SPECIALTY TRAINING CURRICULUM

FOR

CLINICAL PHARMACOLOGY AND THERAPEUTICS

AUGUST 2010

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Joint Royal Colleges of Physicians Training Board

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1 Introduction

Clinical Pharmacology and Therapeutics (CPT) is a clinical discipline involved with the application of pharmacological principles to patients. Its scope is wide including the development of new drugs, promoting rational prescribing of established drugs, managing poisoning by drugs and other chemicals and regulating the use of drugs in populations.

In parallel with these organisational and structural changes, medical education has undergone major reforms. The implementation of the Foundation programme, with doctors leaving the F2 year with “acute safe” competencies, the increased number of medical graduates and the implementation of Good Medical Practice have added to the need to define and map all parts of the new CPT curriculum to the 4 domains of Good Medical Practice with clearly defined assessment methods being allocated to all sections of the curriculum. These new initiatives will allow trainees and trainers to easily identify how trainees will progress through the new curriculum with acquisition of knowledge, skills and behaviours and how these will be assessed. Mapping the 4 domains of Good Medical Practice to the curriculum has also provided the opportunity to define skills and behaviours which trainees require to communicate better with patients, carers and their families and how these will be assessed.

The new curriculum in CPT is designed to attract sufficient high-quality trainees into the discipline by providing the flexibility necessary to allow doctors in different branches of clinical medicine to undergo training in Clinical Pharmacology and Therapeutics and to provide links with the new Academic training pathway. It aims to achieve this flexibility by adopting a modular structure, all trainees taking the core module but with additional modules, usually of 1 year’s duration, from within the panoply of CPT special interests according to their specific training requirements

2 Rationale

2.1 Purpose of the curriculum

Usually trainees entering CPT will combine this with training in another clinical specialty and for some with an Academic Fellowship. The purpose of this curriculum is to define the process of training and the additional competencies needed for:

the award of a certificate of completion of training (CCT) in CPT

The curriculum covers training in all four nations of the UK.

2.2 Development

This curriculum was developed by a working group of the Specialty Advisory Committee for Clinical Pharmacology and Therapeutics under the direction of the Joint Royal Colleges of Physicians Training Board (JRCPTB). The members involved in revising the curriculum included both recently appointed and senior consultants in the specialty, trainers, a trainee, a postgraduate dean, and a lay member. The original basis for its content (derived from the previous curriculum) is a Delphi exercise involving consultants in the specialty updated subsequently by members of the Specialty Advisory Committee. To ensure that the curriculum remains relevant to current clinical practice draft versions were circulated for comment both to the full membership of the Specialty Advisory Committee and members of the Clinical Committee of the British Pharmacological Society.

This curriculum replaces the Clinical Pharmacology and Therapeutics curriculum dated May 2007, with changes to ensure that the curriculum meets GMC's 17 Standards for Curricula and Assessment. It incorporates revisions to the content and delivery of the training programme. Major changes from the previous curriculum include the incorporation of leadership, health inequalities and common competencies. As training in CPT covers different skills and knowledge from that in other disciplines tools of assessment have had to be modified.

Regular workplace-based assessments are conducted throughout training building on those used in the Foundation programme with an annual ARCP. These include for the clinical components the Case Based Discussion (CbD), mini-Clinical Evaluation Exercise (mini-CEX) and multisource feedback (MSF). Assessment of the non-clinical elements is based on Project Based Discussion (PbD) in this context the project relating to a piece of research, analysis, or guideline development.

2.3 Entry requirements

Entrants to specialist training in CPT must have successfully completed Core Medical Training or Acute Care Common Stem training, the equivalent 2 years basic training in a non-physicianly clinical specialty, or the first 2 years of an approved GP training scheme including at least 12 months hospital ST1 or ST2 posts approved for that purpose. Training must include experience of unselected medical take (not necessarily out of hours work).

