



FACULTY OF PATHOLOGY
ROYAL COLLEGE OF PHYSICIANS OF IRELAND

HIGHER SPECIALIST TRAINING IN HAEMATOLOGY



This curriculum of training in Haematology was developed in 2010 and undergoes an annual review by Dr. Susan O'Shea and Dr. Catherine Flynn, National Specialty Directors, Dr. Ann O'Shaughnessy, Head of Education and Professional Development and by the Haematology Specialty Training Committee. The curriculum was approved by the Faculty of Pathology.

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Introduction

The curriculum for Haematology specialist medical training in Ireland is based upon the requirements for competence in both clinical and laboratory practice set by the Medical Council. Successful completion of the Haematology Specialist Registrar programme depends upon satisfactory formal annual reviews and attainment of the FRCPath Diploma in Haematology awarded by the Royal College of Pathologists. The curriculum is not exhaustive and all trainees are expected to keep abreast of new developments in the field. On graduating from the training programme, doctors will be expected to demonstrate expertise in general laboratory and clinical haematology and competence in specialist areas, where an ability to initially diagnose and manage complex patients must be shown. As haematology practice in Ireland is very similar to that of the UK and given that trainees are expected to complete the FRCPath diploma, the Irish curriculum follows that of the Joint Royal Colleges of Physicians Training Board in the UK. Trainees are expected, however, to be aware of differences in structure and practice between the two countries.

The curriculum has a basic modular design, in two phases, and lasts a minimum of five years. The first phase of approximately two years aims to give the trainee a broad experience in general haematology under relatively close supervision. The first 3-4 months is designed to give an understanding of the basic concepts of haematology in order that the trainee can safely perform and give advice, whilst remaining under close supervision.

During the second phase of two to three years, the trainee shall acquire greater independence in haematology practice. Throughout this period, the more specialised areas of transfusion, transplant, coagulation and paediatrics will be encountered. Towards the end of training, a trainee may wish to develop a more in-depth knowledge in certain specialties.

Significant experience may be gained by taking time out-of-programme to study and work at other institutions, often outside of Ireland. This is usually encouraged but must be discussed in advance with the National Specialty Director (NSD). Research can also considerably enhance training – credit of up to one year is given for time spent in haematology related projects, however a trainee may wish to extend this in order to complete more in-depth projects, preferably with journal publications and either an MD or PhD as an outcome. Again, advice should be sought before entering research programmes.

Haematology specialist training may be located both in and outside of Ireland. A minimum of 36 months must be spent in Ireland in order to gain the Certificate of Satisfactory Completion of Specialist Training (CSCST). The National Specialty Director will coordinate training sites within Ireland, based upon requirements to fulfil the curriculum. Trainees should expect to spend a minimum of one year in General or Regional Hospitals but usually no more than two. Where possible, trainee preferences are taken into account but curriculum requirements take precedence. Those failing to communicate their preferences in a timely manner will not be considered.

In addition to local training, regional and national events also occur. These include training days, videoconference tutorials, meetings and conferences. Some of these are essential components of the curriculum and trainees will be expected to attend barring exceptional circumstances. Records of attendance may be taken into account at the Annual Review but trainees will be clearly notified in advance of essential events. In contrast to unrestricted educational grant sponsored events, Pharmaceutical company organised meetings may be useful but are not deemed mandatory.

Dr Andy Hodgson
National Specialty Director for Haematology, RCPI
2009

Introduction

The discipline of Haematology encompasses both clinical and laboratory aspects. Registration as a specialist in Haematology (and award of a CSD) will require satisfactory completion of a structured training programme with both clinical and laboratory components.

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

Aims

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

Competencies, at a level consistent with practice in the specialty of Haematology, 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 describes the knowledge, skills, attitudes and behaviours expected by patients and society from individuals during the practice of their profession (*as a doctor*). It includes such concepts as:

- The skills of lifelong learning and the maintenance of competence
- Information literacy
- Ethical behaviour
- Integrity, honesty
- Altruism
- Service to, justice and respect for others
- Adherence to professional codes

Entry Requirements

Applicants for Higher Specialist Training (HST) in Haematology must have completed a minimum of two years Basic Specialty Training (BST) in approved posts and obtained the MRCPI or (UK). For MRCPI or UK holders, BST* should consist of a minimum of 24 months involved with direct patient care.

BST in General Internal Medicine (GIM) is defined as follows:

A minimum of 24 months in approved posts, with direct involvement in patient care and offering a wide range of experience in a variety of specialties.

At least 12 of these 24 months must be spent on a service or services in which the admissions are acute and unselected.

For further information please review the BST curriculum

Those who do not hold an MRCP or equivalent qualification must provide evidence of appropriate knowledge, training and experience similar to the above, particularly with regard to dealing with acute (medical) conditions.

Duration & Organisation of Training

The duration of HST in Haematology is 5 years, one year of which may be gained from a period of full-time research.

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

Minimum Procedures:

No particular order or sequence of training will be imposed and programmes offered should be flexible i.e. capable of being adjusted to meet trainees' needs. The earlier years will usually be directed towards acquiring a broad general experience of Haematology 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 Haematology this should be accommodated as far as possible within the training period, re-adjusting timetables and postings accordingly.

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

Flexible Training

Trainees who are unable to work full-time are entitled to opt for flexible training programmes. EC Directive 93/16/EEC requires that:

Part-time training shall meet the same requirements as full-time training, from which it will differ only in the possibility of limited participation in medical activities to a period of at least half of that provided for full-time trainees;

The competent authorities shall ensure that the total duration and quality of part-time training of specialists are not less than that of full-time trainees.

The above provision must be adhered to. A flexible trainee should undertake a pro rata share of the out-of-hours duties (including on-call and other out of hours commitments) required of their full-time colleagues in the same programme and at an equivalent stage.

for details of appointment and funding arrangements for flexible trainees, please see the current issue of the HMT training Handbook.

Training Programme

The training programme offered will provide opportunities to fulfil all the requirements of the curriculum of training for Haematology programmes will offer posts in both general hospitals and teaching hospitals. Each post within the programme will have a named trainer/educational supervisor and programmes will be under the direction of the National Specialty Director for Haematology. 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.

Teaching, Research & Audit

All trainees are required to participate in teaching. They should also receive basic training in research methods, including statistics, so as to be capable of critically evaluating published work.

A period of supervised research relevant to Haematology is considered highly desirable and will contribute up to 12 months towards the completion of training. Some trainees may wish to spend two or three years in research leading to a MSc, MD, or PhD, by stepping aside from the programme for a time. Additional educational credit may be granted at the discretion of the NSD and STC for clinical work relevant to the Curriculum undertaken during the second and subsequent years of this research, up to a maximum of six months credit. For those intending to pursue an academic path, an extended period of research may be necessary in order to explore a topic fully or to take up an opportunity of developing the basis of a future career. Such extended research may continue after the CSCST is gained. However, those who wish to engage in clinical medical practice must be aware of the need to maintain their clinical skills during any prolonged period concentrated on a research topic, if the need to re-skill is to be avoided.

Trainees are required to engage in audit during training and to provide evidence of having completed the process.

“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 confirm these competencies during Higher Specialist Training.

Logbook

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

Each trainee is responsible for maintaining an up-to-date record of progress through training and compiling a portfolio of achievements for presentation at annual assessment review. The trainee also has a duty to maximise opportunities to learn, supplementing the training offered with additional self-directed learning in order to fulfil all the educational goals of the curriculum. Trainees must co-operate with other stakeholders in the training process. It is in a SpR's own interest to maintain contact with the Medical Training Office and Dean of Higher Medical Training, and to respond promptly to all correspondence relating to training. “Failure to co-operate” will be regarded as, in effect, withdrawal from the HST's supervision of training (see the HST Training Handbook).

At annual review, the Training Record will be examined. The results of any assessments and reports by educational supervisors, filed in the portfolio submitted, together with other material capable of confirming the trainee's achievements, will be reviewed.

Assessment Process

The methods used to assess progress through training must be valid and reliable. The Haematology 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 HMT 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.

Annual Review – The PeTRA Process

An annual review of progress through training will be undertaken on behalf of HST. The training record will be examined at the review. Assessments and reports by educational supervisors, confirmation of achievements and the contents of the portfolio will be reviewed. A decision is made regarding progress, as detailed in the Training Handbook. At some or all of these annual reviews a non-specialty assessor will be present capable of addressing core competencies. An external assessor will participate in the penultimate year review (PYA) which is held to a standard format usually 12-18 months before the planned end of training. The award of a CSCST will be determined by a satisfactory outcome after completion of the entire series of PeTRA assessments.

Each year trainees undergo a formal review by a panel including the Dean, the National Specialty Director, and whenever possible, a representative member from another specialty. The panel will review in detail the training record, will explore with the trainee the range of experience and depth of understanding which has been achieved and consider individual trainer's reports. Attendance by the trainer is highly desirable and essential for the first year and PYA assessments. An opportunity is also given to the trainee to comment on the training being provided; identifying in confidence any deficiencies in relation to a particular post.

A decision on progress through training is reached at each of these annual assessments. The determination and the evidence considered is entered on one of a set of standard PeTRA Forms as follows:

- successful completion of a year of training – PeTRA Form C
- completion but with a need for additional targeted training – PeTRA Form C₁
- repeat training year – PeTRA Form C₂

The penultimate year assessment (the PYA) reviews the evidence provided in the logbook on the results of the assessment methods employed (see above); the evidence provided will be further questioned during the assessment. At the PYA, the panel identifies the residual training outstanding, advising adjustments to the training schedule as necessary, and finally confirming the estimated date for completion (PeTRA Form T and CSCST issuance).

Facilities

A consultant trainer/educational supervisor has been identified for each approved post. He/she will be responsible for ensuring that the educational potential of the post is translated into effective training which is being fully utilized. The training objectives to be secured should be agreed between trainee and trainer at the commencement of each posting in the form of a written training plan. The trainer will be available throughout, as necessary, to supervise the training process.

All training locations approved for HST have been inspected by the medical training department. Each must provide an intellectual environment and a range of clinical and practical facilities sufficient to enable the knowledge, skills, clinical judgement and attitudes essential to the practice of Haematology to be acquired.

Physical facilities include the provision of sufficient space and opportunities for practical and theoretical study; access to professional literature and information technologies so that self-learning is encouraged and data and current information can be obtained to improve patient management.

Trainees in Haematology should have access to an educational programme of e.g. lectures, demonstrations, literature reviews, multidisciplinary case conferences, seminars, study days etc, capable of covering the theoretical and scientific background to the specialty. Trainees should be notified in advance of dates so that they can arrange for their release. For each post, at inspection, the availability of an additional limited amount of study leave for any legitimate educational purpose has been confirmed. Applications, supported if necessary by a statement from the consultant trainer, will be processed by the relevant employer.

**Teaching, Learning & Assessment
Methods**

Teaching, Learning & Assessment Methods

This section relates to the clinical competencies that are required for your training. During your training you will be assessed by methods such as miniCEX, DOPS and Case Based Discussion. It is extremely important that you read this so that you are aware of the requirements of your training.

