
- Ability to order and interpret investigations and give appropriate specific or symptomatic treatment including use of antispasmodics, dietary fibre and constipating agents
- Demonstrates sympathy and willingness to treat as appropriate

### SKILLS

- Investigate when necessary and advise on use of diet, laxatives and biofeedback as necessary
- Investigate with blood tests, stool examination, endoscopy and radiology as appropriate
- Assess severity of disease, take necessary action and liaise with surgical colleagues

### ASSESSMENT & LEARNING METHODS

- Mini-CEX
- Clinical presentations
- CBD
- DOPS – colonoscopic competency (see endoscopic curriculum)
Rectal Bleeding and Perianal Fistulae

Objective: To appreciate the importance of rectal bleeding as a symptom and to be capable of carrying out necessary examinations and arranging appropriate investigations and treatment

KNOWLEDGE

Rectal bleeding

- Can discuss causes - haemorrhoids; neoplasia of anus and recto-sigmoid colon, colitis and Crohn's disease of rectum
- Be able to investigate symptoms appropriately, construct differential diagnosis
- Demonstrates willingness to undertake appropriate investigations and treatment. Appreciates patient's concerns

Perianal fistulae

- Causes of benign fistulae and fistulae complicated by perianal sepsis and IBD
- Demonstrates willingness to investigate, treat, and refer to surgeons as appropriate

SKILLS

- Manage rectal bleeding: be able to examine patients with rectal bleeding, flexible sigmoidoscopy, colonoscopy and undertake appropriate action
- Manage perianal fistula: be able to investigate including use of MRI, give medical treatment and liaise with surgical colleagues when necessary
- Multidisciplinary team working

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- CBD
- DOPS – colonoscopic competency (see endoscopic curriculum)
Colorectal Cancer

Objective: To be competent to recognize presenting features of lower GI cancers and to obtain evidence to confirm the diagnosis: to advise and initiate treatment which is appropriate to the patient's needs

**KNOWLEDGE**

- Pathology (types) pathogenesis, clinical, radiological features, complications, medical and surgical options, palliative care, prognosis
- Communication with patients and their relatives and with colleagues e.g. in breaking bad news, in a multidisciplinary approach
- Appreciate potential value of contributions from colleagues and other health professionals
- Acknowledge patients' right to be involved in decisions

**SKILLS**

- Assess, investigate and stage lower GI cancers and make appropriate decisions regarding treatment modalities
- Multidisciplinary team working

**ASSESSMENT & LEARNING METHODS**

- Case presentations
- CBD
- DOPS: Colonoscopy competency (see endoscopy curriculum)
Liver
Objective: To understand the pathophysiology of hepatic dysfunction, its investigation, assessment, differential diagnosis, likely cause and contributing factors (see also subspecialty training in Hepatology)

Assessment of Liver Function
Objective: To understand and be able to recognise the manifestations of hepatic dysfunction and the range of disease processes which may be responsible To know the range of investigations available and be able to advise of the selection and interpretation of appropriate tests To understand the place of liver biopsy in the management of patients with liver dysfunction, to know the indications, contraindications and risks, and the techniques available

KNOWLEDGE
Pathophysiology and investigation of liver dysfunction
- Knowledge of bilirubin metabolism, hepatic and biliary inflammatory processes, hepatic blood flow
- Knowledge of biochemical, haematological, viral, autoimmune and metabolic markers of liver disease, and ability to select appropriate markers
- Indications for liver biopsy, abdominal ultrasound, CT, ERCP, MRI/ERCP/EUS
- Demonstrates willingness to use appropriate tests in correct circumstances

Liver biopsy
- Knowledge of technique, types of needle, pre and post procedure care, complications
- Be able to recommend ultrasound guidance or transjugular approach as necessary, recognise complications
- Demonstrates willingness to undertake procedure or refer to radiologist for ultrasound guidance or transjugular biopsy as appropriate

SKILLS
- Recognise the range of disease processes possible
- Select and interpret appropriate markers
- Select and interpret appropriate tests as required
- Recommend and obtain informed consent for ultrasound guidance liver biopsy

ASSESSMENT & LEARNING METHODS
- Clinical presentations
- CBD
Jaundice

Objective: To understand the production of bile, the structure and function of the biliary system; diseases of the biliary tract. The significance of jaundice, its causes and investigation. To be able to advise on the management of a patient with jaundice and recommend treatment.