Core Medical training programmes are designed to deliver core competencies as part of specialty training by acquisition of knowledge, skills and behaviours as assessed by the workplace-based assessments and the MRCP(UK). Programmes are usually for two years and are broad-based consisting of four to six placements in medical specialties. These placements over the two years must include direct involvement in the acute medical take. Trainees are asked to document their record of workplace-based assessments in an ePortfolio which will then be continued to document assessments in specialty training. Trainees completing core training will have a solid platform of common knowledge and skills from which to continue into Specialty Training at ST3, where these skills will be developed and combined with specialty knowledge and skills in order to award the trainee with a certificate of completion of training (CCT).

There are common competencies that should be acquired by all physicians during their training period starting within the undergraduate career and developed throughout the postgraduate career, for example communication, examination and history taking skills. These are initially defined for CMT and then developed further in the specialty. This curriculum supports the spiral nature of learning that underpins a trainee's continual development. It recognises that for many of the competences outlined there is a maturation process whereby practitioners become more adept and skilled as their career and experience progresses. It is intended that doctors should recognise that the acquisition of basic competences is often followed by an increasing sophistication and complexity of that competence throughout their career. This is reflected by increasing expertise in their chosen career pathway.

Acquisition of full MRCP (UK) will be required before entry into Specialty training at ST3 (2011 onwards) if the trainee is undertaking CMT or ACCS as a core training programme.

The approved curriculum for CMT is a sub-set of the Curriculum for General Internal Medicine (GIM). A “Framework for CMT” has been created for the convenience of trainees, supervisors, tutors and programme directors. The body of the Framework document has been extracted from the approved curriculum but only includes the syllabus requirements for CMT and not the further requirements for acquiring a CCT in GIM. The CMT framework document can be viewed on the JRCPTB website www.jrcptb.org.uk.

Pathways are as shown below
All trainees entering CPT should combine this either with training in another clinical specialty and possibly with an Academic Fellowship.

