JRCPTB

Joint Royal Colleges of Physicians Training Board

Curriculum for **Haematology** Training

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DRAFT

ROYAL COLLEGE of PHYSICIANS of EDINBURGH
ROYAL COLLEGE OF PHYSICIANS AND SURGEONS OF GLASGOW
Royal College of Physicians

Contents

1. Introduction

This curriculum defines the purpose, content of learning, process of training and the programme of assessment for Haematology training leading to the award of certificate of completion of training (CCT).

2. Purpose

2.1 Purpose of the curriculum

The purpose of the haematology curriculum is to produce doctors with the generic professional and specialty-specific capabilities needed to work as haematology consultants in the NHS. Trainees may enter haematology training from internal medicine, ACCS or paediatric core training.

When a trainee has completed training satisfactorily, they will be eligible for a CCT and can be recommended to the GMC for inclusion on the specialist register. At this stage they will be regarded as capable of unsupervised practice and eligible for appointment as an NHS consultant.

The curriculum for haematology has been developed with the input of consultants actively involved in delivering teaching and training across the UK, trainees, service representatives and lay persons. This has been through the work of the JRCPTB, Haematology Specialist Advisory Committee (SAC), Royal College of Pathologists and British Society of Haematology. It defines the purpose, content of learning, process of training and the programme of assessment for haematology higher specialist training. The curriculum subcommittee of the SAC reports to the SAC and is responsible for updating the curriculum content and assessment methods as necessary. This is an ongoing process of review and refinement, with continuous consultation and feedback from the representatives listed above.

The Shape of Training (SoT) review was a catalyst for reform of postgraduate training of all doctors to ensure it is more patient focused, more general (especially in the early years) and with more flexibility of career structure. A further driver for change was the GMC review of the curricula and assessment standards and introduction of the GPC framework. From May 2017, all postgraduate curricula should be based on higher level learning outcomes and must incorporate the generic professional capabilities. A fundamental component of the GPCs is ensuring that the patient is at the centre of any consultation and decision making.

Haematologists are responsible for the management of acute and chronic haematological conditions in NHS district general and teaching hospitals, 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, transfusion, advanced diagnostics and paediatric haematology.

The Royal College of Pathologists census 2017 showed there were 1035 Consultant Haematologists across the UK. The 2018 workforce survey identified 76 consultants working in paediatric haematology with a further 8 vacant consultant posts in that area.

The Haematology curriculum will ensure that trainees develop the competencies and skills required to be a general haematologist with the ability to support all acute hospital medical takes, other specialties and the community medical teams. These all regularly request and require haematology input, with the Haematology team providing advice available 24 hours a day on the interpretation of abnormal laboratory results in all patient age groups, the diagnosis and management of haematological conditions, including haematological malignancies and the complications of therapy, haemostasis and thrombosis, and blood transfusion, including the management of major haemorrhage and the complications of transfusion.

Haematology acute admissions represent <1% of the acute medical take, but the haematology team cover a much wider role within the hospital supporting all areas of the acute take and back of house.

Haematologists are the clinical link between the laboratory and the hospital and community medical teams. Haematology Consultants provide a clinical opinion on results and advice on the management of patients and there is an absolute need for haematology consultants to provide the clinical competency for laboratory services for the foreseeable future. This is in addition to providing direct clinical care for patients with haematological disorders.

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.

The objectives of the curriculum are:

- To set out the range of specific professional capabilities that encompass all knowledge, skills and activities needed to practice haematology at a consultant level.
- To set expected standards of knowledge and performance of various professional skills and activities at each stage
- To suggest indicative training times and experiences needed to achieve the required standards
- To set out a programme of assessment procedures to be used.

Scope of practice

The scope of haematology is very broad. A consultant haematologist is both a physician and a pathologist and works in both clinical and laboratory medicine to provide care to patients in a wide variety of hospital and community settings.

Haematology training covers laboratory sciences, haemato-pathology, general and liaison haematology, haemostasis and thrombosis, blood transfusion, haemato-oncology, bone marrow transplant and other cellular therapies.

Liaison haematology describes the advice provided on the investigation and interpretation of results and the management of abnormal blood results from all hospital in-patients, out-patients and patients in the community. This advice may be requested by a healthcare professional directly or be initiated by the Haematologist pro-actively when abnormal results are identified in the laboratory. Advice may require a physical review of the patient. This is a pivotal role which supports the community and all specialties of the acute hospital 24 hours a day.

All trainees require a good general knowledge of paediatric haematology to facilitate providing advice for paediatrics on-call and in general hospitals. Paediatric haematology is not a recognised sub-specialty for training but, post CCT, trainees may choose to work as paediatric haematologists. Trainees who wish to develop further experience of paediatric haematology to facilitate this career path may rotate through specific training posts in this field during the course of their training. The generic skills and CiPs will be common to all routes through haematology training, and the final outcome of a CCT in Haematology will be the same standard for all trainees.

Exclusions

Haematology consultants are required to have a good general understanding of all areas of haematology to ensure they can provide correct advice and signpost patients appropriately. Trainees may wish to develop a special interest in specific areas of haematology such as bone marrow transplantation, paediatric haematology, advanced haemostasis and thrombosis, advanced haematopathology diagnostics or blood transfusion. This may be facilitated by the regional programme through specific training posts or out of programme experience.

Learning methods

Doctors in training will learn in a variety of settings using a range of methods including experiential learning, work place based assessments, formal postgraduate teaching, self-directed learning and peer to peer teaching. The curriculum will share generic capabilities in practice from the internal medicine curriculum alongside the specialty specific capabilities in practice that are unique to haematology.

All aspects of the curriculum may be adapted to facilitate less than full-time training. The curriculum may also be adapted to allow trainees to train in academic medicine alongside their acquisition of specialty and generic capabilities.

During haematology training, the trainee will be expected to pass the FRCPath in haematology, a summative knowledge based test mapped to the curriculum.

2.2 High level outcomes - capabilities in practice

The Haematology capabilities in practice (CiPs) describe the professional tasks or work within the scope of Haematology. Each CiP has a set of descriptors associated with that activity or task. Descriptors are intended to help trainees and trainers recognise the minimum level of knowledge, skills and behaviours which should be demonstrated for an entrustment decision to be made. By the completion of training and award of a CCT, the doctor must demonstrate that they are capable of unsupervised practice in all CiPs.

The CiPs have been mapped to the GPC domains and subsections to reflect the professional generic capabilities required to undertake the clinical tasks. Satisfactory sign off requires demonstration that, for each of the CiPs, the doctor in training's performance meets or exceeds the minimum expected level for completion of training, as defined in the curriculum.

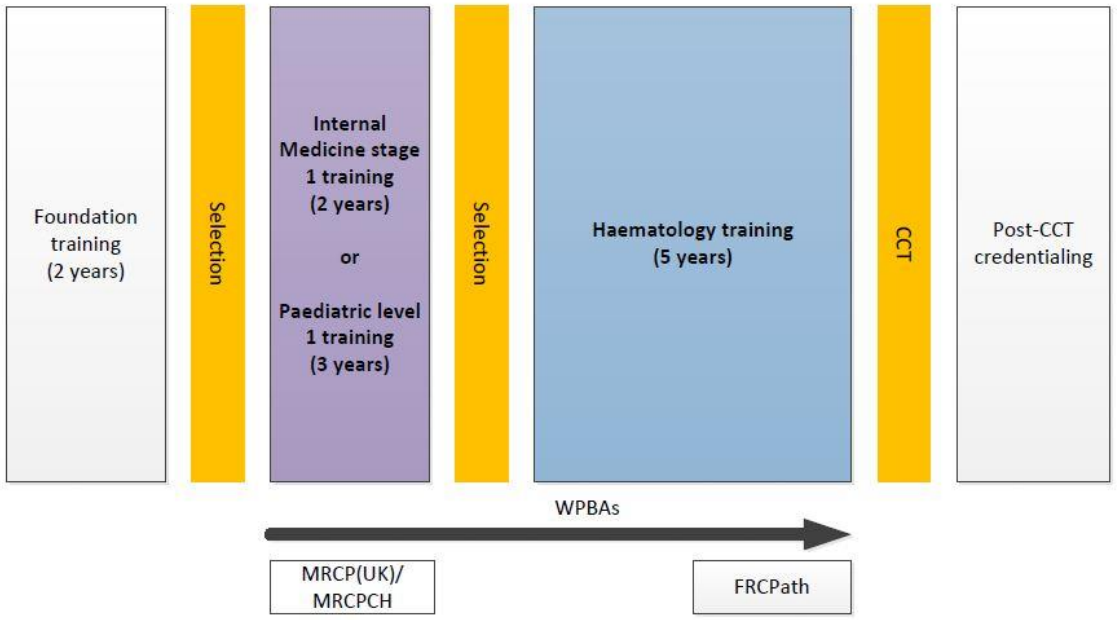
The Haematology CiPs comprise seven specialty CiPs and the six generic CiPs shared across all physician specialties. A Haematologist needs a broad knowledge of all areas of specialist haematology.