Record of Training

The evidence required to confirm progress through training includes:

- Details of the post(s) occupied, the training plan agreed with weekly timetables and duty rosters; case-mixes and volumes, numbers of practical procedures and outcomes.
- Confirmation of attendance at events in the educational programme, at departmental and inter-departmental meetings and other (optional) educational events.
- Confirmation (certificates) of attendance at subject-based/skills-training/instructional courses; (certificate or diploma from appropriate authority).
- Recorded attendance at conferences and meetings.
- A properly completed logbook with entries capable of testifying to the training objectives which have been attained and the standard of performance achieved.
- Evidence of regular contact with trainers, i.e. appraisals; confirmation of workplace/clinical encounters significant in relation to activities specified in the curriculum.
- Evidence of personal study, e.g. journals taken, membership of specialist society, web-based research, special interest developed.
- CPD/CME activity, returns, study leave records.
- Copies/examples of material prepared for presentation e.g. for audit, teaching, best-practice development, collection of cases, topic reviews, output from research.
- Educational supervisor's reports on **observed** performance (in the workplace): of duties, practical procedures, of presentations made and teaching activity: of advising and working with others, of standards of case notes, correspondence, communication with others e.g. at handover. Results of Mini-CEX, CBDs and DOPS encounters.
- Collective opinions – as used to ascertain a range of generic skills e.g. professionalism, maintaining trust.
- Result (diploma, certificate from recognised body) of completed knowledge-based test and/or practical examination.

Assessment of Competencies

The competencies to be acquired during training are listed within the Generic and Specialty Sections of this Curriculum.

The competencies will be assessed on a regular basis during your training programme and must be documented in the Training Record (*Logbook*). Progress through training is confirmed by entries which must be authenticated/ countersigned by the educational supervisors.

Documents which provide evidence of satisfactory completion of other necessary components of the curriculum must be filed in the portfolio of achievements compiled by the trainee and reviewed annually.

A report from the educational supervisor will be included. This will be prepared following appraisal, based on his/her assessment of observed performances by the trainee of practical procedures and other duties. The standard of case notes, summaries, correspondence and other material, of presentational ability can also be the subjects of such report, as could the trainee's enthusiasm, judgement, team working or professionalism.

The trainer's report will also be based on a structured pro-forma, as used in the short form of clinical evaluation exercise (*Mini-CEX*); following observation and appraisal of the performance of a procedure (*DOPS*); after discussion of the (*clinical*) reasoning involved in the management of a problem faced by a trainee (*Case-Based Discussion, CBD*).

The results of any summative tests of knowledge taken, e.g. *MCQs and problem-solving tests, including self-administered tests*, should be filed and retained. Confirmation of the acquisition at a particular stage of a specified professional examination may be required in order to make progress towards the completion of training.

Learning Methods

This section gives examples of the learning methods that can be used as guidance to acquire competencies as they appear in the curriculum.

Experiential:

- Working under supervision
- Documenting/reporting progress (*case notes*), preparing summaries (*discharge notes*) other professional correspondence; communicating information to patients/to other health professionals.
- Consults, referrals between departments, handover, providing cross-cover.
- (*In certain specialties*), procedure room and investigation/assessment sessions offer practical opportunities to learn and develop skills under supervision and to exercise judgement when to seek assistance.

Self-directed learning:

- Curriculum-based personal study *e.g. textbooks, journals, literature search, retrieval of web-based information.*
- Information gathering and evaluation
- Active participation in audit
- Tests of knowledge

Group learning:

- Workplace discussions
- Multidisciplinary meetings
- Programmed meetings within the workplace

Performance based:

- Observing, learning, assisting, performing, demonstrating a technique or practical procedure.
- Simulations, role-play

Learning through teaching and research:

- Teaching, giving tutorials, lecturing.
- Mentoring and supervising junior colleagues and other staff.
- Presenting at meetings - local and international.
- Research
- Publication

External Courses:

- Specialty study/training days
- Attending mandatory and non-mandatory courses
- Attendance at seminars, relevant conferences, regional, national and international meetings.

Reflection:

- In your logbook there is an area to record reflections on training, learning, clinical events and career discussions. In recent years the importance of reflecting as part of the learning process on what you are doing has been shown to improve professional practice. Reflection on what you know and don't know helps to understand that learning is individual and reflection of professional activities can be used to highlight your strengths, weaknesses and areas for development.

Assessment Methods

Mini-CEx

Definition: Mini-CEx is designed to provide feedback on skills essential to the provision of good clinical care by observing an actual clinical encounter.

Description: The mini-CEx is a “snapshot” of a doctor/patient interaction and is based on a 15 minute observation of a single interaction. It is designed to assess the clinical skills and behaviors of trainees assessing such skills as history taking, physical examination skills, clinical judgement, professionalism, organisation/efficiency and overall clinical care. Not all elements will be assessed on each occasion. Immediate feedback should be provided after each encounter by the observer assessing the trainee.

Frequency of assessment: At least two miniCEx assessments should take place in each year of training. Where appropriated, one should be based in an outpatient setting and one in an acute setting. The assessments include assessment of skills in history taking, physical examination, appropriate use of investigations, cost-effectiveness, interpretation of investigations, making medical notes, making a diagnosis, treatment and management of disease, appropriate referral to other specialities, standards of care.

Competencies assessed:

- Consideration/Professionalism:
- Recognises/accepts patient’s rights (to consent, confidentiality, information). Establishes trust, shows professional approach.
- Communication:
 - Informs, explains, advises using appropriate language. Obtains consent, enlists patient’s co-operation.
- Interviewing Skills:
 - Active” listening facilitating relevance; effectively using questions, responding to non-verbal clues.
- Examination Skills:
 - Prepares patient, minimises discomfort/unease. Proceeds logically, efficiently, thoroughly, completely.
- Judgement:
- Correctly identifies/lists problems, prioritises actions in realistic and timely schedule.

Opportunities for assessment: The assessment should take place in the usual place of work (*in-patient, clinic, office or department*) where the assessor must directly **observe** the trainee’s performance.

DOPS:

Definition: Directly Observed Procedural Skills (DOPS) is a method, similar to the mini-CEX that has been designed specifically for the assessment of practical skills. DOPS assess the capabilities of a trainee while they perform a procedure.

Description: The DOPS is a structured assessment of actual performance. Each DOPS should represent a different procedure. The trainee chooses the timing, procedure and observer.

Frequency of Assessments: The number and frequency of assessments of procedural skills will vary from specialty to specialty.

Competencies assessed:

- Understanding of Procedure:
 - Relevant anatomy; purpose, indications, contra-indications; outcomes, risks, complications; choice of methods available, technique of procedure.
- Consideration for the Patient:
 - Gives reassurance, minimises discomfort, explains procedure fully; confirms informed consent obtained.
- Preparation:
 - First re-checks all relevant details correct. Safety check; instrumentation, equipment (drugs); positioning; cleansing/aseptic technique; sedation, analgesia, anaesthesia confirmed.
- Professional/technical ability:
 - Dexterity, accuracy, efficiency; obtains, interprets diagnostic material/information; informs, directs staff courteously; recognises own limitations; seeks help where appropriate; manages risk.
- Post-Procedure:
 - Completes documentation; regulates recovery phase, observations; anticipates/deals with complications. Informs/counsels patient/relatives.
- Overall ability to perform Procedure:
 - Ability to complete/undertake procedure; technical abilities as demonstrated; appropriately confident, team/ leadership skills.

Opportunities for assessment: While supervising, assisting, observing actual performance in appropriate setting (office, theatre, day procedure, ICU etc.). The assessment should be made under appropriate conditions e.g. with all equipment and personnel necessary to support the procedure.

Case Based Discussion (CBD)

Definition: Case-based discussion (CBD) is used to enable the documenting of conversations about, and presentations of, cases by trainees. This activity happens throughout training, but is rarely conducted in a way that provides systematic assessment and structured feedback. CBD is used to evaluate core skills that can be demonstrated during an interactive discussion based on a single case in which the trainee has been actively involved.

Description: CBD is designed to assess clinical decision-making and the application or use of medical knowledge in relation to patient care for which the trainee has been directly responsible. It also enables the discussion of the ethical and legal framework of practice, and in all instances, it allows trainees to discuss why they acted as they did. Although the primary purpose is not to assess medical record keeping, as the actual record is the focus for the discussion, the assessor can also evaluate the record keeping in that instance. The case for discussion can either be selected by the trainee or chosen by the assessor. The assessment will be based on oral discussion and written information available. It includes a bi-lateral (trainee's and trainer's) critical appraisal of the reasoning and judgements made, and of the management of the case. Whenever possible the assessment should include issues such as disease notification, health promotion and screening.

Frequency of Assessment: This method of assessment has not been validated as yet, however it is a very useful method and can be easily incorporated into journal clubs, post-graduate teaching sessions or on-line etc

Competencies assessed:

- **Problem Definition:**
 - All relevant facts established, from current/previous history, investigations, interventions; reports, correspondence reviewed.
- **Record Keeping:**
 - Legible, tidy, legally defensible records seen.

- **Reasoning:**
 - Appropriately selected, sequenced investigations/procedures planned. Evidence-based, logical judgements made; (differential) diagnosis established; action plan made with realistic goals.
- **Case Management:**
 - Effective, safe (responsible) prescribing; aware of protocols/guidelines, best practice; monitoring progress, handling complications/mistakes; timely, appropriate referrals, case closure.
- **Reflective Practice:**
 - Shows analytical, constructive approach to case, willingness to learn; acknowledges and prepared to consider other management options; aware of change, possible advances, when to seek help.

Opportunities for assessment: The presentation should take place in a suitable environment, with due consideration given to the patient's sensitivities, to confidentiality e.g. in any ward or clinical setting; an office, side- or seminar-room may be found convenient. Case presentations and discussions, e.g. at handover, ward-rounds (inter-) departmental meeting.

Mandatory Training Courses:

(Note: this list only includes the generic mandatory courses)

Mandatory Communication course:

To be completed in Year 1. The course is a short 1 -2 hour course at the start or the end of specialty study days to reduce time spent away from the hospitals.

Communication skills will be assessed as part of the miniCEX assessments

Audit:

Mandatory 1/2 day on audit to be completed in Year 1.

Audit reports are submitted on a yearly basis

Ethics:

Four mandatory study days are to be completed during the training programme. Three study days are for all specialities - Ethics & Law, Ethics in Research and Professionalism. The fourth day 'End of life' is for all specialties except Public Health Medicine, Occupational Medicine and Histopathology who have a speciality specific ethics day.

Leadership Skills:

Mandatory 3 day course to be taken in year 3 - 5.

ACLS:

ACLS compliant in appropriate specialties

Specialty Study Days

The number and topics of the specialty study days are listed as part of the specialty curricula.