**KNOWLEDGE**

Jaundice - structure and function of the biliary system:
- Knowledge of anatomy and physiology of the biliary system
- Can describe the physiology of bile production
- Causes of extra and intrahepatic biliary obstruction and their clinical manifestations
- Differential diagnosis of jaundice (non-obstructive) including hepatitis, alcoholic liver disease, biliary obstruction, chronic liver disease (e.g. AIH, PBC, PSC)
- Medical, surgical and radiological treatment of jaundiced patients
- Knowledge of indications and complications of ERCP
- Demonstrates willingness to recognise the development of various causes of jaundice and take appropriate action

**SKILLS**

- Recognise biliary obstruction and its complications
- Make use of and interpret investigations of jaundiced patients including ultrasound, CT, MRI, ERCP and liver biopsy and initiate appropriate treatment
- Select the most appropriate treatment for individual patients

**ASSESSMENT & LEARNING METHODS**

- Clinical presentations
- CBD
Hepatosplenomegaly

Objective: To be able to determine the cause of an hepatosplenomegaly and to recommend appropriate management or refer for other specialist opinion

KNOWLEDGE

Hepatosplenomegaly

- Knowledge of causes of hepatosplenomegaly due to systemic disease
- Knowledge of causes of cirrhosis – chronic viral hepatitis, AIH, PBC, PSC, alcohol liver disease, NASH, haemochromatosis, alpha1 antitrypsin deficiency and Wilson's disease, and vascular disorders, and select therapeutic options where available
- Knowledge of complications of cirrhosis and ability to order and interpret appropriate investigations for complications of cirrhosis
- Knowledge of complications of drug therapies associated with treatment of cirrhosis
- Demonstrates willingness to diagnose and treat liver disease

SKILLS

- Diagnosis of cirrhosis and hepatosplenomegaly due to systemic disease
- Make use of and interpret investigations of jaundiced patients including ultrasound, CT, MRI, ERCP and liver biopsy and initiate appropriate treatment
- Select the most appropriate treatment for individual patients
- Recognise need for referral to specialist liver unit for consideration for liver transplantation

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- CBD
Ascites and Other Abdominal Swellings
Objective: To be able to determine the cause of an abdominal swelling and to recommend appropriate management or refer for other specialist opinion

KNOWLEDGE

Ascites
- Pathophysiology of portal hypertension
- Differential diagnosis of ascites (hepatic and non-hepatic)
- Knowledge of management of spontaneous bacterial peritonitis with diuretics, antibiotics, and albumin as necessary
- Knowledge of appropriate use of paracentesis, complications of procedure
- Knowledge of indications for and complications of TIPS
- Demonstrates willingness to consult with and refer to a specialist unit as appropriate

Abdominal masses including cysts
- Causes of hepatic and extrahepatic masses, knowledge of benign and malignant liver tumours
- Make use of and interpret investigations including ultrasound, CT, MRI, ERCP and liver biopsy
- Knowledge of treatment modalities for liver cancer
- Demonstrates willingness to investigate or to refer to surgeons as appropriate
- Be aware of patient’s anxiety regarding potential outcome of investigation

SKILLS

- Give a differential diagnosis and safely manage ascites
- Recognise abdominal masses and initiate appropriate investigations
- Recognise need for referral to specialist liver unit for consideration for liver transplantation

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- CBD
- DOPS: Paracentesis
Liver Failure and Encephalopathy

**Objective:** To understand the pathogenesis of the features of acute and chronic liver failure, and the occurrence of hepatic encephalopathy. To be able to separate encephalopathy from other confusional states in patients with liver disease and to arrange to provide treatment which is appropriate

**KNOWLEDGE**

**Hepatic encephalopathy**
- Knowledge of pathophysiology, clinical features, stage and precipitants of hepatic encephalopathy in liver disease
- Recognise, investigate and treat alcohol withdrawal syndromes and other causes of confusion
- Demonstrates willingness to recognise and treat hepatic encephalopathy

**Liver failure**
- Causes and manifestations of acute and chronic hepatic failure
- Demonstrates willingness to consult and refer to specialist liver unit as appropriate

**SKILLS**

- Recognise, investigate and treat hepatic encephalopathy, alcohol withdrawal syndromes and other causes of confusion
- Recognise progression to hepatic failure and need for referral to specialist liver unit for consideration for liver transplantation

**ASSESSMENT & LEARNING METHODS**

- Clinical presentations
- CBD
Sub-Specialty Training in Hepatology (Advanced Liver Sub-Specialty Training Option)

Objectives: To develop more detailed knowledge and advanced skills in the diagnosis and management of the diseases of the liver and biliary system. Such advanced training will be available only in specialist Liver Units

**KNOWLEDGE**

**Anti viral therapy**
- Criteria for treatment and efficacy of antiviral therapy for Hepatitis B & C
- Ability to administer and monitor complications of antiviral therapy
- Demonstrates willingness to participate in the diagnosis and management of advanced liver disease

**Acute hepatic failure**
- Causes and manifestations of acute hepatic failure and its complications including cerebral oedema and hepatorenal syndrome
- Awareness of progression of liver failure and need for liver transplantation
- Demonstrate a willingness to liaise appropriately with specialist liver unit

**Benign and malignant tumours of the hepatobiliary system**
- Hepatic adenoma, hepatoma and cholangiocarcinoma and medical, surgical and radiological management
- Ability to advise use of screening, and different therapeutic treatment modalities including immunotherapies and biologic therapies

**Liver transplantation**
- Selection of patients and timing of transplantation
- Management of peri- and post-operative complications including rejection and infection
- Knowledge of immunosuppression therapy, complications and drug interactions
- Knowledge of long-term complications of liver transplantation
- Appreciate patients and family anxiety pertaining to liver transplantation
- Demonstrate willingness to liaise with specialty transplant units

