



**FACULTY OF
PATHOLOGY**

ROYAL COLLEGE OF
PHYSICIANS OF IRELAND

HIGHER SPECIALIST TRAINING IN

HAEMATOLOGY – CLINICAL AND LABORATORY

OUTCOME BASED EDUCATION – OBE



This curriculum of Higher Specialist Training in Haematology was developed in 2023 by the Haematology NSDs - Dr John Quinn, Dr Clodagh Keohane, and former NSD Dr Oonagh Gilligan, and undergoes an annual review by the National Specialty Directors, Dr Ann O’Shaughnessy, Head of Education, and by the Haematology Specialty Training Committee. The curriculum is approved by the Faculty of Pathology.

Version	Date Published	Last Edited By	Version Comments
1.0	01 July 2023	Keith Farrington	New OBE Curriculum

National Specialty Directors Foreword

This curriculum defines the purpose, learning objectives, training process and programme of assessment for Haematology training in Ireland leading to the award of Certificate of Satisfactory Completion of Specialist Training (CSCST).

The purpose of the haematology curriculum is to produce doctors with the generic and speciality-specific skills required to work as haematology consultants (clinical and laboratory) in Ireland.

Trainees who successfully complete the Higher Specialty Training in Haematology and are awarded CSCST will be eligible for inclusion on the specialist register of the Irish Medical Council. At this stage they will be considered as independent practitioners and eligible for consultant appointment.

The Haematology curriculum has been developed with the input of consultants actively involved in delivering teaching and training, trainees, and educational specialists. The Haematology curriculum has moved to an Outcome based approach (OBE) with speciality goals aligned to key areas of practice. Within each goal are a series of training outcomes that reflect the sum of day-to-day practice in Haematology. Trainees will demonstrate proficiencies in each outcome matched to the level of their training, progressing to independent competence in each. Trainers will link closely with their trainees assisting them and evaluating their progress on a regular basis. Achievement of the FRCPath is required for successful completion of HST training. It is advised that trainees attempt the Part 1 of the FRCPath following 2 years of HST and Part 2 in years 4 or 5.

Haematologists are responsible for the management of acute and chronic haematological conditions, in addition, they provide clinical oversight for Haematology laboratory services and a liaison service which supports all other areas of the hospital and community medical services. Haematology consultant posts range from general hospital posts which cover all areas of haematology, to more specialist posts in larger centres in haemato-oncology, haemostasis and thrombosis, bone marrow transplant, red cell and haemoglobinopathy disorders, transfusion, advanced diagnostics and paediatric haematology. This curriculum will ensure that the trainee develops the full range of generic professional capabilities, specialty-specific capabilities and underlying knowledge and skills required for the practice of haematology at consultant level as a general haematologist.

Table of Contents

<i>National Specialty Directors Foreword</i>	1
1. INTRODUCTION	3
1.1. Purpose of training.....	4
1.2. Purpose of the curriculum.....	4
1.3. How to use the curriculum.....	4
1.4. Reference to rules and regulations.....	4
1.5. Overview of curriculum sections and training goals.....	5
2. EXPECTED EXPERIENCE	6
2.1. Programme structure	7
2.2. Outpatient clinics, ward rounds, consultations and Training activities	8
2.3. In-house commitments	9
2.4. Evaluations, Assessments and Examinations	9
2.5. Research, Audit and Teaching experiences	9
2.6. Teaching attendance	9
2.7. Overview of Expected Experience	10
3. CORE PROFESSIONAL SKILLS	11
Partnership	12
Performance	13
Practice	14
4. SPECIALTY SECTION - HAEMATOLOGY GOALS AND OUTCOMES	15
Training Goal 1 – Basic Proficiencies in Haematology	16
Training Goal 2 – Management of Haematology Services.....	19
Training Goal 3 – Diagnosis and Treatment of Specific Haematological Conditions	21
Training Goal 4 – Advanced laboratory haematology	25
Training Goal 5 – Transfusion Haematology	26
5. APPENDICES	27
ASSESSMENT APPENDIX	28
Workplace-Based Assessment and Evaluations	28
Examinations	31
TEACHING APPENDIX	32

1. INTRODUCTION

This section includes an overview of the training programme and of this curriculum document

1.1. Purpose of training

This programme is designed to provide the training and professional development necessary to work as a Consultant Haematologist, providing expert care to patients with Haematological disorders. This is achieved by providing Haematology training in approved training posts, under the supervision of certified trainers, to satisfy the outcomes listed in the Curriculum. Each post provides a trainee with a named trainer and the programme is under the direction of the National Specialty Directors for Haematology.

1.2. Purpose of the curriculum

The purpose of the curriculum is to define the relevant processes, contents, outcomes and requirements to be achieved. The curriculum is structured to delineate the overarching goals, outcomes, expected learning experiences, instructional resources and assessments that comprise your Higher Specialist Training (HST) programme. It provides a feedback framework for successful completion of HST programme.

In keeping with developments in medical education and to ensure alignment with international best practice and standards, the Royal College of Physicians (RCPI) have implemented an Outcomes Based Education (OBE) approach. This curriculum design differs from traditional minimum based requirement designs in that the learning process and desired end-product of training (outcomes) are at the forefront of the design to provide the essential training opportunities and experiences to achieve those outcomes.