Annual Assessments

Consultant feedback:

End of year assessment completed by the Trainers include assessment in areas such as: Team working skills, Leadership skills, Handling of complaints, conflict management

Questions such as the following are included in the assessment form:

- Have there been any complaints from nursing staff, AHP, patients regarding this trainee or their team?
- If so:
 - How did the trainee respond to a complaint about a member of his/her team?
 - How did the trainee respond to a complaint against him/her?.

- Have you any serious issue with your SpR?
- Where there any instances of serious conflict?
- Do you think he/she behaved appropriately?

Audit:

It is difficult to complete the audit cycle in a one year period. Each year the trainee should take part in an audit - either to develop and start an audit or to review and change practice as a result of an audit - the complete audit cycle should be understood. In hospitals that have audit systems set up, the trainee should complete a full audit.

Trainees will be required to submit a full audit report and will be encouraged to present audit results at local, national or international meetings.

Attendance at In- Hospital Speciality Radiology conferences**Time spent in Laboratory/Pathology or attendance at Laboratory/Pathology conferences**

(Depending on specialty)

Committee membership :

Many specialty curricula have identified participation in committees.

Teaching skills

Number of undergraduate and postgraduate tutorials, number of membership tutorials.

Presentations/Publications**On-Call take**

GENERIC COMPONENTS

Communication & Interpersonal Skills

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

Medical Council Domains of Good Professional Practice: No. 2: Relating to Patients; No 3. Communication and Interpersonal Skills.

KNOWLEDGE

Within a consultation

- How to structure an interview to obtain/convey information; how to identify concerns, expectations, priorities; how to promote understanding, reach conclusions; use/choose appropriate language. Knowledge of procedures/investigations available and alternative options; of strategies to promote compliance through understanding of objectives.
- Able to elicit facts, question using open, followed by closed questions; “active listening”. Gives information clearly, avoids jargon, confirms understanding, is able to encourage co-operation, compliance; obtain informed consent.
- Considerate, shows respect for other’s culture, opinions, patient’s right to be informed, make choices.

In difficult circumstances

- Understands potential areas for difficulty “awkward situations”, knows how and when to break bad news, how to circumvent cultural, language barriers, deal with sensory or mental impairments, how to deal with challenging or aggressive behaviour.
- Able to communicate essential information where difficulties exist, appropriately uses assistant, interpreter, chaperone, relatives. Able to deal with anger, frustration in self and others.
- Selects an appropriate environment; seeks assistance, makes and takes time. Avoids unrealistic optimism or pessimism.
- Respects another’s right to opinions and to accept or reject advice.

With professional colleagues and others

- How best and when to communicate with doctors and other members of the healthcare team; how to provide concise, problem-orientated statement of facts and opinions (*written, verbal or electronic*). Knows legal context status of records and reports, of data protection (*confidentiality*), Freedom of Information (FOI) issues.
- Understands relevance to continuity of care and the importance of legible, accessible, authenticated records. Knows when urgent contact becomes necessary and the appropriate place for verbal, telephone, electronic, written communication.
- Communicates effectively, promptly; recognises roles and skills of other health professionals.
- Able to judge own abilities/limitations and when to seek help or give assistance, advice to others; when to delegate responsibility, when to refer.
- Values perspectives of others contributing to management decisions.

In maintaining continuity of care

- Understands the relevance to outcome of continuity of care, within and between phases of healthcare management.
- The importance of completion of tasks and documentation *e.g. before handover (to another team, department, specialty)*, of identifying outstanding issues, uncertainties.
- Maintains (*legible*) records, is available, contactable, time-conscious, sets (*and attempts to reach*) realistic objectives, identifies/prioritises outstanding problems.
- Alert to avoid potential confusion or misunderstanding through communications failure.

Giving explanations

- The importance of possessing the full facts, and of recognising uncertainty and conflicting evidence on which decisions have to be based.
- How to secure, retain attention avoid distraction. Understand how adults receive information best, the relative value of the spoken, written, visual means of communication, use of reinforcement to assist retention. Risk of information overload.
- Need to interpret results, significance of findings, diagnosis, to explain objectives, limitations, risks of treatment, in terms and by means adjusted to recipients' ability to comprehend.
- Uses language, literature (*leaflets*) diagrams, educational aids and resources appropriately.
- Able to achieve level of understanding necessary to achieve co-operation (*compliance, informed choice, acceptance of opinion, advice, recommendation*).
- Prepared to discuss, repeat information, resolve uncertainty, confusion, respond to questioning, challenge.

Responding to complaints

- Value of hearing and dealing with complaints promptly; the appropriate level, the procedures (*departmental and institutional*); sources of advice, assistance available.
- The importance of obtaining and recording accurate and full information, seeking confirmation from multiple sources.
- Able to establish facts, identify issues and respond quickly and appropriately to a complaint received.
- Accepts responsibility, involves others, consults appropriately.
- Open, prepared to accept criticism, acknowledge shortcomings where they exist, offer an apology.

SKILLS

- Communication
- Conflict resolution
- Dealing with complaints
- Communicate decisions in a clear and thoughtful manner
- Presentation skills

ASSESSMENT & LEARNING METHODS

- 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

Professionalism & Autonomy

Objective: To have the knowledge, skills and attitudes to act in a professional manner at all times and in partnership with patients and colleagues. To develop the attributes of someone trusted to be able to manage complex human, legal and ethical problems.

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care; No 2. Relating to Patients; No. 7 Professionalism

KNOWLEDGE

Patient Centred Care;

- The provision of Patient Centre Care should be at the core of the service a doctor provides
- To put the quality and safety of patient care as a prime objective

Behaviour in the workplace;

- **Relationships with patients**
 - Know patients' rights e.g. to be informed sufficiently to enable them to be involved in decisions about their treatment and care. Know boundaries limiting consultations including ethical, duty of care.
 - How to deal with inappropriate behaviour *e.g. aggression, threats, violence, harassment, racism.*
 - Potential obstacles *e.g. cultural, educational, ethical – also preconceptions and prejudices.*
 - Ensures confidentiality, respects privacy. Focuses investigation on patient's needs and expectations. Shows sensitivity, develops empathy but avoids personal involvement.
 - Non-judgemental in approaching patient's perceived problems. Prepared to accommodate idiosyncrasies, respecting patients as individuals. Altruistic.
- **Working with colleagues**
 - Know the potential roles and contributions of other specialists – medical, surgical, general practitioners and of other hospital or community-based agencies *e.g. social services, also patient support groups and other providers of care.*
 - How to arrange cover, safeguarding the handover process, know where responsibility begins and ends, when and where to seek advice.
 - Aware of the extent and limitations of own areas of practice/expertise; recognises and respects others' inputs, capabilities; is able to work co-operatively with other health professionals; refers, delegates appropriately.
 - Realistically schedules and completes tasks and provides full documentation for handover, referral; strives to maintain continuity and standard of care especially across shifts and when arranging rotas and covering absences.
 - Conscientious, reliable, responsible and professional at all times, considerate, shows respect for opinions of others, values good advice, accepts constructive criticism.

Creating an environment conducive to learning and improvement

- Endeavours to foster an environment conducive to learning
- Shares knowledge with trainees, students and other members of the multidisciplinary team
- Encourages and is open to reflective practice
- Seeks out role models and learns from the best practice behaviours of others.
- Participates in quality assurance and clinical improvement systems & training
- Uses evidence based practice in decision making
- Participates in journal clubs, case presentations, grand rounds

Time management & continuity of care

- Is punctual for duty, meetings, handovers and other duties
- Prioritises workload
- Delegates when appropriate to do so
- Knows when to call for help
- Ensures satisfactory handover to ensure continuity of care
- Ensures satisfactory transfer of patients to other medical teams or services when required
- Makes adequate arrangements to cover holidays, study and other leave

Honesty & Integrity

- Acts with honesty and integrity at all times in the delivery of patient care and in working with professional colleagues
- Acts fairly in all situations.

Moral Reasoning & Legal and ethical issues (see also Ethics section)

- Describes and demonstrates an understanding of the main principles of medical ethics including autonomy, justice and confidentiality
- Understands correct procedures for obtaining consent (for treatment, investigations, procedures, research project, post mortem). Legal responsibilities surrounding death/disease certification; regarding mental illness; referrals to coroner; also in criminal cases.
- Understands issues surrounding confidentiality, disclosure/release of information; discovery (FOI) of records. Legal and ethical issues in context of resuscitation, organ donation/transplantation.
- Able to complete certificates, documents, respects patient's wishes, rights, but accepts a doctor's (legal) obligations to society. Able to obtain/provide in full, information relevant to consent.
 - Alert to possible legal implications and ethical aspects of actions
 - Ensures privacy when discussing sensitive issues
 - Seeks timely advice where patient abuse is suspected

Team working and leadership

- How teams work, know how to assign individual and collective responsibilities which respect an individual's (*professional*) status within a team. How to set goals, initiate/ co-ordinate action, audit performance, give feedback, e.g. developing guidelines, protocols.
- Positively contributes to planning, motivating, organising activity, employs negotiating, human relations, interpersonal skills appropriately.
- Able to set and apportion individual and team objectives, energise and fortify others to sustain efforts to achieve goals, appraise performance.
- Co-operates as team player; respects the contributions, expertise of others; tolerant but determined as team leader.
- Adopts a holistic approach to patient care
- Knowledge of principles of audit and self assessment

Health-Physical health and Handling Stress & Fatigue

- Know how stress can affect performance, how to reduce stress and develop coping mechanisms to deal with pressure. When to enlist support.
- Understand the relevance of personal health to performance at work: the risks of self-medication, potential for drug and alcohol abuse: know that support is available from Occupational Health Services.
- Able to recognise, cope with stress; asks for help when necessary, is aware of responsibility (*to others*) of having health problems dealt with. Willing to take time off; and, if necessary, re-train/redevelop skills.

Commitment to Continuous Improvement in Health care Systems

- Understands the principles of quality and safety improvement
- Participates in quality improvement activities, including standard setting, follows established practice guidelines, research and audit
- Undergoes training in this area where appropriate

SKILLS

- Professionalism
- Multidisciplinary team working
- Ethical issues
- Leadership
- Time management
- Stress management

ASSESSMENT & LEARNING METHODS

- RCPI Ethics programme: Ethics I, Ethics II, Ethics III and Ethics IV (mandatory)
- 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
- Leadership Programme (Year 3 – 5)

Maintaining Good Practice

Objective: To adopt the habits of lifelong learning, and to appreciate and implement the practices of clinical governance.

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care, No. 6 Scholarship, No 7 Professionalism, No 8 Clinical Skills

KNOWLEDGE

Lifelong learning

- Aware of CME/CPD obligations, systems/process for competence assurance/revalidation. Understand the role of appraisal, assessment methods available their application.
 - Sources, resources, opportunities for self-directed and group learning including IT. Know how adults learn.
 - Recognises and makes effective use of learning opportunities, maximises the potential for personal study, plans personal development.
 - Self motivated, inquisitive, eager to learn.

Application of clinical governance

- Understand the principles of evidence-based practice, clinical audit and effectiveness, the development/application of best-practice protocols.
- Able to appraise and apply data from research, and to use audit to establish best practice and clinical effectiveness. Utilizes and practices evidence-based medicine.
- Accepts the need for reflective practice and to critically evaluate own work and make changes.