Learning outcomes – capabilities in practice (CiPs)
Generic CiPs
1. Able to successfully function within NHS organisational and management systems 2. Able to deal with ethical and legal issues related to clinical practice 3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement 4. Is focussed on patient safety and delivers effective quality improvement in patient care 5. Carrying out research and managing data appropriately 6. Acting as a clinical teacher and clinical supervisor
Specialty CiPs
1. Providing a comprehensive haematology laboratory service, including investigation, reporting and blood transfusion 2. Providing safe clinical advice to colleagues on interpretation of haematology laboratory results, blood transfusion practice and haematological disorders 3. Managing patients with suspected or known haematological disorders in the outpatient setting 4. Managing patient in an ambulatory/day unit environment including specialist haematological treatments

5. Providing continuity of care to inpatients with haematological conditions
6. Managing acute haematological emergencies in all environments
7. Managing end of life and palliative care skills

2.3 Training pathway

Haematology is a group 2 specialty and is entered at ST3 on completion of two years of Internal Medicine (IM) stage 1 or Acute Care Common Stem – Acute/Internal Medicine (ACCS-AM/IM) with full MRCPUK diploma, or three years of paediatric level 1 training with MRCPCH. Trainees will undertake an indicative five year higher specialist training programme and complete the Part 1 & Part 2 FRCPath examinations



2.4 Duration of training

Training in Haematology will usually be completed in five years of full time training. There will be options for those trainees who demonstrate exceptionally rapid development and acquisition of capabilities to complete training more rapidly than the current indicative time although it is recognised that clinical experience is a fundamental aspect of development as a good physician. There may also be a small number of trainees who develop more slowly and will require an extension of training in line the Reference Guide for Postgraduate Specialty Training in the UK (The Gold Guide).

Less than full time training

Trainees are entitled to opt for less than full time training programmes. Less than full time trainees 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 the equivalent stage.

Less than full time trainees should assume that their clinical training will be of a duration pro-rata with the time indicated/recommended, but this should be reviewed in accordance with the Gold Guide.

This purpose statement has been endorsed by the GMC's Curriculum Oversight Group and confirmed as meeting the needs of the health services of the countries of the UK.

2.5 Generic Professional Capabilities and Good Medical Practice

The GMC has developed the Generic professional capabilities (GPC) framework[1] with the Academy of Medical Royal Colleges (AoMRC) to describe the fundamental, career-long, generic capabilities required of every doctor. The framework describes the requirement to develop and maintain key professional values and behaviours, knowledge, and skills, using a common language. GPCs also represent a system-wide, regulatory response to the most common contemporary concerns about patient safety and fitness to practise within the medical profession. The framework will be relevant at all stages of medical education, training and practice.

[1] Generic professional capabilities framework

The nine domains of the GMC's Generic Professional Capabilities

Good medical practice (GMP)[2] is embedded at the heart of the GPC framework. In describing the principles, duties and responsibilities of doctors the GPC framework articulates GMP as a series of achievable educational outcomes to enable curriculum design and assessment.

The GPC framework describes nine domains with associated descriptor outlining the 'minimum common regulatory requirement' of performance and professional behaviour for those completing a CCT or its equivalent. These attributes are common, minimum and generic standards expected of all medical practitioners achieving a CCT or its equivalent.

The nine domains and subsections of the GPC framework are directly identifiable in the IM curriculum. They are mapped to each of the generic and clinical CiPs, which are in turn mapped to the assessment blueprints. This is to emphasise those core professional capabilities that are essential to safe clinical practice and that they must be demonstrated at every stage of training as part of the holistic development of responsible professionals.

This approach will allow early detection of issues most likely to be associated with fitness to practise and to minimise the possibility that any deficit is identified during the final phases of training.

[2] Good Medical Practice

3. Content of Learning

The curriculum is spiral and topics and themes will be revisited to expand understanding and expertise. The level of entrustment for capabilities in practice (CiPs) will increase as an individual progresses from needing direct supervision to entrusted to act unsupervised.

3.1 Capabilities in practice

CiPs describe the professional tasks or work within the scope of the specialty. CiPs are based on the concept of entrustable professional activities[3] which use the professional judgement of appropriately trained, expert assessors as a defensible way of forming global judgements of professional performance.

Each CiP has a set of descriptors associated with that activity or task. Descriptors are intended to help trainees and trainers recognise the knowledge, skills and attitudes which should be demonstrated. Doctors in training may use these capabilities to provide evidence of how their performance meets or exceeds the minimum expected level of performance for their year of training. The descriptors are not a comprehensive list and there are many more examples that would provide equally valid evidence of performance.

Many of the CiP descriptors refer to patient centred care and shared decision making. This is to emphasise the importance of patients being at the centre of decisions about their own treatment and care, by exploring care or treatment options and their risks and benefits and discussing choices available.

Additionally, the CiPs repeatedly refer to the need to demonstrate professional behaviour with regard to patients, carers, colleagues and others. Good doctors work in partnership with patients and respect their rights to privacy and dignity. They treat each patient as an individual. They do their best to make sure all patients receive good care and treatment that will support them to live as well as possible, whatever their illness or disability. Appropriate professional behaviour should reflect the principles of GMP and the GPC framework.

In order to complete training and be recommended to the GMC for the award of CCT and entry to the specialist register, the doctor must demonstrate that they are capable of unsupervised practice in all generic and clinical CiPs. Once a trainee has achieved level 4 sign off for a CiP it will not be necessary to repeat assessment of that CiP if capability is maintained (in line with standard professional conduct).

This section of the curriculum details the six generic CiPs and 7 specialty CiPs for Haematology. The expected levels of performance, mapping to relevant GPCs and the evidence that may be used to make an entrustment decision are given for each CiP. The list of evidence for each CiP is not prescriptive and other types of evidence may be equally valid for that CiP.

[3] Nuts and bolts of entrustable professional activities

3.2 Generic capabilities in practice

The six generic CiPs cover the universal requirements of all specialties as described in GMP and the GPC framework. Assessment of the generic CiPs will be underpinned by the descriptors for the nine GPC domains and evidenced against the performance and behaviour expected at that stage of training. Satisfactory sign off will indicate that there are no concerns. It will not be necessary to assign a level of supervision for these non-clinical CiPs.

In order to ensure consistency and transferability, the generic CiPs have been grouped under the GMP-aligned categories used in the Foundation Programme curriculum plus an additional category for wider professional practice:

- Professional behaviour and trust
- Communication, team-working and leadership
- Safety and quality
- Wider professional practice

For each generic CiP there is a set of descriptors of the observable skills and behaviours which would demonstrate that a trainee has met the minimum level expected. The descriptors are not a comprehensive list and there may be more examples that would provide equally valid evidence of performance.

KEY

CbD	Case-based discussion	DOPS	Direct observation of procedural skills
GCP	Good Clinical Practice	MCR	Multiple consultant report
Mini-CEX	Mini-clinical evaluation exercise	PS	Patient survey
MSF	Multi source feedback	TO	Teaching observation
QIPAT	Quality improvement project assessment tool	FRCPath	Fellowship of the Royal College or Pathologists (examination)

Generic capabilities in practice (CiPs)	
Category 1: Professional behaviour and trust	
1. Able to function successfully within NHS organisational and management systems	
Descriptors	• Aware of and adheres to the GMC professional requirements • Aware of public health issues including population health, social detriments of health and global health perspectives • Demonstrates effective clinical leadership • Demonstrates promotion of an open and transparent culture • Keeps practice up to date through learning and teaching • Demonstrates engagement in career planning • Demonstrates capabilities in dealing with complexity and uncertainty • Aware of the role of and processes for commissioning • Aware of the need to use resources wisely

GPCs	Domain 1: Professional values and behaviours Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 9: Capabilities in research and scholarship
Evidence to inform decision	MCR MSF Active role in governance structures Management course End of placement reports
2. Able to deal with ethical and legal issues related to clinical practice	
Descriptors	• Aware of national legislation and legal responsibilities, including safeguarding vulnerable groups • Behaves in accordance with ethical and legal requirements • Demonstrates ability to offer apology or explanation when appropriate • Demonstrates ability to lead the clinical team in ensuring that medical legal factors are considered openly and consistently
GPCs	Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 7: Capabilities in safeguarding vulnerable groups Domain 8: Capabilities in education and training Domain 9: Capabilities in research and scholarship
Evidence to inform decision	MCR MSF CbD DOPS Mini-CEX MRCP(UK) End of life care and capacity assessment End of placement reports
Category 2: Communication, teamworking and leadership	
3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement	
Descriptors	• Communicates clearly with patients and carers in a variety of settings • Communicates effectively with clinical and other professional colleagues • Identifies and manages barriers to communication (eg cognitive impairment, speech and hearing problems, capacity issues) • Demonstrates effective consultation skills including effective verbal and nonverbal interpersonal skills • Shares decision making by informing the patient, prioritising the patient's wishes, and respecting the patient's beliefs, concerns and expectations • Shares decision making with children and young people