1.3. How to use the curriculum

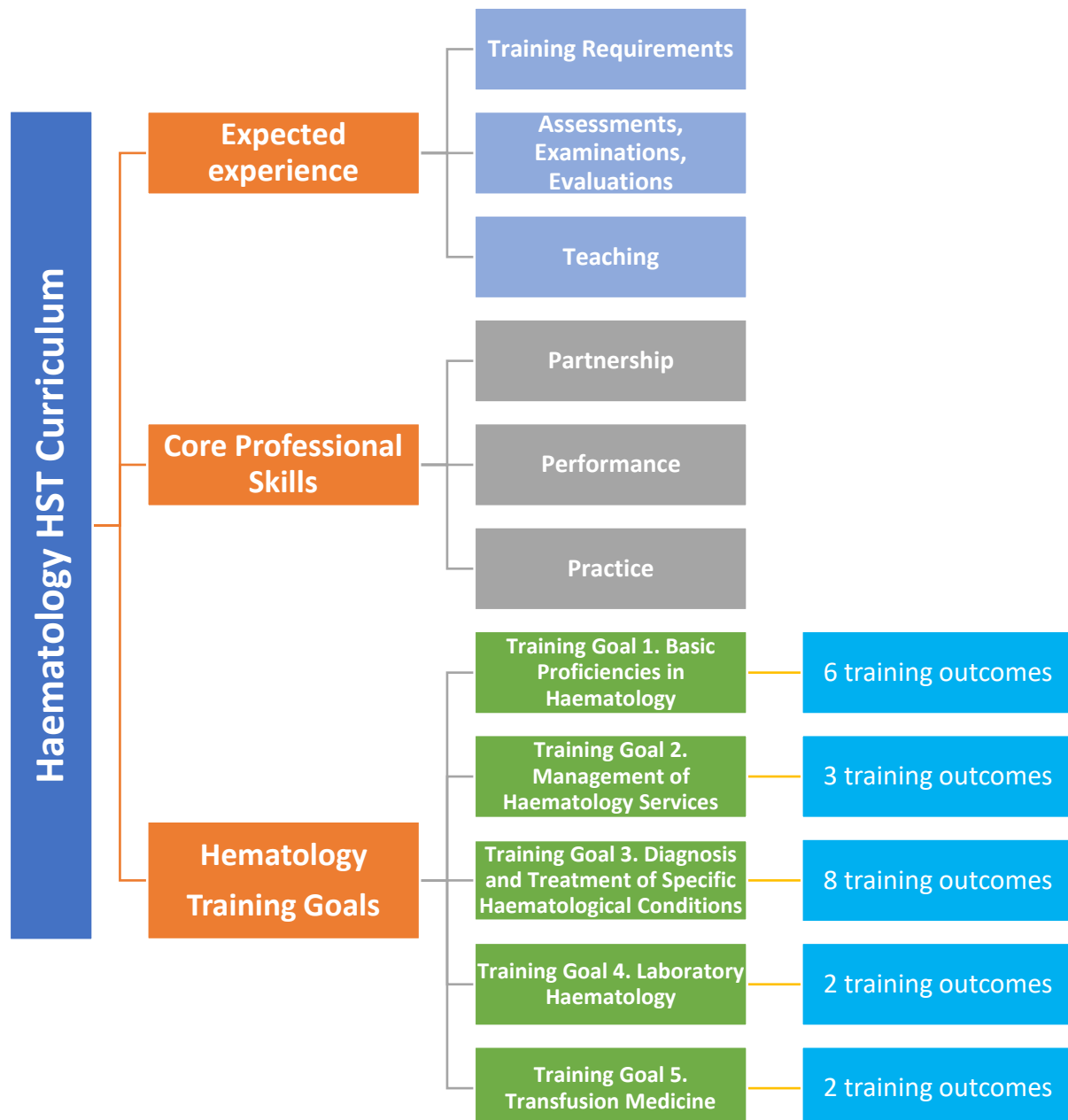
It is expected that both trainees and trainers have a good working knowledge of the curriculum and should use it as a guide for the training programme. Trainers are encouraged to use the curriculum as the foundation of their discussions with trainees, particularly during goals-setting, feedback and appraisal processes.

Each trainee is expected to engage with the curriculum by maintaining an ePortfolio in which assessments and feedback opportunities must be recorded. The ePortfolio allows trainees to build up evidence to inform decisions on their progress at the annual reviews whilst also providing tools to support and identify further educational and development opportunities. It is imperative that the trainees keep an up to date ePortfolio throughout the duration of their programme.

1.4. Reference to rules and regulations

Please refer to the following sections within the HST Training Handbook for rules and regulations associated with this post. Policies, procedures, relevant documents, and Training Handbooks can be accessed on the RCPI website following [this link](#).

1.5. Overview of curriculum sections and training goals



2. EXPECTED EXPERIENCE

This section details the training experience that all Trainees are expected to complete over the course of the higher specialist training

2.1. Programme structure

The duration of HST in Haematology – Clinical and Laboratory is 5 years. While all 5 years can be completed in HST training posts, trainees are encouraged to consider Out of Clinical Programme (OCPE) training opportunities as part of their programme (see below).

Out of Clinical Programme Experience (OCPE): Up to one year of training credit may be gained from a period of full-time research in a relevant area. A further year of training credit may be gained from full time clinical training outside of the HST-accredited training posts e.g. a subspecialty fellowship. These Out of Clinical Programme experience (OCPE) years (research or clinical) must be preapproved, and retrospective credit cannot be applied.

Training Principles: During the period of training the trainee must take increasing responsibility for seeing patients, undertaking ward consultations, making decisions and operating at a level of responsibility which would prepare him/her for practice as an independent Consultant. The trainee should undertake outpatient clinics weekly throughout the training period. New patients should be seen throughout the training period under suitable supervision in outpatient settings and the consultant trainer should review ward consultations directly with the trainee. Supervision should be particularly close during the first one or two years. Particularly experienced trainees may undertake the running of an outpatient clinic on their own without direct consultant supervision later in the programme. Over the course of HST, Trainees are expected to gain experience in a variety of hospital settings, including regional posts where possible. At the start of each post, fill out a Personal Goals form with their trainer and upload it on ePortfolio; the form should be agreed and signed by both Trainee & Trainer.

Generic Professional Skills: Generic knowledge, skills and attitudes support competencies that are common to good medical practice in all of the medical and related specialties. It is intended that all Trainees should re-affirm those competencies during Higher Specialist Training. No timescale of acquisition is imposed, but failure to make progress towards meeting these important objectives at an early stage would cause concern about a Trainee's suitability and ability to become an independent specialist.

Recording of Evidence of training: The target numbers for training items in the following sections represent the recording requirement to document evidence of relevant and varied clinical experience; it is understood that actual number of training experiences is likely to be well in excess of these numbers.