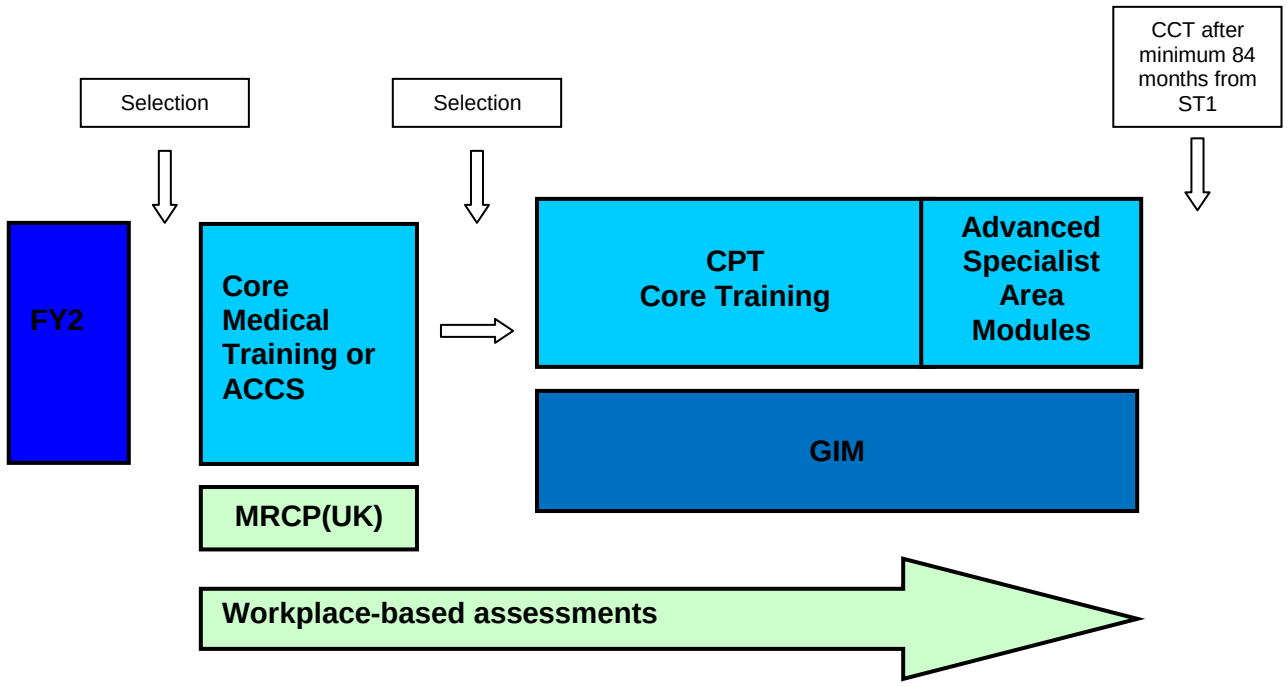


Fig 1.1 CPT and GIM pathway

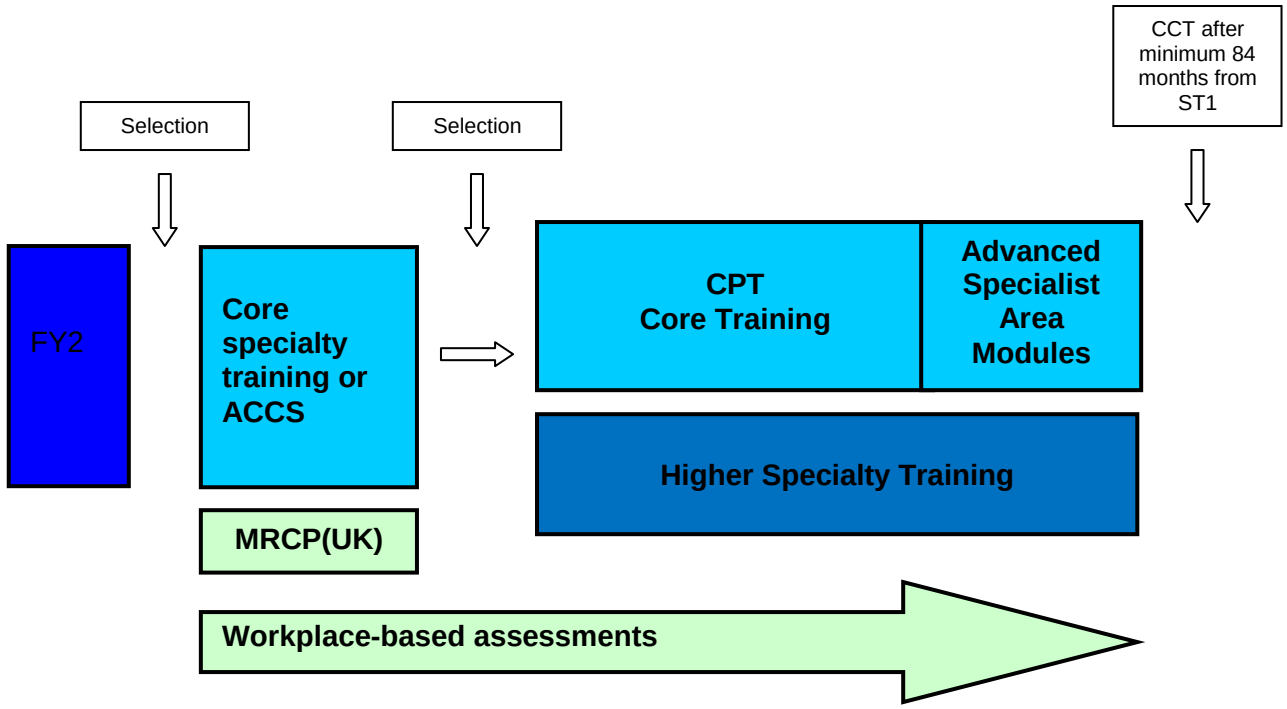


Fig 1.2 Other clinical specialty pathway

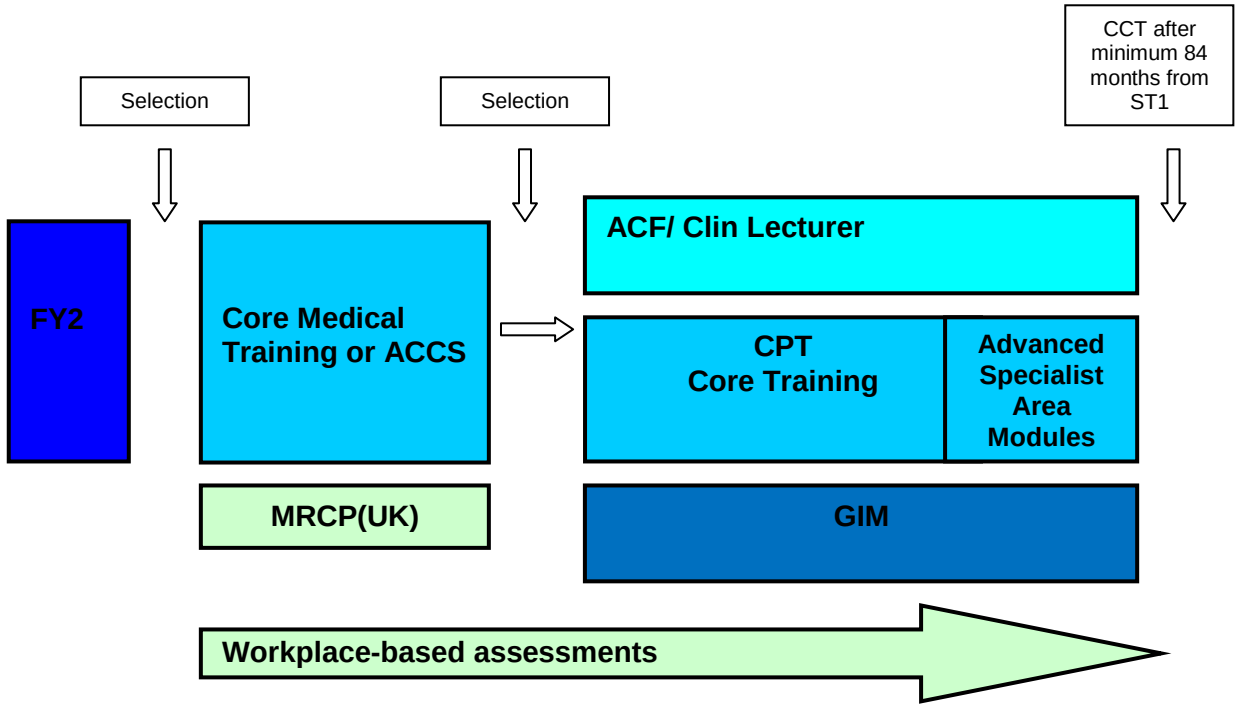


Fig 1.3 Academic pathway

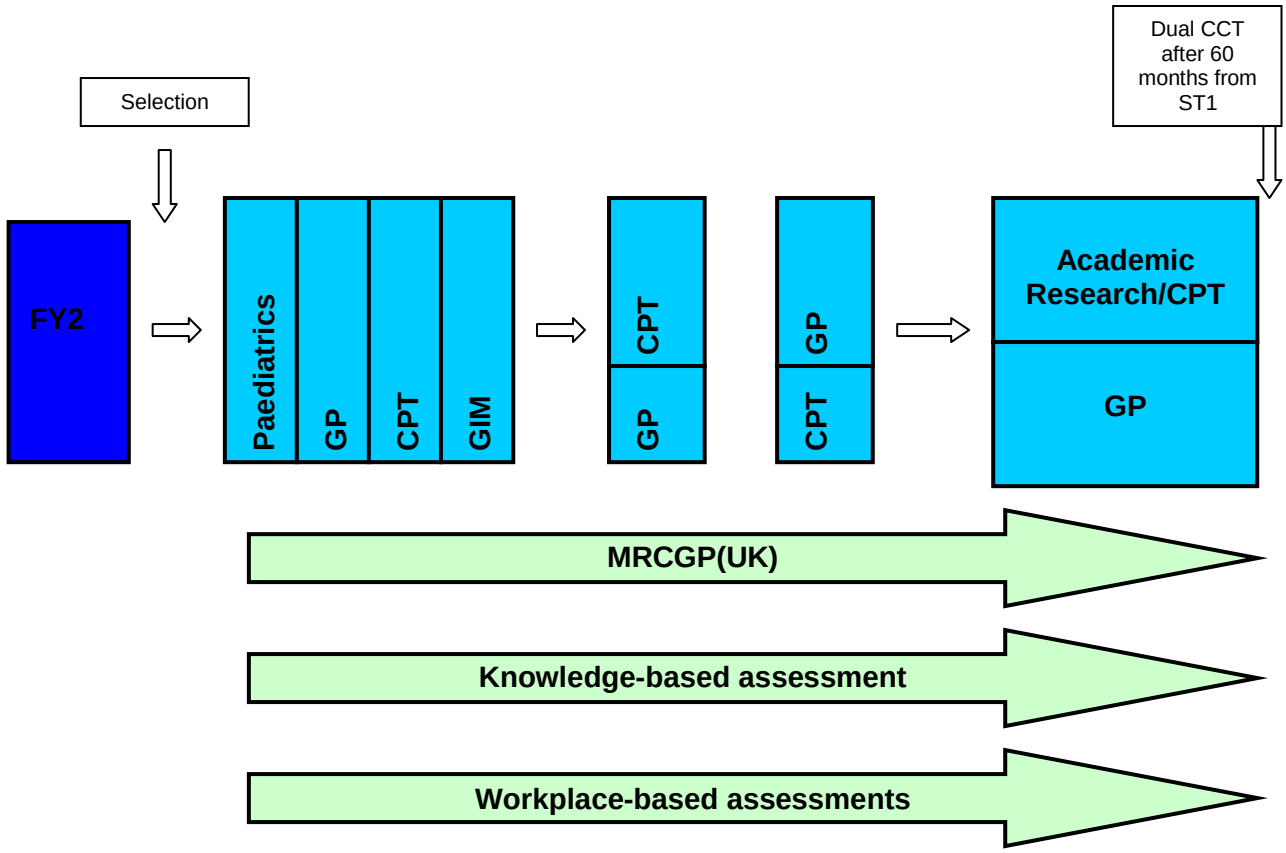


Fig 1.4 Primary care pathway

2.4 Dual CCT

Trainees who must have applied for and successfully entered a training programme which was advertised openly as a dual training programme including CPT and another clinical specialty. Trainees will need to achieve the competencies, with assessment evidence, as described in both the CPT and additional specialty curricula. Individual assessments may provide evidence towards competencies from both curricula. Postgraduate Deans wishing to advertise such programmes should ensure that they meet the requirements of both curricula.

2.5 Enrolment with JRCPTB