Risk management

- Systems, procedures for identifying (*clinical*) risk; correct procedures and action when things go wrong; how to handle complaints.
- Employes procedures and policy for accidents, injuries; for confirming skill and staffing levels, arranging cross-cover, on-call, for supervision.
- Potential complications or side effects of treatments, procedures and investigations; importance of accurate, recent information and available records. The assessment of risk, relative risk.
- Able to assess, anticipate, risks; recognise failure. Openly discuss bad outcomes, locate system weakness, analyse critical incidents.
- Able to discuss potential risks *e.g. with patients, to analyse and balance risk with benefit.* Able to learn from previous experience, from complaints received, errors.
- Is honest in recognising misjudgements.

Evidence, audit, guidelines

- 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.
- Capable of accessing relevant data (library, internet use). Able to appraise available evidence critically.
- Able to complete an audit cycle relevant to practice; to develop, evaluate, review and update a set of guidelines.
- Uses evidence / guidelines appropriately having due regard for the individual.

SKILLS

- Personal development planning
- Evidence -based practice
- Risk Management
- Audit
- Research

ASSESSMENT & LEARNING METHODS

- Record of attendance at journal clubs, medical grand rounds, SpR teaching sessions, local and national academic meetings
- Record of attendance at CME accredited international meetings
- Attendance at local radiology conferences
- Time spent in laboratory or attendance at laboratory conferences
- Audit Study Day (Year 1)
- Annual Audit
- Leadership Skills Course (Year 3- 5)
- Research Publications
- Consultant feedback at annual assessment
- Workplace based assessment e.g Mini-Cex, DOPS, CBD

Standards Of Care

Objective: To be able to assess patients' problems investigate and treat them appropriately, efficiently, and consistently over time.

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care; No. 2 Relating to Patients; No. 3 Communication and Interpersonal Skills; No. 4 Collaboration and Teamwork; No. 5 Management (including Self Management); No. 8 Clinical Skills,

KNOWLEDGE

History taking and examination

- Diagnostic significance of patterns of symptoms, pathophysiology and physical signs.
- Able to take and analyse a clinical history and perform a reliable and appropriate examination, arrive at a differential diagnosis.
- Exhibit empathy and show consideration for all patients, their impairments and attitudes irrespective of cultural and other differences.

Investigation, indications, risks, cost-effectiveness

- Understand the pathophysiological basis of the investigation undertaken.
- Know and be able to explain the procedure for the commonly used investigations, preparations, effects or risks, the reason for the investigation, the information sought and its relevance to management.
- Sensitivity and specificity of results, possible interferences, artefacts.
- Able to understand significance, interpret and explain results of investigations.
- Shows logical approach in choosing, sequencing and prioritising investigations.
- Able to liaise, discuss, negotiate effectively with those undertaking the investigation.
- Careful to select investigations appropriately, considering (*patients'*) needs, risks, value.

Treatment and management of disease

- Understand the pharmacology, therapeutics of treatments prescribed, choice of routes of administration, dosing schedules, compliance strategies; the objectives, risks and complications of treatment cost-effectiveness. Natural history of diseases; quality of life concepts.
- Able to assess accurately patient's needs, to prescribe administer, deliver, arrange treatment; recognise and deal with reactions / side effects. Sets realistic therapeutic goals, utilizes rehabilitation services, palliative care appropriately.
- Able to discuss rationale, objectives, risks and alternative options openly, taking into account patients' / their relatives' attitudes, beliefs or other philosophical concepts.
- Recognises that the degrading effects of illness, especially incapacity which is chronic, impacts on relationships and family, having financial as well as social effects.
- Discusses, plans, delivers care appropriate to patient's needs and wishes.

Disease prevention and health education

- Disease notification; methods of collection and sources of data. Screening for disease, (*methods, advantages and limitations*). Health promotion and support agencies; means of providing and sources of information for patients.
- Risk factors, preventive measures, strategies applicable to smoking, alcohol, drug abuse, lifestyle changes.
- Able to advise on and promote lifestyle change, stopping smoking, control of alcohol intake. Able to assess and explain risk, encourage positive e.g. *immunisation* and negative preventive measures.

- Enlists / requires patients' involvement in solving their health problems, provides information, education. Awaits of support provided by voluntary agencies and patient support groups, as well as expert services e.g. detoxification / psychiatric services.
- Non-judgemental approach to patient's problem: values contributions of health education and disease prevention to health in a community.

Notes, records, correspondence

- Understand the functions of medical records, their value as an accurate up-to-date commentary and source of data.
- Understand the need and place for problem-orientated discharge notes, letters, more detailed case reports, concise out-patient reports, focused reviews.
- Compiles adequate case notes, with results of examinations, investigations, procedures performed, sufficient to provide an accurate, detailed account of the diagnostic and management process and outcome. Provides concise, informative progress reports orally.
- Maintains legible, authenticated records, uses dictation, telephone, e-mail appropriately.
- Appreciates importance of up-to-date, accurate information, its availability, transfer and the need for communicating promptly *e.g. with primary care.*

Time management and decision taking

- How to prioritise demands, respond to patients' needs, sequence urgent tasks. Understand how to establish (*clinical*) priorities *e.g. for investigations, intervention; how to set realistic goals; understand the need to allocate sufficient time, know when to seek help.*
- Understands the need to complete tasks, reach a conclusion, make a decision, take action with allocated time.
- Able to recognise when falling behind and can adjust accordingly; able to cope with changing circumstances, variable demand, prepared to re-prioritise and ask for help.
- Able to collate evidence, summarise, recognise when objective has been gained
- Knows how and when to conclude, disengage.
- Has realistic expectations of own and of others' performance. Time-conscious, punctual.

Relevance of professional bodies

- Understand 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.*
- Actively engages with professional/representative/specialist bodies.
- Values the breadth and depth of experience that can be accessed by associating with professional colleagues.

SKILLS

- History taking and examination
- Appropriate use of investigations
- Treatment and management of disease
- Disease notification
- Health promotion
- Screening
- Study Day - Disease prevention & health education
- Personal and professional organisation and planning; goal setting, time management

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)
- Study Days
- Annual Audit

Patient Safety

Objective: To ensure patient safety is at the core of the health service provided by designing safe systems and processes of care and understanding the role of healthcare systems and human factors in adverse events and errors.

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care.

KNOWLEDGE

Safe Systems, Competency and Safe practice

- Understands multiple factors involved in failures;
- Safe Healthcare Systems-a Safe working environment
- The relationship between 'Human factors' and patient safety
 - Safe working practice. Role of procedures and protocols in optimal practice
- Patient safety relevance in health care and its role in minimizing the incidence and impact of adverse events and maximize recovery from them.
- Knowledge and understanding of the Swiss cheese model.
- Health care errors and system failures; human and economic costs; blame culture

Communication

- Disclosure – know the principles of open disclosure
- Knowledge and understanding of valid consent
- Teamwork
- Continuity of care

Near Misses and adverse events

- Knowledge of preventing and managing near misses and adverse events. Incident reporting; root cause analysis. Understanding and learning from errors
- Understands and manages clinical risk
- Manages complaints
- Knows when and how to report a near miss or adverse event

Quality improvement

- Standardises common processes and procedures – checklists, vigilance
- Evidence based care
- Infection control; healthcare associated infections
- Patient safety and invasive procedures.
- Improvement medication safety; safe prescribing; common medication errors
- Ethical behaviour

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
- Understand how and why systems break down and why errors are made
- Be able to learn from errors and near misses to prevent future errors
- Know how to use relevant information from complaints, incident reports, litigation and quality improvement reports to control risks
- Minimise infection through improved infection control practice
- Minimise errors during invasive procedures by developing and adhering to best-practice guidelines for safe surgery.
- Minimise medication errors by practicing safe prescribing principles

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): prioritization of patient safety in practice
- RCPI Patient safety on-line course (recommended)
- Completion of infection control induction in the workplace

Therapeutics and Safe Prescribing

Objective: To progressively develop your 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: No. 1 Patient Safety and Quality of Patient Care.

KNOWLEDGE

- Indications, contraindications, side effects, drug interaction, dosage and route of administration of commonly used drugs
- Knowledge of prescribing for common medical conditions
- Knows range of adverse drug reactions to commonly used drugs, including complementary medicines
- Identifies common prescribing hazards
- Identifies high risk medications
- Knows drugs requiring therapeutic drug monitoring and interprets results
- Knows the effects of age, body size, organ dysfunction and concurrent illness or physiological state e.g. pregnancy on drug distribution and metabolism relevant to the trainees practice
- Recognise the roles of regulatory agencies involved in drug use, monitoring and licensing (e.g. IMB , and hospital formulary committees)
- Knows procedure for monitoring, managing and reporting adverse drug reaction

SKILLS

- Knows how to write a prescription
- Prescribes appropriately in the elderly, childhood, pregnancy and breast feeding
- Make appropriate dose adjustments following therapeutic drug monitoring, or physiological change (e.g. deteriorating renal function)
- Review the continuing need for long term medications relevant to the trainees clinical practice
- Anticipate and avoid defined drug interactions, including complementary medicines
- Advise patients (and carers) about important interactions and adverse drug effects
- Provide comprehensible explanations to the patient, and carers when relevant, for the use of medicines
- Open to advice and input from other health professionals on prescribing
- Participates in adverse drug event reporting

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): prioritization of patient safety in prescribing practice

Infection Control

Objective: To be able to manage and control infection in patients, including controlling the risk of cross –infection, appropriately managing infection in individual patients, and within the wider community to manage the risk posed by communicable diseases.

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care; No. 5 Management (including Self Management).

KNOWLEDGE

Within a consultation

- Understand the principles of infection control as defined by the HIQA
- How to minimize the risk of cross-infection during a patient encounter by adhering to best practice guidelines available
- Treat and manage infection in the individual patient
- Understand the principles of preventing infection in high risk groups e.g managing antibiotic use to prevent Clostridium difficile) Knowledge and understanding the local antibiotic prescribing policy
- Aware of infections of concern, eg MRSA, C Difficile,
- Understands best practice in isolation precautions
- Knows when and how to notify relevant authorities in the case of infectious disease requiring disclosure

In surgery or during an invasive procedure

- Understands the increased risk of infection in these patients and adheres to guidelines for minimizing infection in such cases
- Knows the guidelines for needle stick injury prevention and management

During an outbreak

- Adheres to guidelines for minimizing infection in the wider community in cases of communicable diseases and seeks expert opinion or guidance from infection control specialists where necessary

SKILLS

- Practices aseptic techniques, hand hygiene
- Follows guidelines for infection control and management
- Prescribes antibiotics according to antibiotic guidelines Encourages all staff, patients and relatives to observe infection control principles
- Communicates effectively with patients regarding treatment and measures recommended to prevent re-infection or spread
- Collaborates with infection control colleagues to manage more complex or uncommon types of infection including those requiring isolation eg transplant cases, immunocompromised host
- In the case of infectious diseases requiring disclosure:
 - Has knowledge of the diseases requiring disclosure and undertakes notification promptly
 - Collaborates with external agencies regarding reporting, investigating and management of notifiable diseases .
 - Able to advise patients on lifestyle change to minimize the risk of re-infection or spread of infection,
 - Enlists / requires patients' involvement in solving their health problems, provides information, education.
 - Avails of support provided by voluntary agencies and patient support groups, as well as expert services where appropriate

- Non-judgemental approach to patient's problem:
- Utilises and values 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

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: No.1 Patient Safety and Quality of Patient Care; No. 3 Communication and Interpersonal Skill; No. 4 Collaboration and Teamwork; No. 5 Management (including Self Management); No 6 Scholarship.