**SKILLS**
- Administer and monitor antiviral therapy for hepatitis B & C with appropriate investigations as necessary
- Recognise progression of acute hepatic failure and the need for liver transplantation
- Advise use of and follow up of TIPS or surgery in patients with portal hypertension
- Advise use of screening and the different therapeutic strategies for individual patients
- Explain complex diagnosis in simple terms to patient
- Enrol multidisciplinary team in investigation and treatment
- Liver transplantation module:
  - Appropriately select patients for liver transplantation
  - Be able to manage complications of transplantation
  - Be able to manage immunosuppressive therapy
ASSESSMENT & LEARNING METHODS

- Mini-CEX
- CBD
Endoscopy Training Module

Introduction
The Conjoint Board of the Royal College of Physicians of Ireland (RCPI) and the Royal College of Surgeons in Ireland (RCSI) oversee training in Endoscopy in Ireland for SpRs who are registered on a RCPI or RCSI Higher Specialist Training (HST) programme

Outline of Training in Endoscopy for SpRs
Trainees are expected to complete their endoscopic training within a 5 year period while registered on a HST programme. Accreditation will be awarded at two levels: General and Specialist level

Entry to Programme
Trainees who are registered on a RCPI or RCSI HST programme are eligible for endoscopy training. The training bodies will notify the Conjoint Board of the trainees who are undertaking endoscopy training at their commencement of HST. The Conjoint Board must be aware at all times of who is in training.

1. Curriculum
The endoscopy curriculum will accredit trainees for upper gastrointestinal endoscopy and colonoscopy

2. Requirements for Training
Training in individual training units must include:
- training in radiological and pathological findings as well as the technical aspects of endoscopy
- training in sedation practices pertaining to endoscopy procedures based on standard guidelines
- an understanding of the principles of and practice of cleaning and disinfection of modern endoscopic instruments
- familiarisation with the commonly used drugs for sedation and experience of airway support
- participate in simulator course on entry to the programme
- participate in Basic Endoscopy course in year one
- participate in Colonoscopy Skills course in year 2
Procedure requirements for General Training:

The following requirements must be met for General level of training:

- Upper gastrointestinal endoscopy:
  - perform at least 200 unassisted and completed examinations independently under supervision
  - a minimum of 20 therapeutic procedures excluding polypectomy; of these 10 must involve control of upper gastrointestinal haemorrhage
  - DOPS assessments annually at 1 month, 6 months and at end of year Additional DOPS assessments may be required at the discretion of the trainer

- Colonoscopy:
  - perform a minimum of 200 unassisted, supervised, complete colonoscopies to the caecum in patients with intact colons (i.e. no previous colonic resection)
  - perform snare polypectomies in a minimum of 30 patients
  - achieve at least a 90% caecal intubation rate by the completion of training

Trainees must complete at least the minimum number of unassisted and supervised procedures; it is understood that most trainees will require more procedures than the minimum required to achieve proficiency and satisfy all criteria. Summative DOPS for each procedure will be required prior to certification. These should be carried out under an external examiner.

3. Logbooks

Details of all cases attempted from the commencement of training to the completion of training, including those not successfully completed, must be recorded prospectively and sequentially in the logbooks provided. In each case the indication for endoscopy, sedation used and any complications must be recorded. Logbook entries must be acknowledged by the supervisor.

4. Requirements for training units

Each training unit should have a named lead trainer who may not individually supervise each trainee but whose responsibilities include:

1. Oversee training in endoscopy within that unit
2. Ensure trainees proceed through their curriculum and record supervision and assessment at appropriate times
3. Ensure trainees receive adequate exposure for training

Each trainee will be answerable to the lead trainer.
Requirements for Trainers

Requirements for Lead Trainer

- have a specific interest in diagnostic/therapeutic endoscopy
- Upper GI endoscopy: have personal performance data in line with national standards
  - Lifetime endoscopy number >200
  - Lifetime serious complications <0 5%
  - Mean sedation rates under 70yrs /70+ Midazolam <5mg / <2 5mg
  - Retroflexion in stomach >95%
  - D2 intubation > 95%
- Colonoscopy: have personal performance data in line with national standards
  - Caecal intubation rates on an intention-to-intubate basis ≥90%
  - Mean sedation levels in the under and over-70’s (≤5mg midazolam and ≤50mg pethidine in <70 yrs; ≤2 5mg midazolam and ≤25mg pethidine in ≥70 yrs)
  - Polyp detection and removal rate of ≥10%
- have performed 100 gastroscopies, + 100 colonoscopies within last 12 months
- be able to personally audit trainee’s performance data in line with curriculum
- be recognised by the conjoint committee

Requirements for Trainer:

- personally supervise the trainee’s training
- acknowledge the procedures logged by the trainee
- assess competence after the trainee has independently completed the minimum number of procedures required. It is expected that most trainees will require more than the stated minimum number of procedures
- Attest that the trainee is:
  - Competent to perform the specific procedure and/or specific therapy safely and expeditiously
  - Able to competently integrate indications for endoscopy and endoscopic findings and therapy into patient management
  - Able to understand risk factors, recognise and manage complications and
  - Able to recognise personal and procedural limits
Introduction
Gastrointestinal trainees both physicians and surgeons (hereafter referred to as “trainees”) must learn to investigate and manage a variety of benign and malignant GI disease. The ability to order, perform and interpret GI endoscopy is an integral part of the practice of a gastroenterologist or general surgeon and so dedicated training in GI endoscopy is an inherent component of the teaching of a GI trainee.