	• Applies management and team working skills appropriately, including influencing, negotiating, re-assessing priorities and effectively managing complex, dynamic situations
GPCs	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 5: Capabilities in leadership and team-working
Evidence to inform decision	MCR MSF PS MRCP(UK) End of placement reports ES report
Category 3: Safety and quality	
4. Is focussed on patient safety and delivers effective quality improvement in patient care	
Descriptors	• Makes patient safety a priority in clinical practice • Raises and escalates concerns where there is an issue with patient safety or quality of care • Demonstrates commitment to learning from patient safety investigations and complaints • Shares good practice appropriately • Contributes to and delivers quality improvement • Understands basic Human Factors principles and practice at individual, team, organisational and system levels • Understands the importance of non-technical skills and crisis resource management • Recognises and works within limit of personal competence • Avoids organising unnecessary investigations or prescribing poorly evidenced treatments
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety

	• quality improvement
Evidence to inform decision	MCR MSF QIPAT End of placement reports
Category 4: Wider professional practice	
5. Carrying out research and managing data appropriately	
Descriptors	• Manages clinical information/data appropriately • Understands principles of research and academic writing • Demonstrates ability to carry out critical appraisal of the literature • Understands the role of evidence in clinical practice and demonstrates shared decision making with patients • Demonstrates appropriate knowledge of research methods, including qualitative and quantitative approaches in scientific enquiry • Demonstrates appropriate knowledge of research principles and concepts and the translation of research into practice • Follows guidelines on ethical conduct in research and consent for research • Understands public health epidemiology and global health patterns • Recognises potential of applied informatics, genomics, stratified risk and personalised medicine and seeks advice for patient benefit when appropriate
GPCs	Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 7: Capabilities in safeguarding vulnerable groups Domain 9: Capabilities in research and scholarship
Evidence to inform decision	MCR MSF MRCP(UK) Evidence of experience of clinical trials and research, such as attendance at Good Clinical Practice (GCP) training course. Evidence of literature search and critical appraisal of research Use of clinical guidelines Quality improvement and audit Evidence of research activity End of placement reports
6. Acting as a clinical teacher and clinical supervisor	
Descriptors	• Delivers effective teaching and training to medical students, junior doctors and other health care professionals • Delivers effective feedback with action plan • Able to supervise less experienced trainees in their clinical assessment and management of patients • Able to supervise less experienced trainees in carrying out appropriate practical procedures • Able to act a clinical supervisor to doctors in earlier stages of training
GPCs	Domain 1: Professional values and behaviours Domain 8: Capabilities in education and training

Evidence to inform decision	MCR MSF TO Relevant training course End of placement reports

3.3 Specialty capabilities in practice

The specialty CiPs describe the clinical tasks or activities which are essential to the practice of Haematology. The CiPs have been mapped to the nine GPC domains to reflect the professional generic capabilities required to undertake the clinical tasks.

Satisfactory sign off will require educational supervisors to make entrustment decisions on the level of supervision required for each CiP and if this is satisfactory for the stage of training, the trainee can progress. More detail is provided in the programme of assessment section of the curriculum.

KEY

CbD	Case-based discussion	DOPS	Direct observation of procedural skills
GCP	Good Clinical Practice	MCR	Multiple consultant report
Mini-CEX	Mini-clinical evaluation exercise	PS	Patient survey
MSF	Multi source feedback	TO	Teaching observation
QIPAT	Quality improvement project assessment tool	FRCPath	Fellowship of the Royal College of Physicians examination

Specialty CiPs	
1. Laboratory Haematology Providing a comprehensive haematology laboratory service, including investigation, reporting and blood transfusion	
Descriptors	• Demonstrates professional behaviour with regards to patients, carers, colleagues and others • Demonstrates ability to interpret and report normal and abnormal laboratory results, contributes to multi-disciplinary team meetings, and communicates results effectively to the appropriate clinical team. • Formulates an appropriate differential diagnosis when interpreting laboratory investigations • Recommends appropriate specialist/further investigations, using specialist knowledge of interpretation of laboratory investigations in combination with clinical information • Prioritises further investigations and communicates their urgency effectively to laboratory staff, other colleagues, patients and carers • Communicates test results and their implications effectively to patients and their carers, and involves them in shared decision making • Offers advice for appropriate selection of blood products and the alternatives to blood transfusion • Participates in internal and external quality assurance

	• Demonstrates knowledge of laboratory management structures and the processes involved in laboratory accreditation • Demonstrates clinical leadership and contributes to quality aspects of the laboratory, including risk assessments and mitigations, incident reporting and investigation • Understands the processes in place for the laboratory and blood transfusion service to respond to major incidents, including measures for appropriate communication between operational and clinical teams
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement
Evidence to inform decision	FRCPath exam CBD MCR Reflective notes Relevant training course Evidence of attendance at Regional teaching End of placement reports ES report Reflection
2. Liaison Haematology Providing safe clinical advice to colleagues on interpretation of haematology laboratory results, blood transfusion practice and haematological disorders	
Descriptors	• Demonstrates professional behaviour with regards to patients, carers, clinical colleagues and laboratory staff • Demonstrates effective communication with patients, laboratory staff, GPs and other clinicians regarding laboratory results and blood transfusion • Demonstrates good judgment by giving safe and appropriate advice and guidance to colleagues in primary and secondary care regarding investigation and management of haematological disorders and triages referrals appropriate. • Clearly explains clinical reasoning behind haematological diagnostic and management advice to patients/carers/guardians and colleagues responsible for the overall management of the patient • Demonstrates appropriate management of haematological problems in patients under the care of other specialties • Contributes to the assessment and management of complex patients in routine and emergency circumstances including patient blood management and major haemorrhage
GPCs	Domain 1: Professional values and behaviours

	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and teamworking
Evidence to inform decision	CBD Mini-CEX MSF MCR TO FRCPath exam Evidence of attendance at Regional teaching End of placement reports ES report Reflection
3. Outpatient Haematology Managing patients with suspected or known haematological disorders in the outpatient setting	
Descriptors	• Demonstrates professional behaviour with regards to patients, carers, colleagues and others • Demonstrates appropriate use of clinical and laboratory tests to establish a diagnosis • Formulates an appropriate management plan, taking into account patient preferences • Demonstrates understanding of, and follows local and national guidelines and clinical trial protocols • Explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues • Safe prescription and management of specialist haematological treatments, including chemotherapy and supportive treatments such as adjuvant medications for chemotherapy, blood components, bisphosphonates. • Demonstrates efficient use of time in the outpatient clinic. • Liaises with other specialty services when appropriate • Understands the function of haematological multidisciplinary team meetings, refers suitable cases and presents information appropriately • Demonstrates understanding of transitional care from paediatric to adult services
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge

	• professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 9: Capabilities in research and scholarship
Evidence to inform decision	CBD Mini-CEX MCR MSF PS FRCPath exam Evidence of attendance at Regional teaching End of placement reports ES report Reflection
4. Day Unit Haematology Managing patient in an ambulatory/day unit environment including specialist haematological treatments	
Descriptors	• Demonstrates professional behaviour with regards to patients, carers, colleagues and others • Delivers patient centred care including shared decision making • Understands the importance of clinical leadership to • ensure safe, effective and timely care • Demonstrates effective teamwork with nursing and other professional colleagues • Formulates an appropriate diagnostic and management plan, taking into account patient preferences, and the urgency required • Explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues • Provides safe prescribing of specialist haematological treatments (including chemotherapy, blood components and replacement of coagulation factors) and manages complications, ensuring appropriate assessment of patients prior to treatment, recognition and management of complications. • Demonstrates competency in bone marrow aspiration and trephine biopsies • Demonstrates safe prescription, safety checks and delivery of intrathecal chemotherapy
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries

	Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement
Evidence to inform decision	CBD Mini-CEX DOPS MSF MCR PS FRCPath exam Evidence of attendance at Regional teaching End of placement reports ES report Reflection
5. In-patient Haematology Providing continuity of care to inpatients with haematological conditions	
Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making • Demonstrates effective consultation skills including in challenging circumstances • Formulates and explains an appropriate diagnostic and management plan, taking into account patient preferences and the urgency required • Appropriately manages comorbidities in haematology inpatients • Appropriately manages complications and side effects of treatment in haematology inpatients • Provides clinical leadership and demonstrates team working and management skills in managing patients including those with complex conditions • Recognises need to liaise with other specialty services and refers where appropriate • Demonstrates safe prescription and delivery of specialist haematological treatments, including chemotherapy and transfusion support, ensuring appropriate assessment of patients prior to treatment, recognition and management of complications • Recognises and manages the deteriorating patient and refers appropriately for intensive care • Demonstrates understanding of, and follows local and national guidelines and clinical trial protocols • Ensures continuity of patient care through the appropriate transfer of information in hospital and community demonstrating safe and effective handover and discharge planning
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty

	• clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement Domain 9: Capabilities in research and scholarship
Evidence to inform decision	Mini-CEX CBD MSF MCR PS Evidence of attendance at Regional teaching End of placement reports ES report Reflection
6. Haematological Emergencies Managing acute haematological emergencies in all environments	
Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Demonstrates prompt assessment and safe management of haematological emergencies • Formulates and explains an appropriate diagnostic and management plan, taking into account patient preferences, and the urgency required • Understands the importance of clinical leadership to ensure safe, effective and timely care • Participates effectively in decision making with regard to resuscitation decisions, including decisions not to attempt CPR, and involves patients and their families • Recognises need to liaise with other specialty services and refers where appropriate for intensive care
GPCs	Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and teamworking