KNOWLEDGE

Demonstrating Personal Qualities

- Develops self-awareness and understanding of personal style and its impact on others
- Efficiently and effectively manages 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
- Acts with integrity and honesty with all people at all times

Working with others

- Develops networks to expand knowledge and sphere of influence
- Builds and maintains key relationships. Adapts style to work with different people and different situations
- Encourages contributions from others including patients, carers, members of the multidisciplinary team and the wider community
- Aware of own personal style and other styles and their impact on team performance. Understands the importance of good communication in teams and the role of human factors on effectiveness and patient safety

Managing Services

- Knows and understands the structure and function of Irish Health Care System
- Aware of the challenges of managing in healthcare
 - Role of Governance
 - Clinical Directors
- Can contribute to the planning and design of services
- Knows and understands the financing of the health service
 - Preparing a budget
 - Defining value
 - Managing resources
- Knows and Understands the importance of human factors in service delivery.
 - Manages staff training, development and education
- Managing performance
 - Performs staff appraisal and deals effectively with poor staff performance
 - Rewards and incentivises staff for quality and efficiency

Improving Services

- Ensures patient safety by adopting and incorporating a patient safety culture
- Critically evaluates where services can be improved by measuring performance, and acting to raise standards where possible Encourages a culture of improvement and innovation
- Facilitating transformation by creating and living a vision

Setting Direction

- Identifies the external and internal drivers setting the context for change
- Applies knowledge and evidence of systems and resource management to guide service development
- Makes decisions using evidence based medicine and performance measures
- Evaluates 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 Being able to managing resources and people
- Managing performance, performance indicators
- How to write and develop a service plan
- How to prepare and manage a budget

ASSESSMENT & LEARNING METHODS

- Communication course (Year 1)
- Leadership course (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.

Management Information Systems & Management Skills

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: No. 5 Management.

KNOWLEDGE

Health service structure, management and organisation

- The administrative structure of the Health Service, services provided in Ireland and their funding. Department of Health, HSE and Hospital Management structures and systems. The National Regulatory Bodies, health agencies and patient representative groups.
- Can explore, direct, pursue a project, negotiating through the relevant department at an appropriate level. Able to “*operate the system*”. Understand the need for business plans, annual hospital budgets, the relationship between the hospital and PCCC.
- Recognises the advantage of understanding the administrative machinery of the Health Services.

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. Know of the sources which can provide information relevant to national or to local services, publications available.
- Able 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.

Obtaining information of value in maintaining medical knowledge with a view to delivering effective clinical care

- Understands the contribution that current, accurate knowledge can make to establishing clinical effectiveness, best practice, treatment protocols. Know sources providing updates, literature reviews and digests.
- Able 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*.
- Embraces principles of clinical governance.

Delegation skills, empowerment and conflict management

- How to assess, develop personal effectiveness, improve negotiating, influencing and leadership skills. How to manage time more efficiently, deal with pressure and stress. How to motivate and operate within a multidisciplinary team.
- Able to adjust to change, apply management/leadership, negotiating skills to manage change. Self-awareness, able to recognise strengths and weaknesses.
- Appropriately values and uses management techniques and seeks to improve these skills and personal effectiveness.

Leadership

- How to maintain, improve working relationships within a team; appropriately recognise roles, skills, status. Know when and what to delegate, provide support, appraise.
- Motivates and empowers others, knows when help is needed. Able to foresee, forestall, manage conflict.
- Sensitive to and aware of the needs of others.

SKILLS

- Risk Management
- Leadership skills
- Time management
- Delegation skills
- Conflict management
- Clinical governance
- Audit

ASSESSMENT & LEARNING METHODS

- Communication course (Year 1)
- Audit course (Year 1)
- Leadership course (Year 3 – 5)
- Annual audit
- Consultant feedback at annual assessment on management and leadership skills
- Involvement in hospital committees

Teaching & Research

Objective: To recognise the opportunities for personal/professional development that exist for medical teachers, educational supervisors and from involvement with research.

Medical Council Domains of Good Professional Practice: No. 6 Scholarship.

KNOWLEDGE

Teaching, educational supervision and assessment

- Know principles of adult learning, teaching and learning methods available and strategies; educational principles directing assessment, methods, formative vs. summative. Value of regular appraisal / assessment in informing training process.
- Able to identify educational objective. Able to design and deliver an effective teaching event, both small and large group. Uses technology / materials effectively. Adequate preparation, timekeeping.
- Appreciates benefit to learner is key objective of teaching sessions, key resource is adequate knowledge of subject.

Research, methodology and critical evaluation

- How to design and resource a research project, how to obtain ethical approval. Research methodology, valid statistical analysis, writing and publishing papers. Ethical considerations, declaring an interest.
- Reviewing the literature, framing the question, designing a project capable of providing an answer. Able to derive results and conclusions, able to write or present a paper.
- Intellectually honest.
- Present data in a clear, honest and critical fashion.

SKILLS

- Bed-side undergraduate and post graduate teaching
- Lectures
- Ethics of research
- Presentation and writing skills

Ethics

Objectives: *Medicine is predominantly concerned with the diagnosis and treatment of illness. Besides the pathological processes involved and the physical impact of each condition, the requirements for practising medicine in a fair, competent and ethical manner must be understood before a doctor is ready for independent practice.*

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

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care; No. 3 Communication and Interpersonal Skill; No. 6 Scholarship; No. 7 Professionalism.

KNOWLEDGE

- Knowledge of 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 informational exchange with individual patients and their families and teamwork with other health professionals, the scientific community and the public.
- Professionalism.

Ethics I: Professionalism

Objectives: *To explore the relationship between ethics of healthcare delivery and professionalism including the challenges and the impact of current developments*

KNOWLEDGE

- Knowledge, skills, attitudes and behaviours expected by patients and society from individuals during the practice of their profession (as a doctor).
 - The skills of lifelong learning and the maintenance of competence
 - Information literacy
 - Ethical behaviour
 - Integrity, honesty
 - Altruism
 - Service to, justice and respect for others
 - Adherence to professional code
- Leadership and Accountability
- Role of the Clinical Director
- Dignity & Respect
- Conflicts of interest
- Personal scope of practice & boundaries
- Adverse Events- open communication when adverse events occur
- Discussing errors

Ethics II: Ethics & Law

Objectives: *To explore the relationship between ethics of healthcare and law including the challenges and the impact of current developments*

KNOWLEDGE

- Ethical patient care and Irish Law including:
- Informed consent
- Consent and capacity
- Disclosure
- Medical Practitioner's Act
- Malpractice
- Misconduct
- Confidentiality
- Data protection
- Coroner's System
- Medical Council Ethical Guide

Ethics III: Research

Objectives: *To explore the ethics of healthcare research including the challenges and the impact of current developments*

KNOWLEDGE

- Principles of research
- Un-ethical conduct
- Genetics
- The Importance of Research in Health Care
- Dept of Health and Children Research Action Plan-implications for researchers
- Reasons for Research being Ethically Regulated
- Genetics
- Researching vulnerable groups
- Data Research/Protection and confidentiality
- Patient information bill
- Human Tissue Act
- Role of Research Ethics Committee
- Conflict of interest

Ethics IV: End of Life

Objectives: To explore the ethics of end of life challenges and the impact of current developments

KNOWLEDGE

- Euthanasia/Terminal Sedation
- Artificial nutrition/hydration
- Resuscitation issues
- Advanced Directives
- Organ donation
- Death Certification/Coronial System
- Prolongation
- Futility
- Decision making process

SKILLS

- Recognises the dying patient
- Communicates bad news sensitively
- Explores the options for managing the dying patient including DNR and advanced directives
- To incorporate the above ethical concepts in their everyday practice

ASSESSMENT & LEARNING METHODS

- RCPI Ethics programme: Ethics I, Ethics II, Ethics III and Ethics IV (Mandatory)
- Note of examples of ethical dilemmas encountered in training
- Consultant feedback at annual assessment
- Workplace based assessment e.g CBD
- Educational supervisor's reports on observed performance (in the workplace)

Dealing with and Management of Acutely ill Patients in Appropriate Specialties

Objective: To have the knowledge and skills to be able to assess and initiate management of patients presenting as emergencies with the problems outlined below. For each scenario, trainees should in particular gain knowledge and skills to recognise the critically ill and:

Immediately assess and resuscitate if necessary.

Formulate a differential diagnosis, treat and/or refer as appropriate.

Select relevant investigations and accurately interpret reports.

Communicate the diagnosis and prognosis – see Generic Skills.

Medical Council Domains of Good Professional Practice: No. 1 Patient Safety and Quality of Patient Care, No. 8 Clinical Skills

KNOWLEDGE

Management of acutely ill patients with medical problems

- Know how potentially life-threatening problems present; know the indications for urgent intervention, additional information necessary to support action (e.g. *results of investigations*) and treatment protocols (see *Addendum*).
- Know when to seek help, refer/transfer to another specialty. Know ACLS protocols. Know the ethical and legal principles relevant to resuscitation and DNR orders.
- Able to manage acute medical intake, to receive and refer patients appropriately, to interact efficiently and effectively with other members of the medical team, accept/undertake responsibility appropriately.
- Able 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*.
- Able to convey essential information quickly to relevant personnel: maintains legible up-to-date records documenting results of investigations. Lists of problems dealt with or remaining, identifies areas of uncertainty; ensures safe handover.
- Remains calm, delegates appropriately, ensures good communication. Tries to meet patient's/ relatives' needs and concerns, respecting their views and right to be informed.

Discharge planning

- Distinguish between illness and disease, disability and dependency. Understand the potential impact of illness and impairment on activities of daily living, family relationships, status, independence. Be aware of quality of life issues.
- Know role and skills of other members of the healthcare team, how to devise and deliver a care package. Know the support available from other agencies e.g. *specialist nurses, social workers, community care*. Understand the principles of shared care with the general practitioner service.
- Show awareness of the pressures/dynamics within a family, the economic factors delaying discharge but recognise the limit to benefit derived from in-patient care. Establish liaison with family and community care, primary care, communicate / report to agencies involved.
- Demonstrates an awareness of the wide ranging effects of illness and the need to bridge the gap between hospital and home.