The trainee should be technically proficient, understand the indications and contraindications, limitations and complications of the procedure and select patients accordingly. They should have the ability to interpret results and manage the patient. They should be able to manage a safe and efficient endoscopy unit and provide a quality endoscopy service. Trainees should recognize that endoscopic procedures are integral aspects of clinical problem solving and not isolated technical activities. Trainees should understand that endoscopic decision making, technical proficiency and patient management are interdependent.

The purpose of this curriculum is to set out the competencies that a trainee must acquire and demonstrate in order to be considered trained in endoscopy.
Following satisfactory completion of a training programme and after satisfying approved methods of assessment the trainee should be able to:

- Assess and refer patients appropriately for GI endoscopy
- Ensure that informed consent is obtained from the patient prior to endoscopy or to ensure that appropriate steps are taken if the patient cannot give informed consent
- Ensure patient safety is maintained during preparation for the procedure, throughout the procedure and in the period following the procedure
- Demonstrate an understanding of scope reprocessing and accessory handling
- Demonstrate an understanding of the issues involved in running an endoscopic service
- Provide safe and effective conscious sedation where appropriate for endoscopic procedures
- Perform diagnostic and therapeutic endoscopic procedures within the limit of their technical ability but to accepted national and international standards and norms. Specifically the trainee will be expected to diagnose benign and malignant disease found at GI endoscopy and directing appropriate management. Furthermore the trainee will be expected to manage upper and lower GI bleeding and GI polyps
- Collect appropriate specimens and provide direction on their handling
- Provide reports and review results of endoscopic procedures
- Demonstrate multidisciplinary working in their provision of an endoscopy service by appropriate liaison with colleagues in primary care, radiology, pathology, surgery, other medical specialties and professionals allied to medicine as necessary
- Participate in personal and institutional audit of endoscopic practice and outcome
- Demonstrate an awareness of the importance of maintaining their endoscopic skills and safely learning new ones by means such as reflective practice, attendance at teaching courses, attendance with colleagues who are accomplished practitioners and teachers of the procedure in question and periods of self-directed learning or supervised remedial action where their skills are suboptimal

This curriculum document will be divided into two broad domains, generic skills and specific skills. In practice the trainee will have to show proficiency in both these areas as in practice the competent endoscopist must be able to explain the procedure, its risks benefits and alternatives and must then be able to safely complete the procedure to therapeutic intent.
**Generic Skills in Gastrointestinal Endoscopy**

**COMMUNICATION WITH PATIENTS/FAMILY**

The trainee must be able to explain the procedure to the patient in a way that helps the patient to understand what will be done, why, what the alternatives are and the risks and benefits of various options. The trainee must be satisfied that the patient has considered and retained the information and made a decision based on that understanding. The trainee must demonstrate that (s)he understands that consent is a continuous process and must react appropriately if consent is withdrawn at any stage before or during the procedure. The trainee must know how to proceed in the patients’ best interest where the patient is incapable of giving consent either due to mental incapacity or the urgency of a life threatening situation. The trainee must demonstrate understanding of how and when it is appropriate to delegate some or all of the consent process. (See generic sections in HST curriculum)

**LIAISON WITH COLLEAGUES**

The trainee must demonstrate understanding of and competence in interaction with other healthcare professionals such as endoscopy or ward nurses, surgeons, radiologists, general practitioners and referring colleagues. This includes communication of appropriate selection of patients for endoscopy or recommendation of the appropriate alternative investigation, appropriate preparation of the patient, effective liaison with nursing and other staff to ensure satisfactory scheduling and running of endoscopy lists and effective communication of results and the management plan to the referring personnel. The trainee must demonstrate appropriate confidential medical record keeping and ensure that their log book of procedures is kept safe.

**SCOPE REPROCESSING, HANDLING OF ASSESSORIES**

The trainee must know how to handle an endoscope and what is involved in the safe washing and decontamination of the scope and where relevant the accessories. The trainee must demonstrate understanding of safety issues regarding maintenance of washing machines, disinfectants, regular water testing and scope traceability. The trainee must describe knowledge of how to respond to a breakdown in infection control measures in the use or washing of scopes, the accessories or injectable material in the endoscopy unit.

**SEDATION AND PATIENT SAFETY**

The trainee must show understanding of the process of conscious sedation, knowledge of the drugs involved and their potential adverse effects. The trainee must demonstrate safe and effective use of conscious sedation, analgesia and cardio-respiratory monitoring of the patient during the procedure. The trainee must have skills in basic life support and airway protection.