Over the course of HST, Trainees are expected to

- Acquire specific experience in stem cell transplant, coagulation, paediatric haematology, and transfusion
- Experience rotations in a variety of hospital settings, including regional posts where possible
- Complete a personal goals form at the start of each post, with their trainer and upload it on ePortfolio; the form should be agreed and signed by both Trainee & Trainer
- Participate regularly in the on-call rota

2.2. Outpatient clinics, ward rounds, consultations and Training activities

Attendance at Clinics, participation in Ward Rounds and Patient Consultations are required elements of all posts throughout the programme. The timetable and frequency of attendance should be agreed with the assigned trainer at the beginning of the post.

This table provides an overview of the expected experience a Specialist Registrar should gain regarding clinics attendance, ward rounds and consultations. All these activities should be recorded on ePortfolio using the respective form.

While it is recognised the opportunity to experience these training activities may not be available at every site, these activities can be captured at other sites over the course of the training program, providing the expected experience number is met.

CLINICS			
Clinic	Timeline	Expected Experience	ePortfolio Form
Haemostasis and Thrombosis (including obstetrics haematology where available)	In year 1 to 5	Attend 1 of these clinics at least 1 per week, during appropriate posts	Clinics
General and Malignant Haematology	In year 1 to 5	Attend 1 of these clinics at least 1 per week, during appropriate posts	
SUBSPECIALTY CLINICS			
Clinic	Timeline	Expected Experience	ePortfolio Form
Paediatric Haematology	In year 1 to 5 of HST	Attend 1 of these clinics at least 1 per week, during appropriate posts	Clinics
Coagulation	In year 1 to 5 of HST		
Stem Cell Transplant	In year 1 to 5 of HST		
Subspecialty	In year 1 to 5 of HST		
WARD ROUNDS and CONSULTATIONS			
Type	Timeline	Expected Experience	ePortfolio Form
Ward Rounds – Consultant-led	Over the 5 years of HST	Weekly (post dependent)	Clinical Activities
Ward Rounds – SpR-led	Over the 5 years of HST	Weekly (post dependent)	
Consultations	Over the 5 years of HST	At least 50 per year	
PROCEDURES			
Type	Timeline	Expected Experience	ePortfolio Form
Bone Marrow Aspirate	Over the 5 years of HST	Weekly (post dependent)	Procedures Skills & DOPS
Lumbar Puncture/Intrathecal Chemotherapy	Over the 5 years of HST	Weekly (post dependent)	

2.3. In-house commitments

Trainees are expected to attend a series of in-house commitments as follows:

- Attend at least **1 Grand Rounds per month**, over the course of 5 years of HST
- Attend at least **1 Journal Club per month**, over the course of 5 years of HST
- Attend at least **2 MDT Meetings per month**, over the course of 5 years of HST
- Regular attendance at National/International meetings

2.4. Evaluations, Assessments and Examinations

Trainees are expected to:

- Complete **4 quarterly assessments per training year** (1 evaluation per quarter)
- Complete **1 end of post assessment at the end of each post** (this replaces quarterly evaluation in happening at the end of a post)
- Complete **1 end of year evaluation at the end of each training year**
- Complete **the FRCPath Part I & II Examination**
- Complete all the **workplace-based assessments (CBD, Mini-CEX, DOPS)** as agreed with Trainers.

For more information on evaluations, assessment and examinations, please refer to the [Assessment Appendix](#) at the end of this document.

2.5. Research, Audit and Teaching experiences

Specialist Registrars are expected to complete the following activities:

- Deliver **12 teaching sessions** (to include tutorials, lectures, bedside teaching, etc.) over the course of 5 years of HST
- Deliver **1 oral presentation**, per each year of HST
- Complete **1 Audit or Quality Improvement Project**, over the course of 5 years of HST
- Attend **1 National or International Meeting**, per each year of HST

In addition, it is recommended that trainees aim to

- Complete **1 research project**, over the course of 5 years of HST
- Complete **1 publication**, over the course of 5 years of HST

2.6. Teaching attendance

Specialist Registrars are expected to attend all the courses and study days as detailed in the [Teaching Appendix](#), at the end of this document.

2.7. Overview of Expected Experience

Experience Type	Expected	ePortfolio form
Rotation Requirements	Complete all requirements related to the posts agreed	n/a
Personal Goals	At the start of each post complete a Personal Goals form on ePortfolio, agreed with your trainer and signed by both Trainee & Trainer	Personal Goals
On-call Commitments	Partake in on-call commitments in Haematology for the full duration of the programme and record attendance on ePortfolio	Clinical Activities
Clinics	Attend Haematology outpatient and Subspecialty Clinics as agreed with your trainer and record attendance per each post on ePortfolio	Clinics
Ward Rounds/Consultations	Gain experience in clinical handover and ward rounds as agreed with your trainer and record attendance per each post on ePortfolio	Clinical Activities
Deliver Teaching	Record on ePortfolio all the occurrences where you have delivered Tutorials (at least 4 per Year), Lectures (at least 4 per Year), and Bedside teaching (at least 4 per Year)	Delivery of Teaching
Research	Desirable Experience: actively participate in research, seek to publish a paper and present research at conferences or national/international meetings	Research Activities
Publication	Desirable Experience: complete 1 publication during the training programme	Additional Professional Activities
Presentation	Deliver 1 oral presentation or poster per each year of training	Additional Professional Activities
Audit	Complete and report on an audit or Quality Improvement (QI) per each year of training, either to start, continue or complete	Audit and QI
Attendance at In-House Activities	Each week attend at least 1 Grand Round, 1 Journal Club, 1 Radiology Conference, 1 MDT Meeting. Attend 1 Seminar and 1 Lecture per year. Record attendance on ePortfolio	Attendance at In-House Activities
National/International Meetings	Attend 1 per year of training	Additional Professional Activities
Teaching Attendance	Attend courses and Study Days as detailed in the Teaching Appendix	Teaching Attendance
Examinations	FRCPATH I & II Haematology	Examinations
Evaluations and Assessments	Complete a Quarterly Assessment/End of post assessment with your trainer 4 times in each year. Discuss your progress and complete the form.	Quarterly Assessments/End-of-Post Assessments
Workplace-based Assessment	Complete all the workplace-based assessment as agreed with your trainer and complete the respective form.	CBD/DOPS/Mini-CEX
End of Year Evaluation	Prepare for your End of Year Evaluation by ensuring your portfolio is up to date and your End of Year Evaluation form is initiated with your trainer.	End of Year Evaluation

3. CORE PROFESSIONAL SKILLS

This section includes the Medical Council guidelines for medical professional conduct, regarding Partnership, Performance and Practice

These principles are woven within training practice and feedback is formally provided in the Quarterly Evaluations, End of Post, End Year Evaluation.