SKILLS

- ACLS
- Deal with common medical emergencies
- Interpretation of blood results, ECG/Rhythm strips, Chest X-Ray, CT Brain
- Give clear instructions to both medical and hospital staff
- Order relevant follow up investigations
- Discharge planning
- Knowledge of patient pathways
- Knowledge of HIPE
- Multidisciplinary team working
- Communication
- Early regular and on-going consultation with family members and primary care physicians

ASSESSMENT & LEARNING METHODS

- Certified ACLS
- Record of on call
- miniCEX (acute setting) - each year
- Case based discussions
- Consultant feedback at annual assessment

**Specialist Section for Clinical and
Laboratory Haematology**

Introduction to Haematology

A formal period of instruction takes place at the beginning of specialist training to provide an introduction to laboratory aspects of haematology. By the end of this period the trainee would be expected to:

- *Have gained an understanding of laboratory practice including Health & Safety and Quality Control.*
- *Have sufficient understanding of haematology to offer basic advice on the interpretation of laboratory results.*
- *Have a sufficient knowledge of laboratory techniques to underpin clinical laboratory practice.*
- *Have a basic knowledge of the presentation and management of the common haematological disorders.*
- *Have knowledge of risk management issues as they apply to laboratory and clinical haematology.*

Haematology

KNOWLEDGE

- Introduction to the laboratory, including Health and Safety principles
- The principles and use of automated blood counters.
- Set up and use of the light microscope
- Principles of staining blood films and marrow aspirate slides.
- Describe the methods for obtaining bone marrow aspirate and trephine biopsies
- Screening Techniques for Malaria

SKILLS

- Interpretation of the full blood count and differential
- Establishment of rapport with laboratory staff.
- Making blood films
- Recognition of malignant haematological disorders, red cell abnormalities & malarial parasites
- Perform Bone Marrow biopsy with supervision
- Prepare aspirate slides and trephine roll preparations

Blood transfusion

KNOWLEDGE

- Outline basic Blood Transfusion techniques (manual and automated)
- Understand the types of blood products
- Relate blood transfusion laboratory practice to patient care.
- Safe blood transfusion practice

SKILLS

- Perform and interpret:-
 - Blood grouping
 - Antibody screening and Cross matching
 - Direct antiglobulin test.
 - Kleihauer test
 - Interprets clinically significant antibodies

Coagulation

KNOWLEDGE

- Describe the techniques for coagulation testing including automation of coagulation tests and thrombophilia tests
- Outline current methods for automated coagulation testing
- Basic thrombophilia testing.

SKILLS

- Perform and interpret PT, INR, APPT, thrombin time, fibrinogen assay and FDPs.
- Interpret thrombophilia screening results.
- Applies laboratory results to patient care.

Clinical

KNOWLEDGE

- Presentation and management of common haematological disorders.
- The general use of blood products

SKILLS

- Recognise in the laboratory and advise on the initial management of common anaemias, acute and chronic leukaemia, myeloma and lymphomas.
- Works as part of the clinical team in the management of these disorders.

ASSESSMENT & LEARNING METHOD – Introduction to Haematology

- DOPS:
 - Making and staining a blood film
 - Blood grouping and cross-match
 - Safe prescription of blood components
 - Safe administration of blood components
- Case Based Discussion: Investigation and reporting of a blood transfusion incident
- Case Based Discussion: Haematological Emergencies – Sepsis; SCC compression/hypercalcaemia/SVS obstruction etc.; massive bleeding; DIC
- Study Day – Introduction to Cytogenetics and Molecular Diagnostics
- Workbook to be submitted by 6 months
- End of Year 1 Assessment

Laboratory Haematology

Objective: To be competent in the interpretation of samples presented for examination and in the management of the Haematology laboratory

Peripheral blood films

KNOWLEDGE

- Interpretation of peripheral blood films including those flagged abnormal by the Medical Scientist or automated counter.

SKILLS

- Accurately report red cell and platelet abnormalities.
- Recognise acute and chronic leukaemia and malarial parasites on blood films.

Special Investigations

KNOWLEDGE

- Understand the basis of specialised investigations in the diagnosis and prognosis of haematological disease including:
 - Hb and protein electrophoresis
 - High Performance Liquid Chromatography
 - Immunophenotyping
 - Immunocytochemistry
 - Cytogenetics
 - PCR
- Maintain up to date awareness on novel uses of familiar techniques or the introduction of new methods to analyse haematological disease

SKILLS

- Order tests appropriately
- Interpret results.
- Relate laboratory results to patient care.

Bone marrow aspiration and trephine biopsy

KNOWLEDGE

- Indications for and technique of performing bone marrow aspirate and trephine biopsies.
- Use of stains, immunophenotyping and other investigations to aid diagnosis

SKILLS

- Perform technique competently
- Consent and treat patient with respect
- Accurately report results (initially with supervision).

Lymph node histopathology

KNOWLEDGE

- Describe Lymph node histology
- The classification of Hodgkin and non-Hodgkin lymphomas particularly the WHO classification.
- The use of immunophenotyping and cytogenetics to characterise certain lymphomas
- Understanding of the Multidisciplinary approach to cancer diagnosis and management

SKILLS

- Applies knowledge of histological classification to patient management.
- Demonstrates pathology and interacts with histopathologists at MDM's

Cerebro-spinal fluid

KNOWLEDGE

- Knowledge of requirement for CSF examination for various malignancies
- Interpretation of CSF cytology.

SKILLS

- Perform lumbar puncture competently and obtain CSF for cytospin preparation.
- Recognise presence of malignant cell in CSF.
- Relate laboratory results to patient care.

Laboratory Management

KNOWLEDGE

- Principles of laboratory management; risk management and laboratory audit.
- Laboratory Accreditation including ISO 15189 as applied to Blood Transfusion
- Awareness of:
 - Internal and External Quality control systems including NEQAS schemes.
 - Commercially available laboratory computer systems.
 - Tendering processes
 - Staff performance management and appraisals
 - Near patient testing guidelines

SKILLS

- Perform a laboratory audit
- Participate in external QA reporting and review
- Participate in Transfusion Committee and other Lab Management Committees
- Participate in Laboratory Accreditation

ASSESSMENT & LEARNING METHODS – Laboratory Haematology

- DOPS: Laboratory skills
 - Making and staining a blood film
 - Setting up a microscope
 - Making and staining a BM Aspirate
 - Sickle screen, Hb electrophoresis and HPLC
 - Immunophenotyping
 - Formal reporting of blood films and bone marrow aspirates
- DOPS: Bone marrow aspiration and trephine biopsy – adult and paediatric
- DOPS: Lumbar puncture, intrathecal administration of chemotherapy – adult and paediatric
- Course – Core Laboratory Skills
- Study Day - Lymphoma Forum of Ireland Trainee session
- Evidence of participating in relevant management committees
- FRCPATH
- Annual End of Year Assessment

Red Cell Disorders

Objective: Competence in the diagnosis and management of anaemia, erythrocytosis and haemoglobinopathy

KNOWLEDGE

- Describe the pathophysiology of anaemia including
 - Haematinic deficiency
 - Chronic Disease / Inflammation
 - Congenital and Acquired Haemolytic anaemia
- Appropriate investigation of red cell disorders
- Identification of underlying causes of anaemia
- Outline the molecular basis and investigation of abnormal haemoglobins and thalassaemia syndromes
- Describe the natural history, epidemiology, presentation and complications of thalassaemias, sickle cell disease and other haemoglobin abnormalities.
- Describe the mechanisms of Erythrocytosis and define Polycythemia

SKILLS

- Interpretation of the blood count and film, haematinics, haemolytic and haemoglobinopathy screening
- Ordering subsequent invasive or radiological procedures appropriately
- Formulation of a management plan for haematinic deficiency
- Categorisation and treatment of haemolytic anaemia
- Referral to other specialties as necessary
- Practices use of appropriate support e.g. pain relief and blood transfusion in the management of patients with haemoglobin disorders
- Ability to construct a long-term treatment plan, in consultation with others as necessary, for the treatment of haemoglobinopathy

ASSESSMENT & LEARNING METHOD

- Case Based Discussion: Investigation of a Red Cell Disorder
- miniCEx: Assessment of haemoglobinopathy
- FRCPATH
- Annual End of Year Assessment

Haematological Malignancies

Acute Leukaemias

Objective: To be competent to manage patients presenting with acute leukaemia

KNOWLEDGE

- Presentation, diagnosis and classification of acute leukaemia in adults and children.
- Principles of chemotherapy regimens: knowledge of mode of action, side effects and interactions of agents used in the management of acute leukaemia.
- Use of supportive care in management of acute leukaemia.
- Indications for autologous and allogeneic haemopoietic stem cell transplantation in the management of acute leukaemia.

SKILLS

- Recognise presenting features and conduct history and examination competently.
- Use appropriate laboratory investigations to establish diagnosis.
- Formulate a management plan and offer full explanation to patient.
- Competent to prescribe and administer complex chemotherapy regimens.
- Competent to safely perform lumbar punctures and administer intrathecal chemotherapy.
- Appropriate use of:
 - Blood Products.
 - Antibiotic Regimens
 - Central Lines
 - Anti-emetics
- Assess suitability for stem cell transplantation.
- Successfully manage patients undergoing stem cell transplantation.
- Recognise complications of stem cell transplantation including post transplant viral syndromes and graft versus host diseases.
- Explains use of transplantation and its limitations to patient and family.

Chronic Leukaemias

Objective: *To be competent in the diagnosis and management of patients presenting with chronic leukaemia*

KNOWLEDGE

- Presentation, natural history, molecular biology and pathogenesis of the various types of chronic leukaemia.
- Classification and staging of chronic leukaemias
- Knowledge of therapeutic agents in the treatment of chronic leukaemia including their mode of action and side effects.
- Indications for autologous and allogeneic haemopoietic stem cell transplantation in the management of chronic leukaemia
- Describe the management of short and long term complications of chronic leukaemia

SKILLS

- Recognise presenting features and conduct history and examination competently.
- Use appropriate laboratory investigations to establish diagnosis.
- Formulate a management plan and offer full explanation to patient.
- Acts with empathy in discussing the diagnosis.

Plasma Cell Disorders

Objective: *To be competent in the diagnosis and management of patients presenting with paraproteinaemias or other manifestations of plasma cell dyscrasias*

KNOWLEDGE

- Classification, natural history and molecular biology of plasma cell disorders
- Presentation and staging.
- Knowledge of treatment regimens and trial protocols in the management of myeloma.
- Indications for intensive chemotherapy and haemopoietic progenitor cell transplantation in the management of myeloma.

SKILLS

- Recognise presenting features and conduct history and examination competently.
- Use appropriate laboratory investigations to establish diagnosis and stage of disease.
- Formulate a management plan and offer full explanation to patient.
- Assess suitability for stem cell transplantation.
- Successfully manage patients undergoing stem cell transplantation.
- Recognise complications of stem cell transplantation including post transplant viral syndromes and graft versus host disease.
- Act with empathy in discussing diagnosis with patient and family.