Evidence to inform decision	CBD MCR MSF Mini-CEX Evidence of attendance at Regional teaching End of placement reports ES report Reflection
7. Managing end of life and palliative care skills	
Descriptors	• Identifies 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, family and carers. • Identifies the dying patient and develops an individualised care plan, including anticipatory prescribing at end of life • Demonstrates safe and effective use of syringe pumps in the palliative care population • Manages complex symptom control including pain, nausea • Facilitates referrals to specialist palliative care across all settings • Demonstrates effective consultation skills in challenging circumstances • Understands the psychological consequences of terminal illness and the management of patients and their families affected by grief • Demonstrates compassionate professional behaviour and clinical judgement
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislative requirements • the health service and healthcare systems in the four countries
Evidence to inform decision	MCR CbD Mini-CEX MSF Evidence of attendance at Regional teaching End of placement reports ES report Reflection

3.4 Presentations and conditions

The table below details the key presentations and conditions of Haematology. Each of these should be regarded as a clinical context in which trainees should be able to demonstrate CiPs and GPCs. In this spiral curriculum, trainees will expand and develop the knowledge, skills and attitudes around managing patients with these conditions and presentations. The patient should always be at the centre of knowledge, learning and care.

Trainees must demonstrate core bedside skills, including information gathering through history and physical examination and information sharing with patients, families and colleagues.

Treatment care and strategy covers how a doctor selects drug treatments or interventions for a patient. It includes discussions and decisions as to whether care is focused mainly on curative intent or whether the main focus is on symptomatic relief. It also covers broader aspects of care, including involvement of other professionals or services.

Particular presentations, conditions and issues are listed either because they are common or serious (having high morbidity, mortality and/or serious implications for treatment or public health).

For each condition/presentation, trainees will need to be familiar with such aspects as aetiology, epidemiology, clinical features, investigation, management and prognosis. Our approach is to provide general guidance and not exhaustive detail, which would inevitably become out of date.

System/Specialty and subspecialty	Presentations	Conditions/Issues
Haematological emergencies	Sepsis Pain Confusion Hypoxia Neurological symptoms Haemorrhage	Neutropenic sepsis Spinal cord compression Tumour lysis syndrome Sickle cell crisis Hyperviscosity syndrome Leukostasis Hypercalcaemia of malignancy Transfusion reactions Major Haemorrhage
Laboratory Haematology	Interpretation of haematology laboratory results Laboratory management and quality control Safe laboratory practice	Interpretation and reporting of : Full blood count blood film standard coagulation tests tests for haemolysis bone marrow aspirate and trephine, H+E stain, reticulin stain and specialist stains specialist coagulation tests – factor assays, platelet function tests, von Willebrand screen, lupus screen haemoglobinopathy screens CSF cytospins Understanding of : flow cytometry immunohistochemistry

System/Specialty and subspecialty	Presentations	Conditions/Issues
		cytogenetics molecular tests eg JAK2screen, BCR-ABL ratio Minimal residual disease assessment Understanding of genomics Knowledge of laboratory quality assurance systems Knowledge of safe laboratory practice
Blood Transfusion	Transfusion safety Major Haemorrhage Acute Anaemia Thrombocytopenia Sickle cell crisis Chronic anaemia requiring transfusion support Rh disease of the newborn NAITP	Management of Major Haemorrhage Transfusion safety – SHOT, MHRA, donor selection, patient identification, laboratory quality assurance Selection of appropriate blood components Special requirements – Irradiated, HLA matched, intrauterine transfusion, pregnancy, haemoglobinopathy patients Use of Special components eg granulocytes Exchange transfusion Identification and Management of Red cell antibodies Management of Transfusion reactions Alternatives to blood transfusion Use of anti-D
Haematological malignancies	Abnormal full blood count Abnormal blood film Lymphadenopathy Paraprotein Spinal cord compression Hypercalcaemia Chemotherapy treatment	Acute Myeloid leukaemia Acute Lymphoblastic leukaemia Chronic Myeloid leukaemia Chronic lymphocytic leukaemia Hodgkin's lymphoma High grade Non-Hodgkin's lymphoma Low grade Non-Hodgkin's lymphoma Myeloma Monoclonal gammopathy of uncertain significance (MGUS) Plasmacytomas Amyloid Awareness of the WHO classification system for haematological malignancies Safe prescribing of chemotherapy Informed consent for chemotherapy Recognising and managing the complications of chemotherapy Understanding of indications for radiotherapy Understand the indications for transplant Understand the role of the MDT

System/Specialty and subspecialty	Presentations	Conditions/Issues
		Survivorship issues/ late complications of chemotherapy treatment
Myeloproliferative disorders	Abnormal full blood count Abnormal blood film Thrombosis	PRV ET Myelofibrosis MDS/MPN Mast cell disorders Eosinophil disorders
Bone marrow failure syndromes		Congenital bone marrow failure syndromes Aplastic anaemia PNH Myelodysplastic syndrome Indications for transplant Iron chelation therapy
Haemostasis and thrombosis	Significant bruising or bleeding Abnormal coagulation results Abnormal platelet count Family history of bleeding disorder Anticoagulation Thrombosis	Haemophilia Von Willebrand's disease Inherited and acquired Platelet disorders including Immune Thrombocytopenia Rare coagulation disorders Understanding of genetics and prenatal diagnosis Antenatal and postnatal care in pregnancies where the mother or baby is affected by a congenital or acquired bleeding disorder Liver disease Disseminated intravascular coagulation Thrombotic Thrombocytopenic purpura Indications for anticoagulation Anticoagulant drugs Antiplatelet drugs Management of over-anticoagulation Thrombosis Risk factors for thrombosis plus advising patients with a history of venous thromboembolism Thrombosis at unusual sites Management of thrombosis in pregnancy Thromboprophylaxis Limitations of thrombophilia screening Acquired conditions – antiphospholipid syndrome, Paroxysmal nocturnal haemoglobinuria, Heparin induced thrombocytopenia
General Haematology	Anaemia Bruising/ bleeding	Anaemia of chronic disease Anaemia of renal impairment

System/Specialty and subspecialty	Presentations	Conditions/Issues
	Iron overload Low platelets Haematological disorders in pregnancy Critical care/acutely unwell patients	Haemolytic anaemia – inherited and acquired B12 and folate deficiency Iron deficiency Haemochromatosis Investigation of neutropenia Investigation of thrombocytosis Haematology in systemic disease Haematology in infectious disease – e.g. HIV,EBV, CMV, malaria Haematological changes of chronic liver disease Sepsis Haemophagocytic Lymphohistiocytosis (HLH) Management of haematological disorders in pregnancy
Haemoglobinopathy	Complications of sickle cell disease – acutely unwell patients and chronic complications Anaemia Iron overload Pregnancy/ antenatal screening	Diagnosis of sickle cell, thalassaemia and other haemoglobinopathies Management of an acute complications of sickle disease – pain, chest crisis, stroke Exchange transfusion Disease modifying drugs Understand the principles of management of chronic transfusion programme Iron chelation therapy Understand antenatal screening Managing pregnancy in patients with haemoglobinopathy
Bone marrow transplantation	Autologous stem cell transplant Allogeneic bone marrow or stem cell transplant Complications of transplant	Indications for transplant Stem cells and haemopoiesis Patient selection Donor selection Selection of conditioning regimens Management of transplant patients Types and use of immune suppressive agents Neutropenic sepsis Management of fungal infections and atypical viral infections Graft versus host disease Management of late complications of transplant Understand the principles of CAR-T cell therapy Classification and mangement of cytokine release syndrome Understanding of quality management/ JACIE
Palliative care	End of life	Advanced malignancy

System/Specialty and subspecialty	Presentations	Conditions/Issues
	Complex symptoms Psychological distress Care of the dying patient	End stage organ failure Frailty Multiple co-morbidity Managing complex symptoms Setting limits of care Interface between primary and secondary care Psychological distress
Paediatric haematology *	Abnormal full blood count Abnormal blood film Bruising or bleeding	The conditions listed above presenting in a paediatric population. Age related normal ranges Age related blood film and bone marrow appearances Procedures for bone marrow biopsy and intrathecal chemotherapy in small children. Processing small samples in the laboratory Transfusion in children Mother-baby transmitted immune conditions Neonatal haematology Constitutional anaemias and inherited marrow disorders Understand the differences between childhood malignancy and adult patients Knowledge of the staging systems and treatment regimens for childhood haematological malignancy Understand the differing needs of Teenage and young adult patients Transition of care from paediatric service to adult service. Non-haematological paediatric malignancy which may present to haematology Safe anticoagulation in children Paediatric haematology relating to other specialties Survivorship and long term conditions relating to treatment in childhood Child protection

*Trainees who wish to progress to a career in paediatric haematology will be expected to achieve the same competencies as all haematology trainees, but may achieve this through attachments to paediatric haematology departments. They should be trained in the paediatric aspects of the conditions above, plus they should have additional experience of the haematological conditions specific to paediatric practice. This should include experience and time during their training spent in a paediatric unit, covering the paediatric aspects of transfusion, laboratory haematology, haemostasis, haemoglobinopathy, malignant haematology, consultative haematology and transplantation. Training should include experience of conditions which predominantly affect adults as listed above, as these may present in the paediatric population.