Partnership

Communication and interpersonal skills

- Facilitate the exchange of information, be considerate of the interpersonal and group dynamics, and have a respectful and honest approach
- Engage with patients and colleagues in a respectful manner
- Actively listen to the thoughts, concerns, and opinions of others
- Consider data protection, duty of care and appropriate modes of communication when exchanging information with others

Collaboration

- Collaborate with patients, their families, and your colleagues to work in the best interest of the patient, for improved services and to create a positive working environment
- Work cooperatively with colleagues and team members to deliver an excellent standard of care
- Seek to build trust and mutual respect with patients
- Appropriately share knowledge and information, in compliance with GDPR guidelines
- Take on-board available, relevant feedback

Health Promotion

- Communicate and facilitate discussion around the effect of lifestyle factors on health and promote the ethical practice of evidence-based medicine
- Seek up-to-date evidence on lifestyle factors that:
 - negatively impact health outcomes
 - increase risk of illness
 - positively impact health and decrease risk factors
- Actively promote good health practices with patients individually and collectively

Caring for patients

- Take into consideration patient's individuality, personal preferences, goals, and the need to provide compassionate and dignified care
- Be familiar with
 - Ethical guidelines
 - Local and national clinical care guidelines
- Act in the patient's best interest
- Engage in shared decision-making and discuss consent

Performance

Patient safety and ethical practice

- Put the interest of the patient first in decisions and actions
- React in a timely manner to issues identified that may negatively impact the patient's outcome
- Follow safe working practices that impact patient's safety
- Understand ethical practice and the medical council guidelines
- Support a culture of open disclosure and risk reporting
- Be aware of the risk of abuse, social, physical, financial, and otherwise, to vulnerable persons

Organisational behaviour and leadership

- The activities, personnel and resources that impact the functioning of the team, hospital, and health care system
- Understand and work within management systems
- Know the impacts of resources and necessary management
- Demonstrate proficient self-management

Wellbeing

- Be responsible for own well-being and health and its potential impact on the provision of clinical care and patient outcomes
- Be aware of signs of poor health and well-being
- Be cognisant of the risk to patient safety related to poor health and well-being of self and colleagues
- Manage and sustain your own physical and mental well-being

Practice

Continuing competence and lifelong learning

- Continually seek to learn, improve clinical skills and understand established and emerging theories in the practice of medicine
- Meet career requirements including those of the medical council, your employer, and your training body
- Be able to identify and optimise teaching opportunities in the workplace and other professional environments
- Develop and deliver teaching using appropriate methods for the environment and target audience

Reflective practice and self-awareness

- Bring awareness to your actions and decisions and engage in critical appraisal of your own work to drive lifelong learning and improve practice
- Pay critical attention to the practical values and theories which inform everyday practice
- Be aware of your own level of practice and your learning needs
- Evaluate and appraise your decisions and actions with consideration as to what you would change in the future
- Seek to role model good professional practice within the health service

Quality assurance and improvement

- Seek opportunities to promote excellence and improvements in clinical care through the audit of practice, active engagement in and the application of clinical research and the dissemination of knowledge at all levels and across teams
- Gain knowledge of quality improvement methodology
- Follow best practices in patient safety
- Conduct ethical and reproducible research

4. SPECIALTY SECTION - HAEMATOLOGY GOALS AND OUTCOMES

This section includes the Haematology Training Goals that the Trainee should achieve by the end of the higher specialist training.

Each Training Goal is broken down into specific and measurable training outcomes.

*Under each outcome there is an indication of the **suggested** training/learning opportunities and assessment methods.*

In order to achieve the outcomes it is recommended to agree the most appropriate training and assessment methods with the assigned Trainer.

Training Goal 1 – Basic Proficiencies in Haematology

By the end of HST the Trainee will be proficient in the outcomes associated with this goal. The proficiencies gained in this goal will establish a solid foundation for all aspects of the practice of Haematology at SpR and subsequently consultant level practice. In general, it is expected that Trainees will be able to demonstrate a high level of proficiency in most aspects of basic skills in Haematology by the end of years 3. It is recognised that this may differ from Trainee to Trainee depending on the experience gained and variations in post-rotation.

OUTCOME 1 OF 6 – DEMONSTRATE PROFICIENCY IN BASIC LABORATORY SKILLS

What this outcome means

Trainees will be able to:

- Demonstrate understanding of laboratory practice including health and safety and quality control and have a suitable knowledge of laboratory methods used in the clinical laboratory
- Provide sound basic advice on interpreting laboratory results and this will be based on the presentation and management of haematological disorders
- Demonstrate proficiency in most aspects of basic laboratory skills relatively early in the programme
- Trainees should record instances of feedback on the following activities:
 - Interpret full blood count
 - Report blood films with appropriate clinical advice
 - Prepare blood films
 - Prepare aspirate slides and trephine preparations
 - Blood grouping
 - Antibody screening and cross matching
 - Direct antibody test
 - Kleihauer test
 - Clinically significant antibodies
 - PT, INR, APPT, Thrombin time, Fibrinogen assay and D-dimer
 - Thrombophilia screening
 - Clotting factor assays
 - Immunophenotyping
 - Cytogenetics
 - Molecular Studies
 - Interpretation of clotting mixing studies
 - Monitoring of Anti-coagulation therapy
 - Advanced coagulation tests
 - Flow cytometry
 - FMH
 - PNH Screening
 - ESR
 - P Viscosity
 - EQA schemes participation