Lymphoma

Objective: *To be competent in the diagnosis and management of patients with Hodgkin's and Non-Hodgkin's Lymphoma.*

KNOWLEDGE

- Natural history, classification and molecular biology of Hodgkin and non-Hodgkin lymphoma.
- Familiar with presentation and staging criteria.
- Basic knowledge of the histological classification of lymphomas particularly the WHO classification.
- Knowledge of chemotherapy treatment regimens, place of radiotherapy and trial protocols in the management of lymphoma.
- Indications for intensive chemotherapy and haemopoietic stem cell transplantation in the management of lymphoma.

SKILLS

- Recognise presenting features and conduct history and examination competently. Use appropriate laboratory and radiological investigations to establish diagnosis and stage of disease.
- Competently diagnose lymphoma on trephine biopsy.
- Working knowledge of lymphoma node histology.
- Formulate a management plan and offer full explanation to patients.
- Assess suitability for stem cell transplantation.
- Successfully manage patients undergoing stem cell transplantation.
- Recognise complications of stem cell transplantation including post transplant viral syndromes and graft versus host disease.
- Act with empathy in discussing diagnosis and treatment with patient and family.
- Explains use of transplantation and its limitations to patient and family.

Clinical Trials

Objective: To be competent in the selection and ethical use of clinical trials in the advance of treatment of haematological malignant and non-malignant disease

KNOWLEDGE

- Use of trial protocols and importance of multi centre trials in haematological malignancy
- Ethical considerations and informed consent
- Legislation surrounding clinical trials
- Role of the Ethics Committee and Irish Medicines Board

SKILLS

- Demonstrates understanding of entry criteria and ethical considerations of informed consent
- Provides full explanation of trial entry.
- Obtains informed consent after full discussion with patient, and relatives as appropriate
- Performs collection of entry and follow up data

ASSESSMENT & LEARNING METHODS

- Case Based Discussion:
 - Use of evidence based medicine to determine treatment
 - Ethical Dilemmas
 - Initial Management of Myeloma and Chronic Leukaemia – Yr 1
- DOPS: Safe Prescribing and Administration of Chemotherapy
- DOPS: Management of Central Lines – use of PICC's, tunneled and non-tunneled central lines, ports. To include flushing, dressing, drug administration, blood sampling
- Case Based Discussion:
 - Use of evidence based medicine to determine treatment (current research; local, national and international guidelines)
 - An ethical dilemma related to haematology
 - Comprehensive investigation of a new haematological malignancy (History & examination; basic laboratory parameters; use of morphology, immunophenotyping, cytogenetics, FISH, molecular diagnostics etc.)
 - Management of a Leukaemia
 - Management of a plasma cell disorder
 - Management of a Lymphoma
- miniCEX: Assessment of patient presenting with a new malignant disorder
- miniCEX: Breaking bad news
- Radiotherapy course
- Cytotoxic prescription and administration course
- Annual Assessment
- FRCPath

Haemostasis

Congenital Disorders of Coagulation

Objective: To be competent to diagnose and manage patients with congenital coagulation disorders

KNOWLEDGE

- Coagulation factors and current views on the coagulation pathway.
- Natural history, presentation and complications of congenital coagulation disorders including Haemophilia and Von Willebrand's Disease.
- Knowledge of diagnostic methods used in assessment of coagulation disorders including specific factor assays.
- Use of molecular biological techniques to identify genetic disorders.
- Types of coagulation factor concentrates including their safety profile.

SKILLS

- Be competent in taking history and conducting examination of patient.
- Interpret results of laboratory assays.
- Formulate an appropriate management plan.
- Advise on role of genetic techniques in prenatal and family testing.
- Offer appropriate advice on prophylaxis and treatment of congenial coagulation disorders.
- Relate theoretical knowledge to patient management.
- Act with empathy in managing coagulation disorders and its complications.
- Recognise the impact of these conditions on the patient and family.

Thrombophilia

Objective: To be competent to diagnose and manage patients with thrombophilia

KNOWLEDGE

- Coagulation inhibitors and the fibrinolytic pathway including epidemiology and molecular basis of thrombophilia.
- Knowledge of natural history, presentation and complications of thrombophilia.
- Techniques for the measurement of Protein C, Protein S, ATIII, APCR and Lupus Anticoagulant. Methods for the detection of Factor V Leiden.
- Effect of pregnancy and oral contraceptive pill and hormone replacement therapy in thrombophilia.

SKILLS

- Use of appropriate clinical and laboratory methods to reach a diagnosis.
- Competent to advise on treatment and prophylaxis of thrombophilic conditions.
- Be able to interpret and apply laboratory results to patient management.
- Successful management of pregnancy in affected individuals.
- Liaise closely with obstetric and other clinical teams.

Anticoagulation

Objective: Safely manage patients requiring anticoagulation

KNOWLEDGE

- Mechanism of action and indications for the use of heparin and oral anticoagulants.
- Be familiar with different models of anticoagulant control including computerised dosing methods and the use of the multi-professional team in delivering anticoagulant services.
- Knowledge of side effects of anticoagulants

SKILLS

- Able to initiate and control heparin and oral anticoagulants.
- Advise on the indications for prophylactic and therapeutic anticoagulation.
- Offer advice on the management of over-anticoagulation and reversal of anticoagulation
- Advise on perioperative anticoagulation strategies
- Recognise and advise on heparin induced thrombocytopenia.
- Work as part of multi-professional team
- Liaise closely with other clinical teams.

Acquired Bleeding Disorders

Objective: *To be competent to manage patients with acquired bleeding disorders*

KNOWLEDGE

- Knowledge of the mechanism of bleeding disorders in relation to:
 - *DIC*
 - *Renal and hepatic disease*
 - *Acquired coagulation factor inhibitors*
 - *Massive transfusion*
 - *Obstetric complications*
- Knowledge of available pharmaceutical and blood products available for the management of excessive bleeding, including their indications and side effects.

SKILLS

- Interpret laboratory results correctly.
- Able to formulate an appropriate plan in the management of these disorders.
- Advise on appropriate use of blood products including coagulation factors.
- Close liaison with other clinical teams.

Platelet Disorders

Objective: *To be competent in the diagnosis and management of patients with congenital and acquired platelet disorders*

KNOWLEDGE

- Knowledge of platelet structure and function.
- Platelet and vessel wall interaction.
- Diagnosis and Management of Congenital and Acquired qualitative platelet disorders
- The measurement of platelet numbers by automated counters.
- Knowledge of the use and limitations of platelet function tests.
- Mechanism of action of antiplatelet agents.

SKILLS

- Interpret laboratory results correctly.
- Able to formulate an appropriate plan in the management of these disorders.
- Advise on appropriate use of blood products including platelet transfusion and alternative agents.
- Close liaison with other clinical teams.

ASSESSMENT & LEARNING METHODS - Haemostasis

- Case Based Discussion: Management of anticoagulation
- MiniCEX: Genetic counseling e.g. haemoglobinopathy or congenital bleeding disorder
- Course - NCHCD Update in Coagulation
- Annual Assessment
- FRCPath

Bone Marrow Failure Syndromes

Objective: Competence in the diagnosis and management of bone marrow failure

KNOWLEDGE

- Aetiology, natural history and classification of pancytopenia including:
 - *Aplastic anaemia.*
 - *Myelodysplastic syndromes*
- Use of blood product support and knowledge of the complications of long-term transfusion.
- Indications for use of chemotherapy, immunosuppression and haemopoietic progenitor cell transplant in the management of marrow failure syndromes.

SKILLS

- Use of clinical and laboratory methods to reach a diagnosis and formulate a management plan.
- Appropriate use of blood transfusion and iron chelation regimens.
- Initiate appropriate therapy.
- Be able to give a clear explanation of disorder and its long-term management to patient and family.

ASSESSMENT & LEARNING METHODS

- Annual assessment
- FRCPATH

Myeloproliferative Disorders

Objective: To be competent in diagnosing and managing patients with myeloproliferative disorders.

KNOWLEDGE

- Pathophysiology and classification of myeloproliferative disorders including:
 - Polycythaemia rubra vera
 - Essential thrombocythaemia
 - Myelofibrosis
- Knowledge of therapeutic options including:
 - Venesection
 - Chemotherapy
 - Other treatment modalities

SKILLS

- Use of clinical and laboratory methods to achieve a diagnosis and formulate a management plan.
- Be able to competently perform therapeutic venesection.
- Relates theoretical knowledge to patient management.

ASSESSMENT & LEARNING METHODS

- DOPS: Venesection
- Annual assessment
- FRCPATH

Blood Transfusion

Objective: *Acquire sufficient knowledge of blood transfusion practice to be capable of providing advice to clinical colleagues in a general hospital.*

NOTE: For specialist training in Transfusion Medicine please contact the Program Director

KNOWLEDGE

Principles of blood transfusion laboratory practice

- Blood grouping and Cross-matching techniques
- Identification of allo and auto antibodies
- Automation in blood transfusion
- Use of computers in blood transfusion
- Quantification of fetomaternal haemorrhage

Basic principles of donor selection and the preparation of blood components

- Donor selection and safety
- Red cell serological and microbiological testing of blood donors
- Preparation of blood components
- Principles of GMP and quality assurance procedures in blood donation procurement
- Risk reduction methods for transfusion transmitted infection

Principles of clinical blood transfusion practice

- Hazards of blood transfusion including analysis of haemovigilance data from SHOT & NHO reports
- The structure and role of the Hospital Transfusion Committee
- Principles and practice of therapeutic apheresis
- Prevention, diagnosis and management of haemolytic disease of the fetus and newborn.
- Appropriate use of blood and blood components with reference to national and international blood transfusion guidelines
- Techniques to reduce homologous blood transfusion exposure.

Theoretical knowledge of specialised laboratory techniques

- Extended red cell antibody investigations and compatibility testing for complex antibodies and in autoimmune haemolytic anaemia
- HLA typing and antibody screening
- Investigations in alloimmune platelet disorders
- Antibody titration and anti-D quantification techniques

SKILLS

- Appropriate use of blood products including special requirements
- Manage complications of blood transfusion appropriately.
- Assess patients requiring therapeutic apheresis procedures.
- Relates knowledge to principles of blood transfusion to patient management.
- Reporting of adverse events and reactions to the NHO
- Advise on patients with auto- or allo-antibodies, including during pregnancy

ASSESSMENT & LEARNING METHODS

- Completion of Introduction Module Workbook (Year 1)
- Case based Discussion: Investigation and reporting of a blood transfusion incident
- Case Based Discussion: Investigation and reporting of transfusion reactions
- Completion of the IBTS Training Plan or a Comprehensive Transfusion Course
- Transfusion Study Days
- National Haemovigilance conference
- FRCPath Exam

Paediatric Haematology

Objective: Acquire sufficient knowledge of paediatric haematology practice to be capable of providing advice to clinical colleagues in a general hospital.