**MANAGEMENT OF A UNIT, WAITING LIST, SCHEDULING**

The trainee must demonstrate an understanding of the issues involved in staffing an endoscopy unit, maintaining a waiting list, scheduling patients, appropriate handling of repeat procedures, patients who Do Not Attend and situations where patients or entire lists must be cancelled.
SPECIFIC SKILLS IN GASTROINTESTINAL ENDOSCOPY

The specific endoscopic procedures that will be covered are:
- OGD including diagnostic and therapeutic as well as PEG, PEG(J) and NJ tube insertion
- Colonoscopy, both diagnostic and therapeutic including rigid and flexible sigmoidoscopy as well as diagnostic proctoscopy

The trainee must have an understanding of the indications for these procedures and the ability to undertake the appropriate therapeutic options. Each trainee should be adequately trained such that by the completion of the training programme(s) he is competent to independently perform diagnostic and therapeutic OGD and colonoscopy.
General Training

Upper Gastrointestinal Endoscopy/OGD

Objectives: The trainee should be able to discuss and demonstrate the following:

- Indications and contraindications for the procedure
- Appropriate patient selection
- The ability to obtain informed consent for these procedures
- Recognition of the anatomic landmarks of the normal oesophagus, stomach and duodenum
- Interpretation of endoscopic findings
- Integration of findings or therapy into the patient management plan
- Diagnosis and management of endoscopic complications
- Recognise personal and procedural limits and know when to request help
- Equipment necessary and available for upper endoscopy
- Proper maintenance and cleaning and preparation of equipment

Specific attention should be focused on understanding and learning the following skills:

- Safe and effective completion of diagnostic OGD to therapeutic intent in more than 90% of cases
- The application and interpretation of non-invasive patient monitoring devices
- The appropriate use of conscious sedation and analgesia
- Technique and indications for hot and cold biopsies
- Proper use of snare cautery
- Retrieval of foreign bodies
- Use of cytology brushes and needles
- Appropriate use of cautery/heater probes
- Options for laser or other ablation of oesophageal tumors
- Indications for and placement of overtubes
- Diagnosis and medical and/or endoscopic management of acute upper gastrointestinal hemorrhage including oesophageal varices with sclerotherapy or band ligation (see detailed therapeutic OGD section)
- Diagnosis and management of polyps
- Indications for and insertion of PEGs (see detailed therapeutic OGD section)
KNOWLEDGE

The following disease processes should be familiar to the trainee, and their appearance demonstrated when feasible during OGD. The trainee should be able to identify and discuss the implications and treatment of the following:

**Oesophagus**
- Oesophageal diverticula
- Hiatus hernia
- Barrett's oesophagus
- Schatzki's rings
- Webs
- Peptic oesophagitis
- Infectious oesophagitis
- Eosinophilic oesophagitis
- Oesophageal varices
- Radiation changes
- Strictures
- Oesophageal carcinoma
- Oesophageal motility disorders
- Oesophageal foreign bodies
- Oesophageal perforations
- Tracheoesophageal fistula

**Stomach**
- hiatus hernia
- anatomic variants and postoperative anatomy
- gastritis
- infections
- ulcers
- gastric carcinoma
- arteriovenous malformations
- gastric varices
- portal hypertensive gastropathy
- Gastric Crohns
- polyps

**Duodenum**
- ulcers
- diverticula
- macroscopic evidence of villous atrophy
- benign duodenal lesions
- inflammatory bowel disease
- malignant duodenal lesions
Therapeutic OGD
Upper Gastrointestinal Bleeding

Objectives: The trainee should be well informed regarding the diagnosis and management of upper gastrointestinal bleeding. This includes knowledge about resuscitation of the patient, endoscopic management as well as appropriate surgical treatment when other interventions have failed.

KNOWLEDGE

The following aspects of the diagnosis and management of upper gastrointestinal bleeding should be practiced and demonstrated:

- Appropriate resuscitative and monitoring measures
- Indications and preparation for upper endoscopy
- Identification of bleeding sites and treatment options available
- Morbidity and mortality associated with endoscopy
- Management of bleeding ulcers in the era of Helicobacter pylori, antiplatelet agents, NSAIDs and their alternatives
- Management of active bleeding, visible vessels, adherent clot
- Use of the GI bleeding morbidity and mortality scores that are widely available eg Rockall, Forrest
- Use of Senstaken Blakemore tube, band ligation, sclerosant, electrocautery, heater probe, endoscopic clips, Argon Plasma Coagulation in the management of bleeding
- Knowledge of the complications of procedures
- Recognition of the failure of endoscopic treatment to control upper GI bleeding and appropriate knowledge of the alternatives
- Appropriate and timely involvement of GI surgeon and radiologist