Learning opportunities and assessment

- Feedback opportunities
- Workplace Based Assessments (CBD – Reporting blood films, Full blood count)
- Study Days

OUTCOME 2 OF 6 – COMPETENTLY TAKE HISTORY AND PERFORM PHYSICAL EXAMINATION

What this outcome means

Trainees will be able to:

- Elicit an accurate history and perform an appropriate physical examination
- Demonstrate proficiency in History and Physical Examination relatively early in the programme i.e., before end year 1, however some recording activities and continual demonstration of proficiency is required until at least year 3

Learning opportunities and assessment

- Feedback opportunities (case mix of outpatients, inpatients, post-take patients and presentation at MDT)
- Workplace Based Assessments (CBD History taking, and physical examination, Mini-CEX)
- Study Days

OUTCOME 3 OF 6 – COMMUNICATE EFFECTIVELY WITH PATIENTS, CARERS, AND FAMILIES

What this outcome means

Trainees will be able to:

- Demonstrate proficiency in Communication with Patients Carers, and Families

Learning opportunities and assessment

- Feedback opportunities (Record case mix of communication with Patients, Carers and Families to include Ceiling of Care Discussion, Breaking Bad news, Obtaining Informed Consent. Record feedback from senior colleagues (consultants) at outpatient clinics/ward rounds/post-take patients)
- Workplace Based Assessments (CBD, Mini-CEX)
- RCPI Course: Mastering Communication

OUTCOME 4 OF 6 – COMMUNICATE EFFECTIVELY WITH OTHER CLINICIANS AND LABORATORY STAFF

What this outcome means

Trainees will be able to:

- Demonstrate Effective communication with other clinicians and healthcare providers is critical to Haematology

- It is expected that Trainees will be able to demonstrate proficiency Clinical Communication relatively early in the programme i.e., before end year 1, however some recording activities and continual demonstration of proficiency is required until at least year 3

Learning opportunities and assessment

- Feedback opportunities (Record case mix of attending (observed or participating) at MDT, observed oral presentations or giving tutorials, journal club attendance, presenting patients to senior colleagues at ward rounds or outpatient clinics at least once per post years)
- Workplace Based Assessments (CBD, Mini-CEX)
- RCPI Course: Mastering Communication

OUTCOME 5 OF 6 – SAFELY PRESCRIBE CHEMOTHERAPY

What this outcome means

Trainees will be able to:

- Safely prescribe chemotherapy for different chemotherapy regimens, immunotherapy, supportive therapies, extremes of weight, targeted therapies

Learning opportunities and assessment

- Feedback opportunities (Record case mix of attending (observed or participating) at MDT, observed oral presentations or giving tutorials, journal club attendance, presenting patients to senior colleagues at ward rounds or outpatient clinics at least once per post years)
- Workplace Based Assessments (CBD, Mini-CEX)
- RCPI Course: Safe Prescribing Systemic Anti-Cancer Therapy (This course must be taken in year 1)

OUTCOME 6 OF 6 – SAFELY PRESCRIBE BLOOD COMPONENTS

What this outcome means

Trainees will be able to:

- Safely prescribe blood components and understand the risk and benefits involved.

Learning opportunities and assessment

- Feedback opportunities (Record case mix of safe prescribing of blood components (iron overload, advising on use of blood products, coagulation factors))
- Workplace Based Assessments (CBD, Mini-CEX)

Training Goal 2 – Management of Haematology Services

By the end of HST the Trainee will be proficient in all aspects of the management of Haematology service – day care, outpatients, and inpatient. This involves demonstrating professional behaviors and delivering patient centered care in all settings. In general, it is expected that Trainees will be able to demonstrate a high level of proficiency of management of Haematology services by the end of years 3. It is recognised that this may differ from Trainee to Trainee depending on the experience gained and variations in post-rotation.

OUTCOME 1 OF 3 – MANAGE DAY CARE SERVICES

What this outcome means

Trainees will be able to:

- Manage and treat patients in an ambulatory/day care unit including specialist haematological treatments. This involves demonstration of core professional skills such as patient centered care, clinical leadership, effective teamwork as well as competency in specialty specific skills such as diagnosis and management, clinical reasoning, safe prescribing, managing complications, and competency performing procedures. It is expected that Trainees would not be able to demonstrate full competency before year 4.

Learning opportunities and assessment

- Feedback opportunities (Informal discussion or informal observation)
- Procedures - procedures performed at day care clinics – Administration of Intrathecal Chemotherapy, Observed Stem Cell Harvest, Observing Therapeutic Apheresis, Performing Venesection, Perform Bone Marrow Aspirate and Trephine Biopsy
- Workplace Based Assessments (CBD, Mini-CEX)
- RCPI course: Leadership for Pathology
- RCPI Course: Ethics Foundation
- RCPI Course: Ethics for Pathology
- RCPI Course Core Pathology

OUTCOME 2 OF 3 – MANAGE OUTPATIENT SERVICES

What this outcome means

Trainees will be able to:

- Manage and treat patients with known haematological disorders in an outpatient clinic/setting. This involves demonstration of core professional skills such as patient centered care, clinical leadership, effective teamwork, efficient use of time at clinics as well as competency in specialty specific skills such as diagnosis and management, clinical reasoning, safe prescribing, managing complications, and liaising with specialty services where appropriate. It is expected that Trainees would not be able to demonstrate full competency before year 4.