Note: Those wishing to pursue a career in Paediatric Haematology will require extended training, likely to include specialist centres outside of Ireland

KNOWLEDGE

General

- Laboratory investigation of children including sampling requirements and age-related normal values
- Describe the appearance of blood films and bone marrows in neonates, infants and children
- Describe the pathophysiology, diagnosis and management of neonatal anaemia, coagulation disorders, haemorrhagic disease of the newborn and haemolytic disease of the newborn
- Identify the haematological manifestations of paediatric disease
- Describe the haematological investigation of non-accidental injury

Malignancy

- Describe the aetiology, classification and prognosis of childhood leukaemia, myeloproliferative diseases and myelodysplastic syndromes
- Outline the principles of chemotherapy and the need for clinical trials
- Paediatric aspects of Stem Cell Transplantation
- Understand the need for long-term follow up of children to assess the late effects of chemotherapy and SCT

Non-malignant

- Describe the pathophysiology, diagnosis and management of childhood
- Haemoglobinopathies
- Pre-op and population screening
- emergency treatment and principles of long term management strategies
- Congenital and Acquired thrombocytopenias
- Congenital and Acquired haemostatic defects
- Congenital and Acquired thrombotic states
- Leukocyte disorders
- Immune deficiency syndromes
- Inherited and Acquired Bone Marrow Failure syndromes

SKILLS

- Interpretation of blood counts, coagulation screens and Hb electrophoresis /HPLC
- Analysis of blood films and bone marrow smears
- Evaluation and management of the haematological manifestations of childhood disease in conjunction with paediatric colleagues, including Palliative Care
- Use of laboratory and clinical skills to diagnose haematological disease and formulate an appropriate management plan
- Consultation with and referral to Paediatric Haematologists for complex haematological disorders
- Communication and empathy with children and their parents
- Performs bone marrow biopsy and lumbar puncture safely and appropriately
- Has experience of intrathecal chemotherapy administration and is aware of associated risks
- Advises appropriately on the use of transfusion in children
- Understands the concepts of family screening for inherited disease and the use of genetic testing. Performs counselling appropriately.

ASSESSMENT & LEARNING METHODS

- Paediatric rotation (Year 3 or 4)
- Completion of specific paediatric training plan
- DOPS: Formal reporting of blood films and bone marrow aspirates
- DOPS: Perform a paediatric Bone Marrow Biopsy
- DOPS: Perform a paediatric lumbar puncture and administer intrathecal chemotherapy
- miniCEX: Assessment of a paediatric case
- Paediatric Study Days
- Annual Assessment
- FRCPATH

Consultative Haematology

Objective: *To be competent to advise on Haematological problems arising in other medical and surgical patients.*

KNOWLEDGE

- Gain an understanding of the haematological aspects of other specialties including:
 - Problems of massive transfusion.
 - Multi-organ failure in ICU patients
 - Haemostatic problems in pregnancy
 - Neonatal Haematology

SKILLS

- Be able to interpret laboratory results in these clinical situations and provide appropriate and timely advice
- Communicate clearly with colleagues in other specialties.

ASSESSMENT & LEARNING METHODS

- MiniCEX: Assessment of an obstetric case
- Annual Assessment
- Trainers Report
- Communication / Presentation / Teaching course

General Aspects of Haematology

Objective: To develop the particular core competencies and procedural skills required for the practice of clinical and laboratory (see also generic section)

KNOWLEDGE

Effective communication

- Understand the importance of good communication, with patients and their relatives, and with colleagues, other health professionals and those involved in the provision of health care.
- Understand impact of disease on the patient and their family.
- Work as part of a multidisciplinary team.

Practical skills

- The purpose, place, benefits and risks of procedures employed.
- Recognise impact of procedures on the patient and their family
- Recognises the importance of obtaining informed consent in the practice of Haematology, and respects the patient's right to choice
- Principles of Safe Chemotherapy administration
- Principles of Safe Blood Components Transfusion

Audit and Research

- Describe the principles of clinical audit including the audit cycle
- Explain the critical appraisal of research data, including basic statistical analysis

SKILLS

- Elicit an accurate history.
- Be able to communicate the diagnosis clearly to patients and their relatives.
- Be able to explain treatment required and its side effects of patients and their relatives.
- Demonstrate an ability to break bad news including the communication of a terminal prognosis.
- Be able to communicate clearly with colleagues in primary and secondary care via clinic letters
- Choice and care of central venous lines.
- Use of antibiotic regimens for treatment and prophylaxis in the immunosuppressed patient.
- Requests the use of radioisotope methods appropriately
- Prescribes chemotherapy safely and understands the risks / benefits associated
- Prescribes blood components safely and understands the risks / benefits associated
- Participates in Audit
- Evaluates research data and/or publications in scientific journals

ASSESSMENT & LEARNING METHODS

- Case Based Discussion: End of life care
- Leadership/Management course
- Ethics programme
- Evidence of participation in audit
- Evidence of participating in and/or reviewing current research
- ASH/HAI/EHA Conferencea – at least one per year, an international conference should be attended at least every second year
 - HAI Training Session
 - ASH Highlights session – present at least once
 - Attend additional course study days
- Annual Assessment

Minimum Requirements for Training

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Section 1 - Training Plan				
Personal Goals Plan (Copy of agreed Training Plan for your current training year signed by both Trainee & Trainer)	Required	1	Training Post	Form 052
Weekly Timetable (Sample Weekly Timetable for Post/Clinical Attachment)	Required	1	Year of Training	Form 045
On Call Rota	Required	1	Year of Training	Form 064
Section 2 - Training Activities				
Outpatient Clinics				Form 001
General	Required	0	Year of Training	Form 001
Day Ward	Required	0	Year of Training	Form 001
Paediatric (10 per training)	Required	10	Training Programme	Form 001
Haemostasis and Thrombosis (min 30 per training)	Required	30	Training Programme	Form 001
Obstetrics (10 per training)	Required	10	Training Programme	Form 001
Ward Rounds/Consultations (100 per year)	Required	100	Year of Training	Form 002
Emergencies/Complicated Cases	Required			Form 003
Procedures/Practical Skills/Surgical Skills	Desirable			Form 004
Bone marrow aspirate and biopsy (100 per training)	Required	100	Training Programme	Form 004
Lumbar puncture/Intrathecal chemotherapy (100 per training)	Required	100	Training Programme	Form 004
Bone marrow harvest (Observe 2 per training)	Required	2	Training Programme	Form 004
Pheresis (Observe 2 per training)	Required	2	Training Programme	Form 004
Additional/Special Experience Gained	Desirable	0	Training	Form 005

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
			Programme	
Relatively Unusual Cases	Desirable	0	Training Programme	Form 019
Lab Experience				Form 018
Introduction to laboratory haematology (min 2 weeks)	Required	1	Training Programme	Form 018
Bone Marrow Reporting (min 100 per training)	Required	100	Training Programme	Form 018
Reticulocyte Counting	Required	1	Training Programme	Form 018
Haemoglobinopathy Investigation	Required	1	Training Programme	Form 018
Vitamin B12 and folate assays	Required	1	Training Programme	Form 018
Chronic Cases/Long term care	Desirable	0	Training Programme	Form 066
Section 3 - Educational Activities				
Mandatory Courses				Form 006
Audit	Required	1	Year of Training	Form 006
Communication	Required	1	Year of Training	Form 006
Core Laboratory Skills course	Required	3	Training Programme	Form 006
Transfusion online	Required	1	Training Programme	Form 006
1. Ethics I Professionalism	Required	1	Training Programme	Form 006
2. Ethics II Ethics & Law	Required	1	Training Programme	Form 006
3. Ethics III Research	Required	1	Training Programme	Form 006
4. Ethics IV Pathology	Required	1	Training Programme	Form 006
Leadership skills (3 rd year on)	Required	1	Training	Form 006

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
			Programme	
ACLS	Required	1	Training Programme	Form 006
Non – Mandatory Courses	Desirable	0	Training Programme	Form 007
In-house activities				Form 011
Grand Rounds	Required	1	Year of Training	Form 011
Radiology Conference	Required	1	Year of Training	Form 011
Journal Club	Required	1	Year of Training	Form 011
MDT Meetings	Required	1	Year of Training	Form 011
Other	Required	1	Year of Training	Form 011
Examinations	Required	0		Form 012
FRCPATH Part I examination	Required	1	Training Programme	Form 012
FRCPATH Part II examination	Required	1	Training Programme	Form 012
Teaching Activity	Required	6	Training Programme	Form 013
Study Days (min 5 recognised per year)	Required	5	Training Programme	Form 008
Research	Desirable	0	Year of Training	Form 014
Audit activities (1 per year)	Required	1	Year of Training	Form 015
Publications	Desirable	0	Year of Training	Form 016
Presentations (1 per year)	Required	1	Year of Training	Form 017
National/International meetings (1 per year – HAI mandatory unless oncall)	Required	1	Year of Training	Form 010

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Additional Qualifications	Desirable	0	Year of Training	Form 065
Committee Attendance (1 per year)	Desirable	0	Year of Training	Form 063
Section 4 - Assessments				
DOPS				Form 021
Bone marrow aspirate and trephine biopsy - adult and paediatric	Required	1	Year of Training	Form 021
Lumbar puncture, intrathecal administration of chemotherapy - adult and paediatric	Required	1	Year of Training	Form 021
Laboratory Skills:	Required	1	Year of Training	Form 021
Making and staining a blood film	Required	1	Year of Training	Form 021
Setting up a microscope	Required	1	Year of Training	Form 021
Blood grouping and cross match	Required	1	Year of Training	Form 021
Making and staining a BM Aspirate	Required	1	Year of Training	Form 021
Sickle screen, Hb electrophoresis and HPLC	Required	1	Year of Training	Form 021
Immunophenotyping	Required	1	Year of Training	Form 021
Formal reporting of blood films and bone marrow aspirates- adult and paediatric	Required	1	Year of Training	Form 021
Blood group	Required	1	Year of Training	Form 021
Antibody screening and cross matching	Required	1	Year of Training	Form 021
Direct antiglobulin test	Required	1	Year of Training	Form 021
Kleihauer test	Required	1	Year of Training	Form 021
Interprets clinically significant antibodies	Required	1	Year of	Form 021

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
			Training	
Safe prescribing of blood components	Required	1	Year of Training	Form 021
Safe prescribing and administration of chemotherapy	Required	1	Year of Training	Form 021
Management of Central lines	Required	1	Year of Training	Form 021
CBD	Required	1	Year of Training	Form 020
See examples below:				
Use of evidence based medicine to determine treatment	Desirable	0	Training Programme	
Comprehensive investigation of a new haematological malignancy	Desirable	0	Training Programme	
Ethical Dilemmas	Desirable	0	Training Programme	
Haematological Emergencies	Desirable	0	Training Programme	
End of life care	Desirable	0	Training Programme	
Management of a leukaemia	Desirable	0	Training Programme	
Management of a plasma cell disorder	Desirable	0	Training Programme	
Management of lymphoma	Desirable	0	Training Programme	
Investigation of a red cell disorder	Desirable	0	Training Programme	
Initial management of myeloma and chronic leukaemia	Desirable	0	Training Programme	
Management of anticoagulation	Desirable	0	Training Programme	
Mini-Cex (At least two Mini-CEx assessments should take place in each year of training)	Required	2	Year of Training	Form 023