3.5 Practical procedures

There are a number of procedural skills in which a trainee must become proficient.

Trainees must be able to outline the indications for these procedures and recognise the importance of valid consent, aseptic technique, safe use of analgesia and local anaesthetics, minimisation of patient discomfort, and requesting help when appropriate. For all practical procedures the trainee must be able to recognise complications and respond appropriately if they arise, including calling for help from colleagues in other specialties when necessary.

Trainees should receive training in procedural skills in a clinical skills lab if required. Assessment of procedural skills will be made using the direct observation of procedural skills (DOPS) tool. The table below sets out the minimum competency level expected for each of the practical procedures.

When a trainee has been signed off as being able to perform a procedure independently, they are not required to have any further assessment (DOPS) of that procedure, unless they or their educational supervisor think that this is required (in line with standard professional conduct).

Procedure	ST3	ST4	ST5	ST6	ST7
Minimum level required					
Bone marrow aspirate and trephine	Perform under supervision	Perform with minimal supervision	Perform independently	Perform independently	Perform independently
Administration of Intrathecal chemotherapy	Perform under supervision	Perform with minimal supervision	Perform Independently	Perform independently	Perform independently

4. Learning and Teaching

4.1 The training programme

The organisation and delivery of postgraduate training is the responsibility of the Health Education England (HEE), NHS Education for Scotland (NES), Health Education and Improvement Wales (HEIW) and the Northern Ireland Medical and Dental Training Agency (NIMDTA) – referred to from this point as 'deaneries'. A training programme director (TPD) will be responsible for coordinating the specialty training programme. In England, the local organisation and delivery of training is overseen by a school of medicine.

Progression through the programme will be determined by the Annual Review of Competency Progression (ARCP) process and the training requirements for each indicative year of training are summarised in the ARCP decision aid (available on the JRCPTB website).

The sequence of training should ensure appropriate progression in experience and responsibility. The training to be provided at each training site is defined to ensure that, during the programme, the curriculum requirements are met and also that unnecessary duplication and educationally unrewarding experiences are avoided.

The following provides a guide on how training programmes should be focussed in each training year in order for trainees to gain the experience and develop the capabilities to the level required.

Trainees will have an appropriate clinical supervisor and a named educational supervisor. The clinical supervisor and educational supervisor may be the same person. It will be best practice for trainees to have an educational supervisor who practises internal medicine for periods of IM stage 2 training. Educational supervisors of IM trainees who do not themselves practise IM must take particular care to ensure that they obtain and consider detailed feedback from clinical supervisors who are knowledgeable about the trainees' IM performance and include this in their educational reports.

Mandatory training

INSERT DETAILS OF ANY MANDATORY TRAINING REQUIRED – NB A RATIONALE FOR ANY MANDATED ELEMENTS WILL BE REQUIRED FOR THE GMC SUBMISSION(see IM stage 1/stage 2 curricula for reference)

4.2 Teaching and learning methods

The curriculum will be delivered through a variety of learning experiences and will achieve the capabilities described in the syllabus through a variety of learning methods. There will be a balance of different modes of learning from formal teaching programmes to experiential learning 'on the job'. The proportion of time allocated to different learning methods may vary depending on the nature of the attachment within a rotation.

This section identifies the types of situations in which a trainee will learn.

Work-based experiential learning - The content of work-based experiential learning is decided by the local faculty for education but includes active participation in:

General and specialist Haematology clinics
The educational objectives of attending clinics are:

- To understand the management of chronic diseases
- Be able to assess a patient in a defined time-frame
- To interpret and act on the referral letter to clinic
- To propose an investigation and management plan in a setting different from the acute medical situation
- To review and amend existing investigation plans
- To write an acceptable letter back to the referrer

- To communicate with the patient and where necessary relatives and other health care professionals.

These objectives can be achieved in a variety of settings including hospitals, day care facilities and the community. The clinic might be primarily run by a specialist nurse (or other qualified health care professionals) rather than a consultant physician. After initial induction, trainees will review patients in clinic settings, under direct supervision. The degree of responsibility taken by the trainee will increase as competency increases. Trainees should see a range of new and follow-up patients and present their findings to their clinical supervisor. Clinic letters written by the trainee should also be reviewed and feedback given.

The number of patients that a trainee should see in each clinic is not defined, neither is the time that should be spent in clinic, but as a guide this should be a minimum of two hours.

Clinic experience should be used as an opportunity to undertake supervised learning events and reflection.

Reviewing patients with consultants
It is important that trainees have an opportunity to present at least a proportion of the patients whom they have admitted to their consultant for senior review in order to obtain immediate feedback into their performance (that may be supplemented by an appropriate WBA such as an mini-CEX or CBD). This may be accomplished when working on a take shift along with a consultant, or on a post-take ward round with a consultant.

Personal ward rounds and provision of ongoing clinical care on specialist medical ward attachments
Every patient seen, on the ward or in outpatients, provides a learning opportunity, which will be enhanced by following the patient through the course of their illness. The experience of the evolution of patients' problems over time is a critical part both of the diagnostic process as well as management. Patients seen should provide the basis for critical reading and reflection on clinical problems.

Ward rounds by more senior doctors
Every time a trainee observes another doctor seeing a patient or their relatives there is an opportunity for learning. Ward rounds (including post-take) should be led by a more senior doctor and include feedback on clinical and decision-making skills.

Multi-disciplinary team meetings
There are many situations where clinical problems are discussed with clinicians in other disciplines. These provide excellent opportunities for observation of clinical reasoning.

Trainees have supervised responsibility for the care of inpatients. This includes day-to-day review of clinical conditions, note keeping, and the initial management of the acutely ill patient with referral to and liaison with clinical colleagues as necessary. The degree of responsibility taken by the trainee will increase as competency increases. There should be appropriate levels of clinical supervision throughout training, with increasing clinical independence and responsibility.

Palliative and end of life care
Trainees should have significant experience of palliative care with the objective of:

- Enhancing skills in recognising the patient with limited reversibility of their medical condition and the dying patient
- Enhancing ability to recognise the range of interventions that can be delivered in acute and non-acute settings (eg community, hospice or care home)
- Increasing confidence in managing physical symptoms inpatients and psychosocial distress inpatients and families
- Increasing confidence in developing appropriate advance care plans, including DNA/CPR decisions

These learning objectives and experience of end of life care can be achieved during attachments to the haematology wards and haemato-oncology / bone marrow transplant posts.

Formal postgraduate teaching
The content of these sessions are determined by the local faculty of medical education and will be based on the curriculum. There are many opportunities throughout the year for formal teaching in the local postgraduate teaching sessions and at regional, national and international meetings. Many of these are organised by the Royal Colleges of Physicians.

Suggested activities include:

- a programme of formal bleep-free regular teaching sessions to cohorts of trainees (eg a weekly training hour for IM teaching within a training site)
- case presentations
- research, audit and quality improvement projects
- lectures and small group teaching
- Grand Rounds
- clinical skills demonstrations and teaching
- critical appraisal and evidence based medicine and journal clubs
- joint specialty meetings
- attendance at training programmes organised on a deanery or regional basis, which are designed to cover aspects of the training programme outlined in this curriculum.

Learning with peers - There are many opportunities for trainees to learn with their peers. Local postgraduate teaching opportunities allow trainees of varied levels of experience to come together for small group sessions.

Independent self-directed learning
Trainees will use this time in a variety of ways depending upon their stage of learning. Suggested activities include:

- reading, including web-based material such as e-Learning for Healthcare (e-LfH)
- maintenance of personal portfolio (self-assessment, reflective learning, personal development plan)
- audit, quality improvement and research projects
- reading journals

- achieving personal learning goals beyond the essential, core curriculum

Formal study courses
Time to be made available for formal courses is encouraged, subject to local conditions of service. Examples include transfusion, management and leadership courses and communication courses, which are particularly relevant to patient safety and experience.

4.3 Academic training

The four nations have different arrangements for academic training and doctors in training should consult the local deanery for further guidance.

Trainees may train in academic medicine as an academic clinical fellow (ACF), academic clinical lecturer (ACL) or equivalent. Academic trainees can be recruited at any point in the internal medicine training programme.

Some trainees may opt to do research leading to a higher degree without being appointed to a formal academic programme. This new curriculum should not impact in any way on the facility to take time out of programme for research (OOPR) but as now, such time requires discussion between the trainee, the TPD and the Deanery as to what is appropriate together with guidance from the appropriate SAC that the proposed period and scope of study is sensible.