Learning opportunities and assessment

- Feedback opportunities (cases managed at OP clinics and/or specialised clinics – e.g. coagulation, transplant, obstetrics)
- Workplace Based Assessments (CBD, Mini-CEX)
- RCPI course: Leadership for Pathology
- RCPI Course: Ethics Foundation
- RCPI Course: Ethics for Pathology
- RCPI Course Core Pathology

OUTCOME 3 OF 3 – MANAGE INPATIENTS**What this outcome means**

Trainees must be able to provide continuity of care to inpatients with haematological conditions. This involves demonstration of core professional skills such as patient centered care, effective consultation skills in challenging conditions, assessment of urgency as well as competency in specialty specific skills such as managing co-morbidities, patients with complex conditions, recognizing the need to liaise with other specialties, safe prescribing, managing complications, and liaising with specialty services where appropriate. It is expected that Trainees would not be able to demonstrate full competency before year 4.

Learning opportunities and assessment

- Feedback opportunities (ward rounds/post-take patients)
- Workplace Based Assessments (CBD, Mini-CEX)
- RCPI course: Leadership for Pathology
- RCPI Course: Ethics Foundation
- RCPI Course: Ethics for Pathology
- RCPI Course Core Pathology

Training Goal 3 – Diagnosis and Treatment of Specific Haematological Conditions

By the end of HST the Trainee will be proficient in diagnosing, treating haematological conditions and the management of patients requiring specialist Haematological treatment. It is recognised that Trainees may advance at different rates depending on factors such as post-rotations or specific experience. In most cases however, it is expected that Trainees will be approaching consultant level proficiencies in most of the outcomes listed below between years 3 and 5. In order to achieve proficiency in this goal each part of the outcomes must be completed in addition to passing the FRCPATH examinations (I and II.)

OUTCOME 1 OF 8 – MANAGE RED CELL DISORDERS

What this outcome means

Trainees will be able to:

- Diagnose and manage patients with red cell disorders, in particular anaemia and manage patients with haemoglobinopathies
- Select and interpret appropriate investigations and order appropriate tests and form an appropriate management plan for nutritional deficiency anaemia, immune mediated anaemia (transfusion), and red cell aplasia.
- Correctly interpret laboratory results and formulate a plan of management for chronic pain in sickle cell disease, use transfusion and manage iron overload, screen for organ damage, appropriately use disease modifying drugs, exhibit an understanding of the impact of physical and psychosocial factors on the patient

Learning opportunities and assessment

- Feedback opportunities (case mix of management of red cell disorders)
- Workplace Based Assessments (CBD, Mini-CEX,) Investigation of anaemia, or haemoglobin disorders (e.g., sickle cell crisis), Assessment of a patient with haemolytic or haemoglobin disorder
- FRCPATH I & II

OUTCOME 2 OF 8 – MANAGE BONE MARROW FAILURE SYNDROMES

What this outcome means

Trainees will be able to:

- Proficiently manage patients with bone marrow failure syndromes
- Use appropriate methods (clinical and laboratory) to reach a diagnosis and formulate a management plan
- Liaise with other medical staff in treatment of bone marrow failure syndromes
- Use therapies appropriately such as iron chelation, assess suitability for stem cell transplant

Learning opportunities and assessment

- Feedback opportunities (case mix management of bone marrow failure syndromes)
- Workplace Based Assessments (CBD, Mini-CEX) – work up of management of patient presenting with pancytopenia
- FRCPATH I & II

OUTCOME 3 OF 8 – MANAGE HAEMOSTASIS AND THROMBOSIS

What this outcome means

Trainees will be able to:

- Proficiently diagnose and manage patients with congenital coagulation disorders and thrombophilia
- Safely manage patients requiring anti-coagulation
- Safely manage patients with bleeding disorders
- Competently diagnose and manage patients with congenital and acquired platelet disorders

Learning opportunities and assessment

- Feedback opportunities (Case mix of management of haemostasis and thrombosis – to include congenital disorders of coagulation, thrombosis, anticoagulation, acquired bleeding disorders)
- Workplace Based Assessments (CBD, Mini-CEX,) – Management of bleeding, management of clotting
- FRCPATH I & II

OUTCOME 4 OF 8 – MANAGE HAEMATOLOGICAL MALIGNANCIES INCLUDING MYELOPROLIFERATIVE NEOPLASMS

What this outcome means

Trainees will be able to:

- Recognise the presenting features of myeloproliferative neoplasms
- Demonstrate appropriate use of clinical and laboratory methods to achieve a diagnosis
- Formulate a management plan for treatment of patients with myeloproliferative disorders
- Diagnose and manage patients presenting with acute and/or chronic leukaemias
- Diagnose and manage patients presenting with paraproteins, plasmacytomas or other manifestations of plasma cell dyscrasias
- Diagnose and manage patients with lymphoma

Learning opportunities and assessment

- Feedback opportunities (Case mix of haematological malignancies including acute leukaemias, chronic leukaemias, plasma cell disorders, lymphomas)
- Workplace Based Assessments (CBD, Mini-CEX, DOPS) – Management of leukaemia, Management of lymphoma, management of myeloproliferative neoplasms
- FRCPATH I & II

OUTCOME 5 OF 8 – MANAGE PAEDIATRIC HAEMATOLOGY PATIENTS

What this outcome means

Trainees will be able to:

- Demonstrate sufficient knowledge of paediatric haematology practice to be capable of providing advice to clinical colleagues in a general hospital
- Understand the management of paediatric patients with benign haematological conditions
- Understand the management of paediatric patients with malignant haematological conditions

Learning opportunities and assessment

- Feedback opportunities (Case mix of management of benign and malignant haematology in paediatric patients)
- Workplace Based Assessments (CBD, Mini-CEX,) – Management of benign paediatric haematology, Management of malignant paediatric haematology
- FRCPath I & II

OUTCOME 6 OF 8 – MANAGE HAEMATOLOGICAL CONDITIONS RELATED TO TRANSPLANTATION**What this outcome means**

Trainees will be able to:

- Recognise the indications for transplant along with different types of donor experience (autologous transplant and allogenic transplant)
- Recognise complications and late effects of transplant
- Understand the principles of cellular therapies and their indications
- Describe quality control management for transplant services

Learning opportunities and assessment

- Feedback opportunities (Case mix of management of transplant cases e.g., indications for management, work up, management of complications)
- Workplace Based Assessments (CBD, Mini-CEX, DOPS)