Objective: The trainees should be familiar with the topics listed below

KNOWLEDGE

- Indications for performing enteral access, including neurologic, nutritional, mechanical, and oncologic reasons
- Appropriate candidates for PEG and PEG/J based on medical condition, nutritional status, anatomic situation, aetiology of inability to maintain adequate oral intake
- Patient preparation, including correct selection, informed consent, preoperative antibiotics, other tests as needed
- Techniques of PEG placement and knowledge of the role of radiologic placement techniques
- Techniques of percutaneous jejunostomy, including primary placement and conversion of a PEG to PEJ
- Techniques of nasojejunal tube placement and indications for use
- The use and types of buttons available, their indications, maintenance, and technique of changing them
- Complications possible from PEG or PEJ, their diagnosis and management (including aspiration, perforation, inadvertent early removal, gastric wall and body wall necrosis, and leakage at the site)
Lower Gastrointestinal Endoscopy

Objective: To become experienced and competent in sigmoidoscopy (rigid and flexible) and colonoscopy. Trainees should be able to discuss and demonstrate diagnostic sigmoidoscopy and colonoscopy, to manage lower gastrointestinal bleeding, polyps, and clips.

**KNOWLEDGE**

To demonstrate:

- Understanding of the indications and contraindications for these procedures and how to perform them to an acceptable standard
- The ability to obtain informed consent for these procedures and how to deal with consent withdrawal at all stages including during the procedure,
- Selection of the most appropriate bowel preparation
- Competence in patient selection and management of medical issues during preparation and performance of the lower GI endoscopy eg management of diabetes, anticoagulation, patients in need of antibiotic prophylaxis
- Knowledge of the benefits and limitations of the alternatives to colonoscopy, the therapeutic options available as part of lower GI endoscopy, and the role of colonoscopy and other screening modalities in bowel cancer screening
- Knowledge of the quality measures used to assess colonoscopic competence,
- Knowledge of sedative and analgesic options for lower GI endoscopy,
- Competence in using a variety of means of assessing, dyeing, tatooing and removing and retrieving polyps,
- Competence in the recognition of malignant transformation in polyps and recognition of polyps that cannot or should not be removed endoscopically,
- Competence in the recognition of early and late complications of colonoscopy and or polypectomy and the appropriate investigation and management of colonoscopy complications
- Diagnosis and management of acute and chronic lower gastrointestinal haemorrhage

**Working knowledge of instrumentation and equipment**

- Scopes:
  - Anoscopes
  - Sigmoidoscopes (rigid and flexible)
  - Colonoscopes
  - Cleaning and disinfecting scopes
  - Accessories
  - Biopsy forceps (hot and cold)
  - Snares
  - Cautery and heater probes
  - Cytology brushes and needles
  - Dye, dye spray catheters, tatooing
  - Lasers and Argon Plasma Coagulation
  - Endoscopic clips
  - Retrieval baskets and nets
Diagnostic Endoscopic Techniques:

- Independently perform flexible sigmoidoscopy
- Knowledge of the limitations of such examinations
- Independently performing colonoscopy including the identification of landmarks including:
  - Anal verge
  - Rectosigmoid junction
  - Splenic and hepatic flexure
  - Appendix orifice
  - Ileocaecal valve and the ileum
- Recognition and correct of loops
- Technique of torque steering
- Use of change of patient position, external compression and the inspection of folds and suctioning of pools to clear the view on adequate withdrawal
Therapeutic Techniques

**KNOWLEDGE**

**Biopsy**
- Performing colonoscopic biopsy
- Working knowledge of appropriate specimen handling

**Polypectomy**
- Independently perform polypectomy upon completion of training
- Explain the risks and benefits of polypectomy to patients
- Capable of identifying polyps as flat, sessile, pedunculated
- Knowledge of the features that indicate hyperplastic polyps versus adenomas and polyps with high risk of containing malignancy
- Appropriately use dye spray or tattooing in polyp marking and visualisation
- Set up the electrocautery unit and identify and correct common technical failures
- Select and perform the appropriate form of polypectomy according to the polyp size, location and form
- Select and manipulate the appropriate range of endoscopic accessories to complete the polypectomy and specimen retrieval
- Understand the polypectomy options including cold biopsy, cold snare, hot snare, endomucosal resection, piecemeal removal, appropriate use of clips, injections and loops prior to or during polypectomy
- Recognition of large polyps or those difficult to access or requiring special manoeuvres to remove and referring these for advanced polypectomy, surgery, or other treatment where necessary

**Treatment of lower GI bleeding**
- Demonstrate competence in the diagnosis and management of lower GI bleeding including the use of endoscopic haemostasis
- Use of injection of vasoconstrictors, banding, clipping and placement of loops

**Colonoscopic Decompression of Pseudo-Obstruction and Volvulus**
- Independently perform colonoscopic decompression of these conditions

**Colonoscopic control of lower gastrointestinal bleeding**
- Correctly identify patients who are bleeding from the lower GI tract
- Be familiar with resuscitation of the patient and triage to the appropriate investigation pathway i.e colonoscopy, (CT)angiography, radionuclide scanning
The following disease processes should be familiar to the trainee, and their appearance demonstrated when feasible during sigmoidoscopy and colonoscopy. The trainee should be able to identify and demonstrate the treatment of the following:

Colonic polyps

- False or suction polyps
- Epithelial polyps
  - Adenomatous polyps
    - Tubular
    - Tubulovillous
    - Villous
    - Adenoma-carcinoma sequence
    - Appropriate polyp follow up, advise on family screening and need for other GI or non GI surveillance
  - Hyperplastic
  - Inflammatory
  - Juvenile

- The polyposis syndromes
- Submucosal lesions
- Endometrial implants

Colonic Malignancies

- Adenocarcinoma
  - Appearances
  - Biopsy and cytology
  - Synchronous adenomas and cancers
  - Surveillance
  - Family screening
  - Role of genetic studies

- Non adenocarcinoma malignancy of the bowel
- Direct extension of non GI malignancy eg
- Metastases to the bowel

Inflammatory Disease

- Ulcerative colitis
  - Appearance and grading
  - Cancer surveillance
  - Dysplasia

- Crohn's disease
  - Appearance
  - Features distinguishing from UC
  - Cancer surveillance

- Viral
- Bacterial and amoebic colitis
- Antibiotic associated colitis
- Ischemic colitis
- Radiation colitis/proctitis
- Rare lesions
  - Tuberculosis
  - Behcet's disease
  - Schistosomiasis
  - Worms

- Drug induced
Colonic Strictures

- Aetiologies
  - Diverticular
  - Malignant
  - Inflammatory bowel disease
  - Ischaemic
  - Radiation
  - Post operative
  - Infective

Colonic Bleeding

- Aetiologies
  - Neoplastic
    - Adenomas
    - Malignant strictures
    - Leiomyomas/sarcomas
  - Inflammatory bowel disease
  - Ischemic colitis
  - Radiation colitis
  - Diverticular disease
  - Vascular
    - Angiodysplasia
    - Hemorrhoids
    - Colonic varices
    - Hereditary hemorrhagic telangiectasias
    - Cavernous hemangioma

Treatment

- Role of colonoscopy
- Electrocautery
  - Monopolar
  - Bipolar
- Heater probe
- Injection
- Argon beam
- Laser
- Vasopressin
Summary of Endoscopy Curriculum
The trainee must study an approved curriculum in gastrointestinal endoscopy and demonstrate competence as measured by DOPS.

The core competencies will be:

- To assess and refer patients appropriately for GI endoscopy
- To ensure that informed consent is obtained from the patient prior to endoscopy or to ensure that appropriate steps are taken if the patient cannot give informed consent
- To ensure patient safety is maintained during preparation for the procedure, throughout the procedure and in the period following the procedure
- To demonstrate an understanding of scope reprocessing and accessory handling
- To demonstrate an understanding of the issues involved in running an endoscopic service
- To provide safe and effective conscious sedation where appropriate for endoscopic procedures
- To perform diagnostic and therapeutic endoscopic procedures within the limit of their technical ability but to accepted national and international standards and norms. Specifically, the trainee will be expected to diagnose benign and malignant disease found at GI endoscopy and direct its appropriate management. Furthermore, the trainee will be expected to manage upper and lower GI bleeding, upper GI strictures and GI polyps
- To correctly identify pathology found at endoscopy and to direct appropriate management following its discovery
- To collect appropriate specimens and to provide direction on their handling
- To provide reports and review results of endoscopic procedures
- To participate in personal and institutional audit of endoscopic practice and outcome
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.