5. Programme of Assessment

5.1 Purpose of assessment

The purpose of the programme of assessment is to:
- assess trainees' actual performance in the workplace
- enhance learning by providing formative assessment, enabling trainees to receive immediate feedback, understand their own performance and identify areas for development
- drive learning and enhance the training process by making it clear what is required of trainees and motivating them to ensure they receive suitable training and experience
- demonstrate trainees have acquired the GPCs and meet the requirements of GMP
- ensure that trainees possess the essential underlying knowledge required for their specialty
- provide robust, summative evidence that trainees are meeting the curriculum standards during the training programme;
- inform the ARCP, identifying any requirements for targeted or additional training where necessary and facilitating decisions regarding progression through the training programme;
- identify trainees who should be advised to consider changes of career direction.

5.2 Programme of Assessment

Our programme of assessment refers to the integrated framework of exams, assessments in the workplace and judgements made about a learner during their approved programme of training. The purpose of the programme of assessment is to robustly evidence, ensure and clearly communicate the expected levels of performance at critical progression points in, and to demonstrate satisfactory completion of training as required by the curriculum.

The programme of assessment is comprised of several different individual types of assessment. A range of assessments is needed to generate the necessary evidence required for global judgements to be made about satisfactory performance, progression in, and completion of, training. All assessments, including those conducted in the workplace, are linked to the relevant curricular learning outcomes (eg through the blueprinting of assessment system to the stated curricular outcomes).

The programme of assessment emphasises the importance and centrality of professional judgement in making sure learners have met the learning outcomes and expected levels of performance set out in the approved curricula. Assessors will make accountable, professional judgements. The programme of assessment includes how professional judgements are used and collated to support decisions on progression and satisfactory completion of training.

The assessments will be supported by structured feedback for trainees. Assessment tools will be both formative and summative and have been selected on the basis of their fitness for purpose.

Assessment will take place throughout the training programme to allow trainees continually to gather evidence of learning and to provide formative feedback. Those assessment tools which are not identified individually as summative will contribute to summative judgements about a trainee's progress as part of the programme of assessment. The number and range of these will ensure a reliable assessment of the training relevant to their stage of training and achieve coverage of the curriculum.

Reflection and feedback should be an integral component to all SLEs and WBPAs. In order for trainees to maximise benefit, reflection and feedback should take place as soon as possible after an event. Every clinical encounter can provide a unique opportunity for reflection and feedback and this process should occur frequently. Feedback should be of high quality and should include an action plan for future development for the trainee. Both trainees and trainers should recognise and respect cultural differences when giving and receiving feedback.

5.3 Assessment of CiPs

Assessment of CiPs involves looking across a range of different skills and behaviours to make global decisions about a learner's suitability to take on particular responsibilities or tasks.

Clinical supervisors and others contributing to assessment will provide formative feedback to the trainee on their performance throughout the training year. This feedback will include a global rating in order to indicate to the trainee and their educational supervisor how they

are progressing at that stage of training. To support this, workplace based assessments and multiple consultant reports will include global assessment anchor statements.

Global assessment anchor statements

- Below expectations for this year of training; may not meet the requirements for critical progression point
- Meeting expectations for this year of training; expected to progress to next stage of training
- Above expectations for this year of training; expected to progress to next stage of training

Towards the end of the training year, trainees will make a self-assessment of their progression for each CiP and record this in the eportfolio with signposting to the evidence to support their rating.

The educational supervisor (ES) will review the evidence in the eportfolio including workplace based assessments, feedback received from clinical supervisors (via the Multiple Consultant Report) and the trainee's self-assessment and record their judgement on the trainee's performance in the ES report, with commentary.

For **generic CiPs**, the ES will indicate whether the trainee is meeting expectations or not using the global anchor statements above. Trainees will need to be meeting expectations for the stage of training as a minimum to be judged satisfactory to progress to the next training year.

For **specialty CiPs**, the ES will make an entrustment decision for each CiP and record the indicative level of supervision required with detailed comments to justify their entrustment decision. The ES will also indicate the most appropriate global anchor statement (see above) for overall performance.

Level descriptors for clinical CiPs

Level	Descriptor
Level 1	**Entrusted to observe only** – no provision of clinical care
Level 2	**Entrusted to act with direct supervision**: The trainee may provide clinical care, but the supervising physician is physically within the hospital or other site of patient care and is immediately available if required to provide direct bedside supervision
Level 3	**Entrusted to act with indirect supervision**: The trainee may provide clinical care when the supervising physician is not physically present within the hospital or other site of patient care, but is available by means of telephone and/or electronic media to provide advice, and can attend at the bedside if required to provide direct supervision
Level 4	**Entrusted to act unsupervised**

The ARCP will be informed by the ES report and the evidence presented in the eportfolio. The ARCP panel will make the final summative judgement on whether the trainee has achieved the generic outcomes and the appropriate level of supervision for each CiP. The ARCP panel will determine whether the trainee can progress to the next year/level of training in accordance with the Gold Guide. ARCPs will be held for each training year. The final ARCP will ensure trainees have achieved level 4 in all CiPs for the critical progression point at completion of training.

5.4 Critical progression points

There will be key progression points on entry and on completion of specialty training. Trainees will be required to be entrusted at level 4 in all CiPs by the end of training in order to achieve an ARCP outcome 6 and be recommended for a CCT.

The educational supervisor report will make a recommendation to the ARCP panel as to whether the trainee has met the defined levels for the CiPs and acquired the procedural competence required for each year of training. The ARCP panel will make the final decision on whether the trainee can be signed off and progress to the next year/level of training [see section 5.6].

The outline grid below sets out the expected level of supervision and entrustment for the specialty CiPs and includes the critical progression points across the whole training programme.

Table 1: Outline grid of minimum levels expected for Haematology specialty CiPs by year of training

Level descriptors
Level 1: Entrusted to observe only – no clinical care
Level 2: Entrusted to act with direct supervision
Level 3: Entrusted to act with indirect supervision
Level 4: Entrusted to act unsupervised

	Selection	Specialty training					CCT
Specialty CiP	CRITICAL PROGRESSION POINT	**ST3**	**ST4**	**ST5**	**ST6**	**ST7**	CRITICAL PROGRESSION POINT
Laboratory Haematology - Providing a comprehensive haematology laboratory service, including investigation, reporting and blood transfusion		**2**	**3**	**3**	**3**	**4**	
Liaison Haematology - Providing safe clinical advice to colleagues on interpretation of haematology laboratory results, blood transfusion practice and haematological disorders		**2**	**3**	**3**	**3**	**4**	
Outpatient Haematology - Managing patients with suspected or known haematological disorders in the outpatient setting		**2**	**2**	**3**	**3**	**4**	
Day Unit Haematology - Managing patient in an ambulatory/day unit environment including specialist haematological treatments		**2**	**3**	**3**	**3**	**4**	
Inpatient Haematology - Providing continuity of care to inpatients with haematological conditions		**2**	**3**	**3**	**3**	**4**	
Haematological Emergences - Managing acute haematological emergencies in all environments		**3**	**3**	**3**	**4**	**4**	
Managing end of life and palliative care skills		**3**	**3**	**3**	**4**	**4**	

5.5 Evidence of progress

The following methods of assessment will provide evidence of progress in the integrated programme of assessment. The requirements for each training year/level are stipulated in the ARCP decision aid (www.jrcptb.org.uk).

Summative assessment

Examinations and certificates

- FRCPath examination will be completed by the end of ST7

Formative assessment

Supervised Learning Events (SLEs)
- Case-Based Discussions (CbD)
- mini-Clinical Evaluation Exercise (mini-CEX)

WPBA
- Direct Observation of Procedural Skills (DOPS) – formative
- Multi-Source Feedback (MSF)
- Patient Survey (PS)
- Quality Improvement Project Assessment Tool (QIPAT)
- Teaching Observation (TO)

Supervisor reports
- Multiple Consultant Report (MCR)
- Educational Supervisor Report (ESR)

These methods are described briefly below. More information and guidance for trainees and assessors are available in the eportfolio and on the JRCPTB website (www.jrcptb.org.uk).

Assessment should be recorded in the trainee's eportfolio. These methods include feedback opportunities as an integral part of the programme of assessment.

Case-based Discussion (CbD)
The CbD assesses the performance of a trainee in their management of a patient to provide an indication of competence in areas such as clinical reasoning, decision-making and application of medical knowledge in relation to patient care. It also serves as a method to document conversations about, and presentations of, cases by trainees. The CbD should focus on a written record (such as written case notes, out-patient letter, and discharge summary). A typical encounter might be when presenting newly referred patients in the out-patient department.

mini-Clinical Evaluation Exercise (mini-CEX)
This tool evaluates a clinical encounter with a patient to provide an indication of competence in skills essential for good clinical care such as history taking, examination and clinical reasoning. The trainee receives immediate feedback to aid learning. The mini-CEX can be used at any time and in any setting when there is a trainee and patient interaction and an assessor is available.

Direct Observation of Procedural Skills (DOPS)
A DOPS is an assessment tool designed to evaluate the performance of a trainee in undertaking a practical procedure, against a structured checklist. The trainee receives immediate feedback to identify strengths and areas for development. DOPS can be undertaken as many times as the trainee and their supervisor feel is necessary (formative). A trainee can be regarded as competent to perform a procedure independently after they are signed off as such by an appropriate assessor (summative).