OUTCOME 7 OF 8 – MANAGE HAEMATOLOGICAL EMERGENCIES**What this outcome means**

Trainees will be able to:

- Demonstrate prompt recognition and manage haematological emergencies such as spinal cord compression, coagulopathy, neutropenia, sepsis, massive haemorrhage, tumour lysis
- Participate in decision making regarding resuscitation decisions involving patients and their families

Learning opportunities and assessment

- Feedback opportunities (Case mix of management of haematological emergencies – spinal cord compression, coagulopathy, neutropenia, sepsis, massive haemorrhage, tumour lysis)

- Workplace Based Assessments (CBD, Mini-CEX,) – management of massive haemorrhage, Management of neutropenic sepsis

OUTCOME 8 OF 8 – RECOGNISE THE NEED FOR PALLIATIVE CARE MEDICINE WHERE APPROPRIATE

What this outcome means

Trainees will be able to:

- Identify patients with limited reversibility of their medical condition and determines ceilings of care, palliative and end of life care needs, in collaboration with the patient and family/carers
- Contribute to an individualized care plan including anticipatory prescribing at end of life, manage complex symptoms and liaise with and facilitate referral to specialist palliative care

Learning opportunities and assessment

- Feedback opportunities (Case mix of identification of palliative care needs and contributing to individualised care plans)
- Workplace Based Assessments (CBD, Mini-CEX)

Training Goal 4 – Advanced laboratory haematology

By the end of HST the Trainee is expected to be competent in the interpretation of samples presented for examination and in the management of the Haematology laboratory. Trainees must be competent in reporting peripheral blood films, bone marrow aspiration and trephine biopsy, lymph node histopathology, cerebrospinal fluid cytology interpretation and laboratory management.

OUTCOME 1 OF 2 – INTERPRET THE RESULTS OF TESTS ON SAMPLES ANALYSED IN THE HAEMATOLOGY LABORATORY

What this outcome means

Laboratory management, quality control, quality assurance and validation and safe laboratory practice are critical components of the practice of Haematology. Advanced laboratory activities involve risk management and laboratory audit, laboratory accreditation (ISO15189) applied to blood transfusion. Trainees should ensure that they experience aspects of haematology laboratory management relatively early in the programme i.e., before end of year 2.

Learning opportunities and assessment

- Feedback opportunities (Case mix of advanced laboratory activities (e.g., bone marrow reporting, specialised coagulation tests, clotting factor assays, manual fibrinogens, flow cytometry, haemoglobinopathy screening, laboratory accreditation, internal/external QC/QA,
- Workplace Based Assessments (CBD, Mini-CEX, DOPS)

OUTCOME 2 OF 2 – UNDERSTAND THE PROCEDURES CONDUCTED ON PATIENTS AND DIAGNOSTIC ACTIVITIES

What this outcome means

Trainees will be able to:

- Demonstrate basic understanding and appreciation of procedures that are carried out on patients, and diagnostic activities

Learning opportunities and assessment

- Feedback opportunities (Case mix of diagnostic activities e.g., description of lymph node pathology, trephine biopsy,
- Trephine biopsy (perform or observe)
- Workplace Based Assessments (CBD, Mini-CEX, DOPS)
- FRCPath I & II

Training Goal 5 – Transfusion Haematology

By the end of HST the Trainee is expected to be competent in the management of transfusion Haematology – both laboratory and clinical. Trainees will be able to interpret blood transfusion investigations and manage blood transfusions. Trainees will rotate through the IBTS post and complete the blood transfusion checklist.

OUTCOME 1 OF 2 – MANAGEMENT OF LABORATORY TRANSFUSION

What this outcome means

Trainees will be able to:

- Interpret blood transfusion investigations competently

Learning opportunities and assessment

- Feedback opportunities (Informal discussion or informal observation)
- Workplace Based Assessments (CBD)
- Three-month post rotation in IBTS
- Complete transfusion checklist in eportfolio
- FRCPATH I & II

OUTCOME 2 OF 2 – MANAGEMENT OF CLINICAL TRANSFUSION

What this outcome means

Trainees will be able to:

- Advise on the appropriate use of blood products
- Know when to report adverse events, manage complications of blood transfusion
- Assess patients requiring therapeutic apheresis procedures and understand massive transfusion and transfusion in trauma

Learning opportunities and assessment

- Feedback opportunities (Informal discussion or informal observation)
- Workplace Based Assessments (CBD, Mini-CEX, DOPS)
- Three-month post rotation in IBTS
- Complete transfusion checklist in eportfolio
- FRCPATH
- Complete Transfusion online course

5. APPENDICES

This section includes the assessment, examination, and teaching appendices

ASSESSMENT APPENDIX

Workplace-Based Assessment and Evaluations

The expression “workplace-based assessments” (WBA) defines all the assessments used to evaluate trainees’ daily clinical practices employed in their work setting. It is primarily based on the observation of trainees’ performance by trainers. Each observation is followed by a trainer’s feedback, with the intent of fostering reflective practice.

Relevance of Feedback for WBA

Although “assessment” is the keyword in WBA, it is necessary to acknowledge that feedback is an integral part and complementary component of WBA. The main purpose of WBA is to provide specific feedback for trainees. Such feedback is expected to be:

- **Frequent:** the opportunities to provide feedback are preferably given by directly observed practice, but also by indirectly observed activities. Feedback is expected to be frequent and should concern a low-stake event. Rather than being an assessor, the trainer is an observer who is asked to provide feedback in the context of the training opportunity presented at that moment.
- **Timely:** preferably, the feedback should be a direct conversation between trainer and trainee in a timeframe close to the training event. The trainee should then record the feedback on ePortfolio in a timely manner.
- **Constructive:** the recorded feedback would inform both trainee’s practice for future performance and committees for evaluations. Hence, feedback should provide trainees with behavioural guidance on how to improve performance and give committees the context that leads to a rating, so that progression or remediation decisions can be made.