<table>
<thead>
<tr>
<th>Curriculum Requirement</th>
<th>Required/Desirable</th>
<th>Minimum Requirement</th>
<th>Reporting Period</th>
<th>Form Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1 - Training Plan</td>
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</tr>
<tr>
<td>Personal Goals Plan (Copy of agreed Training Plan for your current training year signed by both Trainee &amp; Trainer)</td>
<td>Required</td>
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<td>Training Post</td>
<td>Personal Goals Form</td>
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<tr>
<td>On Call Rota Unselected Admissions for General Internal Medicine (Completed within first 3 years)</td>
<td>Required</td>
<td>480</td>
<td>Training Programme</td>
<td>Clinical Activities</td>
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<tr>
<td>GIM Year</td>
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<tr>
<td>Dual Specialty Year</td>
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<td>Section 2 - Training Activities</td>
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<tr>
<td>Outpatient Clinics</td>
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<tr>
<td>General Gastroenterology clinic (minimum 1 per week)</td>
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<td>Year of Training</td>
<td>Clinical Activities</td>
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<td>Ward Rounds/Consultations</td>
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<td>Consultant led (minimum 2 per week)</td>
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<td>Year of Training</td>
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<tr>
<td>SpR led (2 per week)</td>
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<td>80</td>
<td>Year of Training</td>
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<td>Emergencies/Complicated Cases</td>
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<td>Must include one of each of the following Gastrointestinal emergencies cases</td>
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<td>GI infections</td>
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<tr>
<td>Acute abdomen</td>
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<td>Bleeding oesophageal varices</td>
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<td>Bleeding peptic ulcer</td>
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<tr>
<td>Fulminant colitis</td>
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<tr>
<td>Cholangitis</td>
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<tr>
<td>Liver failure</td>
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<td>Acute pancreatitis</td>
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<td>Procedures/Practical Skills/Surgical Skills</td>
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<td>Non-endoscopic procedures - Paracentesis</td>
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<td><strong>Endoscopy Module</strong></td>
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<td>Upper Gastrointestinal Endoscopy (OGD)</td>
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<td><strong>Colonoscopy</strong></td>
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<td>Diagnostic Colonoscopy</td>
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<td>Colonoscopy/OGD</td>
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<td>Therapeutic Colonoscopy</td>
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<td>Training Programme</td>
<td>Colonoscopy/OGD</td>
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<td>Procedures</td>
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<td>Emergency DC cardioversion</td>
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<td>Joint aspiration</td>
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<td>Lumbar puncture</td>
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<td>Abdominal paracentesis – under ultrasound</td>
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<td>Femoral venous line placement – under ultrasound</td>
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<td>Pleural aspiration – under ultrasound</td>
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<td>Intercostal drain Insertion – under ultrasound</td>
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<td><strong>Additional/Special Experience Gained (Advanced Options)</strong></td>
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<td>Advanced Gastroenterology</td>
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<td>Advanced Hepatology</td>
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<td>Elective (free option e.g. genetic study)</td>
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<td>Chronic Cases/Long term care</td>
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<td>See the following examples: Chronic liver disease; Liver transplantation; Management of ascites; Irritable bowel syndrome; Chronic pancreatitis; AIDS; Dysphagia; Ulcer disease; Oesophageal &amp; Gastric cancer</td>
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<td>ACLS</td>
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<td>HST Leadership in Clinical Practice (year 3+)</td>
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<td><strong>(Online)</strong></td>
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<td><strong>Non – Mandatory Courses</strong></td>
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<td><strong>Study days</strong></td>
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<td>See the following examples: Laboratory tests of GI Function; Care of the cirrhotic patient; Update on HBV; Update on oesophageal disease; BSG; Ethical challenges in gastro; PUD; IBD update; Practical issues in ERCP; Complications of PHT</td>
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<tr>
<td>General Internal Medicine specialty year (Minimum of 6 GIM study days: 3 ‘core’ and 3 ‘non-core’)</td>
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<td>Years 1 – 3 for non-GIM Years (Minimum of 3 GIM study days per year: 2 ‘core’ and 1 ‘non-core’)</td>
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<td>3</td>
<td>Year of Training</td>
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<td><strong>Participation at In-house activities</strong> minimum of 1 per month from the categories below:**</td>
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<tr>
<td>Grand Rounds (minimum of 2 per month)</td>
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<td>Attendance at Hospital Based Learning</td>
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<td>Journal Clubs</td>
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<td>Year of Training</td>
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<tr>
<td>Radiology/Pathology conference/MDT</td>
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<tr>
<td>Pathology conference</td>
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<td><strong>Examinations</strong> e.g. European Fellowship</td>
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<td><strong>Delivery of Teaching</strong></td>
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<td>Tutorial</td>
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<td>Bedside teaching</td>
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<tr>
<td><strong>Research</strong></td>
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<td>Research Activities</td>
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<tr>
<td><strong>Audit activities and Reporting</strong> (1 per year either to start or complete, Quality Improvement (QI) projects can be uploaded against audit)</td>
<td>Required</td>
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<td>Year of Training</td>
<td>Audit and QI</td>
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<tr>
<td><strong>Publications</strong></td>
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<tr>
<td><strong>Presentations</strong> (1 oral or poster per year)</td>
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<td>Year of Training</td>
<td>Additional Professional Experience</td>
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### Curriculum Requirement

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<tr>
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<th>Minimum Requirement</th>
<th>Reporting Period</th>
<th>Form Name</th>
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<tbody>
<tr>
<td>National/International meetings (minimum 1 per year)</td>
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### Section 4 - Assessments

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<td>OGD</td>
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<td>Colonoscopy</td>
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<td>BIPAP/CPAP</td>
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<td>Communication e.g. chairing care planning meeting for complex discharge, procedure consent</td>
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<td>DC cardioversion</td>
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<td>ECG interpretation</td>
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<td>Joint aspiration</td>
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<td>Lumbar puncture</td>
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<td>Abdominal paracentesis under ultrasound</td>
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<tr>
<td>Pleural aspiration under ultrasound</td>
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<td><strong>See the following examples:</strong> Upper GI Tract; Upper abdominal pain/dyspepsia; Upper GI Symptoms and their management; Nausea &amp; vomiting; Assess, investigate and stage upper and lower GI Cancers; Laboratory tests of GI Function; Malabsorption, anorexia and weight loss; Short bowel syndrome; Anaemia; Abdominal pain; Jaundice; Liver failure and encephalopathy; Diagnose and manage Upper gastrointestinal bleeding; Constipation, diarrhea; Diagnosis and management of rectal bleeding &amp; perianal fistula; recognition and referral for liver transplant; management of complex IBD</td>
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<td><strong>Mini-CEX</strong> (At least two Mini-CEX assessments)</td>
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<tr>
<td>Quarterly Assessments/End-of-Post Assessments</td>
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