Multi-source feedback (MSF)
This tool is a method of assessing generic skills such as communication, leadership, team working, reliability etc, across the domains of Good Medical Practice. This provides systematic collection and feedback of performance data on a trainee, derived from a number of colleagues. 'Raters' are individuals with whom the trainee works, and includes doctors, administrative staff, and other allied professionals. Raters should be agreed with the educational supervisor at the start of the training year. The trainee will not see the individual responses by raters. Feedback is given to the trainee by the Educational Supervisor.

Patient Survey (PS)
The PS addresses issues, including the behaviour of the doctor and effectiveness of the consultation, which are important to patients. It is intended to assess the trainee's performance in areas such as interpersonal skills, communication skills and professionalism by concentrating solely on their performance during one consultation.

Quality Improvement Project Assessment Tool (QIPAT)
The QIPAT is designed to assess a trainee's competence in completing a quality improvement project. The QIPAT can be based on review of quality improvement project documentation or on a presentation of the quality improvement project at a meeting. If possible the trainee should be assessed on the same quality improvement project by more than one assessor.

Teaching Observation (TO)
The TO form is designed to provide structured, formative feedback to trainees on their competence at teaching. The TO can be based on any instance of formalised teaching by the trainee which has been observed by the assessor. The process should be trainee-led (identifying appropriate teaching sessions and assessors).

Multiple Consultant Report (MCR)
The MCR captures the views of consultant supervisors based on observation on a trainee's performance in practice. The MCR feedback and comments received give valuable insight

into how well the trainee is performing, highlighting areas of excellence and areas of support required. MCR feedback will be available to the trainee and contribute to the educational supervisor's report.

Educational supervisors report (ESR)
The ES will periodically (at least annually) record a longitudinal, global report of a trainee's progress based on a range of assessment, potentially including observations in practice or reflection on behaviour by those who have appropriate expertise and experience. The ESR can incorporate commentary or reports from longitudinal observations, such as from supervisors or formative assessments demonstrating progress over time.

5.6 Decisions on progress (ARCP)

The decisions made at critical progression points and upon completion of training should be clear and defensible. They must be fair and robust and make use of evidence from a range of assessments, potentially including exams and observations in practice or reflection on behaviour by those who have appropriate expertise or experience. They can also incorporate commentary or reports from longitudinal observations, such as from supervisors or formative assessments demonstrating progress over time.

Periodic (at least annual) review should be used to collate and systematically review evidence about a doctor's performance and progress in a holistic way and make decisions about their progression in training. The annual review of progression (ARCP) process supports the collation and integration of evidence to make decisions about the achievement of expected outcomes.

Assessment of CiPs involves looking across a range of different skills and behaviours to make global decisions about a learner's suitability to take on particular responsibilities or tasks, as do decisions about the satisfactory completion of presentations/conditions and procedural skills set out in this curriculum. The outline grid in section 5.4 sets out the level of supervision expected for each of the clinical and specialty CiPs. The requirements for each year of training are set out in the ARCP decision aid (www.jrcptb.org.uk).

The ARCP process is described in the Gold Guide. Deaneries are responsible for organising and conducting ARCPs. The evidence to be reviewed by ARCP panels should be collected in the trainee's eportfolio.

As a precursor to ARCPs, JRCPTB strongly recommend that trainees have an informal eportfolio review either with their educational supervisor or arranged by the local school of medicine. These provide opportunities for early detection of trainees who are failing to gather the required evidence for ARCP.

In order to guide trainees, supervisors and the ARCP panel, JRCPTB has produced an ARCP decision aid which sets out the requirements for a satisfactory ARCP outcome at the end of each training year and critical progression point. The ARCP decision aid is available on the JRCPTB website www.jrcptb.org.uk.

5.7 Assessment blueprint

The table below show the possible methods of assessment for each CiP. It is not expected that every method will be used for each competency and additional evidence may be used to help make a judgement on capability.

KEY

DOPS	Direct observation of procedural skills	CbD	Case-based discussion
MCR	Multiple consultant report	Mini-CEX	Mini-clinical evaluation exercise
PS	Patient survey	MSF	Multi source feedback
TO	Teaching observation	QIPAT	Quality improvement project assessment tool

Blueprint for WPBAs mapped to CiPs

Learning outcomes	**CbD**	**DOPS**	**MCR**	**Mini -CEX**	**MSF**	**PS**	**QIPAT**	**TO**
Generic CiPs								
Able to function successfully within NHS organisational and management systems			√		√		√	√
Able to deal with ethical and legal issues related to clinical practice	√	√	√	√	√	√	√	√
Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement	√		√	√	√	√		√
Is focussed on patient safety and delivers effective quality improvement in patient care	√		√	√	√		√	√
Carrying out research and managing data appropriately			√		√		√	√
Acting as a clinical teacher and clinical supervisor			√		√			√
Laboratory Haematology - Providing a comprehensive haematology laboratory service, including investigation, reporting and blood transfusion	√		√	√	√		√	√
Liaison Haematology - Providing safe clinical advice to colleagues on interpretation of haematology laboratory results, blood transfusion practice and haematological disorders	√		√	√			√	√
Outpatient Haematology - Managing patients with suspected or known haematological disorders in the outpatient setting	√	√	√	√	√	√	√	√
Day Unit Haematology - Managing patient in an ambulatory/day unit environment including specialist haematological treatments	√	√	√	√	√	√	√	√
Inpatient Haematology - Providing continuity of care to inpatients with haematological conditions	√	√	√	√	√	√	√	√
Haematological Emergences - Managing acute haematological emergencies in all environments	√		√	√	√			√

Learning outcomes	CbD	DOPS	MCR	Mini -CEX	MSF	PS	QIPAT	TO
Managing end of life and palliative care skills	√		√	√	√	√	√	√

6. Supervision and feedback

This section of the curriculum describes how trainees will be supervised, and how they will receive feedback on performance. For further information please refer to the AoMRC guidance on Improving feedback and reflection to improve learning[4].

Access to high quality, supportive and constructive feedback is essential for the professional development of the trainee. Trainee reflection is an important part of the feedback process and exploration of that reflection with the trainer should ideally be a two way dialogue. Effective feedback is known to enhance learning and combining self-reflection to feedback promotes deeper learning.

Trainers should be supported to deliver valuable and high quality feedback. This can be by providing face to face training to trainers. Trainees would also benefit from such training as they frequently act as assessors to junior doctors, and all involved could also be shown how best to carry out and record reflection.

6.1 Supervision

All elements of work in training posts must be supervised with the level of supervision varying depending on the experience of the trainee and the clinical exposure and case mix undertaken. Outpatient and referral supervision must routinely include the opportunity to discuss all cases with a supervisor if appropriate. As training progresses the trainee should have the opportunity for increasing autonomy, consistent with safe and effective care for the patient.

Organisations must make sure that each doctor in training has access to a named clinical supervisor and a named educational supervisor. Depending on local arrangements these roles may be combined into a single role of educational supervisor. However, it is preferred that a trainee has a single named educational supervisor for (at least) a full training year, in which case the clinical supervisor is likely to be a different consultant during some placements.

The role and responsibilities of supervisors have been defined by the GMC in their standards for medical education and training[5].

[4] Improving feedback and reflection to improve learning. A practical guide for trainees and trainers
[5] Promoting excellence: standards for medical education and training

Educational supervisor
The educational supervisor is responsible for the overall supervision and management of a doctor's educational progress during a placement or a series of placements. The educational supervisor regularly meets with the doctor in training to help plan their training, review progress and achieve agreed learning outcomes. The educational supervisor is responsible for the educational agreement, and for bringing together all relevant evidence to form a summative judgement about progression at the end of the placement or a series of placements. Trainees on a dual training program may have a single educational supervisor responsible for their internal medicine and specialty training, or they may have two educational supervisors, one responsible for internal medicine and one for specialty.

Clinical supervisor
Consultants responsible for patients that a trainee looks after provide clinical supervision for that trainee and thereby contribute to their training; they may also contribute to assessment of their performance by completing a 'Multiple Consultant Report (MCR)' and other WPBAs. A trainee may also be allocated (for instance, if they are not working with their educational supervisor in a particular placement) a named clinical supervisor, who is responsible for reviewing the trainee's training and progress during a particular placement. It is expected that a named clinical supervisor will provide a MCR for the trainee to inform the Educational Supervisor's report.

The educational and (if relevant) clinical supervisors, when meeting with the trainee, should discuss issues of clinical governance, risk management and any report of any untoward clinical incidents involving the trainee. If the service lead (clinical director) has any concerns about the performance of the trainee, or there are issues of doctor or patient safety, these would be discussed with the clinical and educational supervisors (as well as the trainee). These processes, which are integral to trainee development, must not detract from the statutory duty of the trust to deliver effective clinical governance through its management systems.