Types of WBAs in use at RCPI

There is a variety of WBAs used in medical education. They can be categorised into three main groups: *Observation of performance; Discussion of clinical cases; Feedback; Mandatory Evaluations.*

As WBAs at RCPI we use *Observation of performance* via MiniCEX and DOPS; *Discussion of clinical cases* via CBD; *Feedback* via Feedback Opportunity.

Mandatory Evaluations are bound to specific events or times of the academic year, for these at RCPI we use: Quarterly Evaluation/End of Post Evaluation; End of Year Evaluation; Penultimate Year Evaluation; Final Year Evaluation.

Recording WBAs on ePortfolio

It is expected that WBAs are logged on an electronic portfolio. Every trainee has access to an individual ePortfolio where they must record all their assessments, including WBAs. By recording assessments on this platform, ePortfolio serves both the function to provide an individual record of the assessments and to track trainees’ progression.

Formative and Summative Feedback

The Trainee can record any WBA either as formative or summative with the exception of the *Mandatory Evaluations* (Quarterly/End of Post, End of Year, Penultimate Year, Final Year evaluations).

If the WBA is logged as formative, the trainee can retain the feedback on record, but this will not be visible to an assessment panel, and it will not count towards progression. If the WBA is logged as summative it will be regularly recorded and it will be fully visible to assessment panels, counting towards progression.

WORKPLACE-BASED ASSESSMENTS	
CBD Case Based Discussion	<p>This assessment is developed in three phases:</p> <ol style="list-style-type: none"> 1. Planning: The trainee selects two or more medical records to present to the trainer who will choose one for the assessment. Trainee and trainer identify one or more training goals in the curriculum and specific outcomes related to the case. Then the trainer prepares the questions for discussion. 2. Discussion: Prevalently, based on the chosen case, the trainer verifies the trainee's clinical reasoning and professional judgment, determining the trainee's diagnostic, decision-making and management skills. 3. Feedback: The trainer provides constructive feedback to the trainee. <p>It is good practice to complete at least one CBD per quarter in each year of training.</p>
DOPS Direct Observation of Procedural Skills	<p>This assessment is specifically targeted at the evaluation of procedural skills involving patients in a single encounter.</p> <p>In the context of a DOPS, the trainer evaluates the trainee while they are performing a procedure as a part of their clinical routine. This evaluation is assessed by completing a form with pre-set criteria, then followed by direct feedback.</p>
MiniCEX Mini Clinical Examination Exercise	<p>The trainer is required to observe and assess the interaction between the trainee and a patient. This assessment is developed in three phases:</p> <ol style="list-style-type: none"> 1. The trainee is expected to conduct a history taking and/or a physical examination of the patient within a standard timeframe (15 minutes). 2. The trainee is then expected to suggest a diagnosis and management plan for the patient based on the history/examination. 3. The trainer assesses the overall trainee's performance by using the structured ePortfolio form and provides constructive feedback.
Feedback Opportunity	<p>Designed to record as much feedback as possible. It is based on observation of the trainees in any clinical and/or non-clinical task. Feedback can be provided by anyone observing the trainee (peers, other supervisors, healthcare staff, juniors). It is possible to turn the feedback into an assessment (CDB, DOPS or MiniCEX)</p>
MANDATORY EVALUATIONS	
QE Quarterly Evaluation	<p>As the name suggests, the Quarterly Evaluation recurs four times in the academic year, once every academic quarter (every three months).</p> <p>It frequently happens that a Quarterly Evaluation coincides with the end of a post, in which case the Quarterly Evaluation will be substituted by completing an End of Post Evaluation. In this sense the two evaluations are interchangeable, and they can be completed using the same form on ePortfolio.</p>
EOP End of Post Evaluation	<p>However, if the trainee will remain in the same post at the end of the quarter, it will be necessary to complete a Quarterly Evaluation. Similarly, if the end of a post does not coincide with the end of a quarter, it will be necessary to complete an End of Post Evaluation to assess the end of a post.</p> <p>This means that for every specialty and level of training, a minimum of four Quarterly Evaluation and/or End of Post Evaluation will be completed in an academic year as a mandatory requirement.</p>
EOYA End of Year Evaluation	<p>The End of Year Evaluation occurs once a year and involves the attendance of an evaluation panel composed of the National Specialty Directors (NSDs); the Specialty Coordinator attends too, to keep records of and facilitate the meeting. The assigned trainer is not supposed to attend this meeting unless there is a valid reason to do so. These meetings are scheduled by the respective Specialty Coordinators and happen sometime before the end of the academic year (between April and June).</p>
PYE Penultimate Year Evaluation	<p>The Penultimate Year Evaluation occurs in place of the End of Year Evaluation, in the year before the last year of training.</p> <p>It involves the attendance of an evaluation panel composed of the National Specialty Directors (NSDs) and an External Member who is a recognised expert in the Specialty outside of Ireland; the Specialty Coordinator attends too, to keep records of and facilitate the meeting. The assigned trainer is not supposed to attend this meeting unless there is a valid reason to do so.</p>
FYE Final Year Evaluation	<p>In the last year of training, the End of Year Evaluation is conventionally called Final Year Evaluation, however, its organisation is the same as an End of Year Evaluation.</p>

Examinations

Trainee must sit and pass both exams as described at suitable times during the training programme as agreed with Trainer(s.)

- FRCPATH Part I (Haematology)
- FRCPATH Part II (Haematology)

TEACHING APPENDIX

Courses

- An Introduction to Health Research (Year 1)
- Core Pathology I, II, III (Year 3+)
- Ethics Foundation
- Ethics for Pathology or Ethics for General Medicine
- Mastering Communication
- HST Leadership for Pathology (Year 3+)
- Performing Audit (Year 1)
- Wellness Matters
- Management Course (Year 4/5)
- Safe Prescribing Systemic Anti-Cancer Therapy (Year 1)
- GCP Clinical Trials Training (local)

Study Days

Study days vary from year to year, they comprise a rolling schedule of hospital-provided topic-specific educational days and national/international events selected for their relevance to the Haematology HST curriculum.

Trainees are expected to attend the study days available.