Educational and clinical supervisors need to be formally recognised by the GMC to carry out their roles[6]. It is essential that training in assessment is provided for trainers and trainees in order to ensure that there is complete understanding of the assessment system, assessment methods, their purposes and use. Training will ensure a shared understanding and a consistency in the use of the WPBAs and the application of standards.

Opportunities for feedback to trainees about their performance will arise through the use of the workplace-based assessments, regular appraisal meetings with supervisors, other meetings and discussions with supervisors and colleagues, and feedback from ARCP.

Trainees
Trainees should make the safety of patients their first priority and they should not be practising in clinical scenarios which are beyond their experiences and competencies without supervision. Trainees should actively devise individual learning goals in discussion with their trainers and should subsequently identify the appropriate opportunities to

[6] Recognition and approval of trainers

achieve said learning goals. Trainees would need to plan their WPBAs accordingly to enable their WPBAs to collectively provide a picture of their development during a training period. Trainees should actively seek guidance from their trainers in order to identify the appropriate learning opportunities and plan the appropriate frequencies and types of WPBAs according to their individual learning needs. It is the responsibility of trainees to seek feedback following learning opportunities and WPBAs. Trainees should self-reflect and self-evaluate regularly with the aid of feedback. Furthermore, trainees should formulate action plans with further learning goals in discussion with their trainers.

6.2 Appraisal

A formal process of appraisals and reviews underpins training. This process ensures adequate supervision during training, provides continuity between posts and different supervisors and is one of the main ways of providing feedback to trainees. All appraisals should be recorded in the eportfolio

Induction Appraisal
The trainee and educational supervisor should have an appraisal meeting at the beginning of each post to review the trainee's progress so far, agree learning objectives for the post ahead and identify the learning opportunities presented by the post. Reviewing progress through the curriculum will help trainees to compile an effective Personal Development Plan (PDP) of objectives for the upcoming post. This PDP should be agreed during the Induction Appraisal. The trainee and supervisor should also both sign the educational agreement in the e-portfolio at this time, recording their commitment to the training process.

Mid-point Review
This meeting between trainee and educational supervisor is not mandatory (particularly when an attachment is shorter than 6 months) but is encouraged particularly if either the trainee or educational or clinical supervisor has training concerns or the trainee has been set specific targeted training objectives at their ARCP).At this meeting trainees should review their PDP with their supervisor using evidence from the e-portfolio. Workplace-based assessments and progress through the curriculum can be reviewed to ensure trainees are progressing satisfactorily, and attendance at educational events should also be reviewed. The PDP can be amended at this review.

End of Attachment Appraisal
Trainees should review the PDP and curriculum progress with their educational supervisor using evidence from the e-portfolio. Specific concerns may be highlighted from this appraisal. The end of attachment appraisal form should record the areas where further work is required to overcome any shortcomings. Further evidence of competence in certain areas may be needed, such as planned workplace-based assessments, and this should be recorded. If there are significant concerns following the end of attachment appraisal then the programme director should be informed. Supervisors should also identify areas where a trainee has performed about the level expected and highlight successes.

7. Quality Management

The organisation of training programs is the responsibility of the deaneries. The deaneries will oversee programmes for postgraduate medical training in their regions. The Schools of Medicine in England, Wales and Northern Ireland and the Medical Specialty Training Board in Scotland will undertake the following roles:

- oversee recruitment and induction of trainees into the specialty
- allocate trainees into particular rotations appropriate to their training needs
- oversee the quality of training posts provided locally
- ensure adequate provision of appropriate educational events
- ensure curricula implementation across training programmes
- oversee the workplace-based assessment process within programmes
- coordinate the ARCP process for trainees
- provide adequate and appropriate career advice
- provide systems to identify and assist doctors with training difficulties
- provide flexible training.

Educational programmes to train educational supervisors and assessors in workplace based assessment may be delivered by deaneries or by the colleges or both.

Development, implementation, monitoring and review of the curriculum are the responsibility of the JRCPTB and the SAC. The committee will be formally constituted with representatives from each health region in England, from the devolved nations and with trainee and lay representation. It will be the responsibility of the JRCPTB to ensure that curriculum developments are communicated to heads of school, regional specialty training committees and TPDs.

The JRCPTB has a role in quality management by monitoring and driving improvement in the standard of all medical specialties on behalf of the three Royal Colleges of Physicians in Edinburgh, Glasgow and London. The SACs are actively involved in assisting and supporting deaneries to manage and improve the quality of education within each of their approved training locations. They are tasked with activities central to assuring the quality of medical education such as writing the curriculum and assessment systems, reviewing applications for new posts and programmes, provision of external advisors to deaneries and recommending trainees eligible for CCT or Certificate of Eligibility for Specialist Registration (CESR).

JRCPTB uses data from six quality datasets across its specialties and subspecialties to provide meaningful quality management. The datasets include the GMC national Training Survey (NTS) data, ARCP outcomes, examination outcomes, new consultant survey, penultimate year assessments (PYA)/external advisor reports and the monitoring visit reports.

Quality criteria have been developed to drive up the quality of training environments and ultimately improve patient safety and experience. These are monitored and reviewed by JRCPTB to improve the provision of training and ensure enhanced educational experiences.

8. Intended use of curriculum by trainers and trainees

This curriculum and ARCP decision aid are available from the Joint Royal Colleges of Physicians Training Board (JRCPTB) via the website www.jrcptb.org.uk.

Clinical and educational supervisors should use the curriculum and decision aid as the basis of their discussion with trainees, particularly during the appraisal process. Both trainers and trainees are expected to have a good knowledge of the curriculum and should use it as a guide for their training programme.

Each trainee will engage with the curriculum by maintaining an eportfolio. The trainee will use the curriculum to develop learning objectives and reflect on learning experiences.

Recording progress in the eportfolio

On enrolling with JRCPTB trainees will be given access to the eportfolio. The eportfolio allows evidence to be built up to inform decisions on a trainee's progress and provides tools to support trainees' education and development.

The trainee's main responsibilities are to ensure the eportfolio is kept up to date, arrange assessments and ensure they are recorded, prepare drafts of appraisal forms, maintain their personal development plan, record their reflections on learning and record their progress through the curriculum.

The supervisor's main responsibilities are to use eportfolio evidence such as outcomes of assessments, reflections and personal development plans to inform appraisal meetings. They are also expected to update the trainee's record of progress through the curriculum, write end-of-attachment appraisals and supervisor's reports.

Deaneries, training programme directors, college tutors and ARCP panels may use the eportfolio to monitor the progress of trainees for whom they are responsible.

JRCPTB will use summarised, anonymous eportfolio data to support its work in quality assurance.

All appraisal meetings, personal development plans and workplace based assessments (including MSF) should be recorded in the eportfolio. Trainees are encouraged to reflect on their learning experiences and to record these in the eportfolio. Reflections can be kept private or shared with supervisors.

Reflections, assessments and other eportfolio content should be used to provide evidence towards acquisition of curriculum capabilities. Trainees should add their own self-assessment ratings to record their view of their progress. The aims of the self-assessment are:

- to provide the means for reflection and evaluation of current practice
- to inform discussions with supervisors to help both gain insight and assists in developing personal development plans.
- to identify shortcomings between experience, competency and areas defined in the curriculum so as to guide future clinical exposure and learning.

Supervisors can sign-off and comment on curriculum capabilities to build up a picture of progression and to inform ARCP panels.

9. Equality and diversity

The Royal Colleges of Physicians will comply, and ensure compliance, with the requirements of equality and diversity legislation set out in the Equality Act 2010.

The Federation of the Royal Colleges of Physicians believes that equality of opportunity is fundamental to the many and varied ways in which individuals become involved with the Colleges, either as members of staff and Officers; as advisers from the medical profession; as members of the Colleges' professional bodies or as doctors in training and examination candidates.

Deaneries quality assurance will ensure that each training programme complies with the equality and diversity standards in postgraduate medical training as set by GMC. They should provide access to a professional support unit or equivalent for trainees requiring additional support.

Compliance with anti-discriminatory practice will be assured through:

- monitoring of recruitment processes
- ensuring all College representatives and Programme Directors have attended appropriate training sessions prior to appointment or within 12 months of taking up post
- Deaneries ensuring that educational supervisors have had equality and diversity training (for example, an e-learning module) every three years
- Deaneries ensuring that any specialist participating in trainee interview/appointments committees or processes has had equality and diversity training (at least as an e-module) every three years
- ensuring trainees have an appropriate, confidential and supportive route to report examples of inappropriate behaviour of a discriminatory nature. Deaneries and Programme Directors must ensure that on appointment trainees are made aware of the route in which inappropriate or discriminatory behaviour can be reported and supplied with contact names and numbers. Deaneries must also ensure contingency mechanisms are in place if trainees feel unhappy with the response or uncomfortable with the contact individual
- providing resources to trainees needing support (for example, through the provision of a professional support unit or equivalent)
- monitoring of College Examinations
- ensuring all assessments discriminate on objective and appropriate criteria and do not unfairly advantage or disadvantage a trainee with any of the Equality Act 2010 protected characteristics. All efforts shall be made to ensure the participation of people with a disability in training through reasonable adjustments.