Trainees are required to register for specialist training with JRCPTB at the start of their training programmes. Enrolment with JRCPTB, including the complete payment of enrolment fees, is required before JRCPTB will be able to recommend trainees for a CCT. Trainees can enrol online at www.jrcptb.org.uk

2.6 Duration of training

Although this curriculum is competency-based , the duration of training must meet the European minimum of 4 years for full time specialty training adjusted accordingly for flexible training (EU directive 2005/36/EC). The SAC has advised that training in CPT will depend upon the specialty taken along with CPT and whether a CPT special module is incorporated in training or not.

2.7 Less Than Full Time Training (LTFT)

Trainees who are unable to work full-time are entitled to opt for less than full time training programmes. EC Directive 2005/36/EC requires that:

LTFT shall meet the same requirements as full-time training, from which it will differ only in the possibility of limiting participation in medical activities.
The competent authorities shall ensure that the competencies achieved and the quality of part-time training are not less than those of full-time trainees.

The above provisions must be adhered to. LTFT 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.

EC Directive 2005/36/EC states that there is no longer a minimum time requirement on training for LTFT trainees. In the past, less than full time trainees were required to work a minimum of 50% of full time. With competence-based training, in order to retain competence, in addition to acquiring new skills, less than full time trainees would still normally be expected to work a minimum of 50% of full time. If you are returning or converting to training at less than full time please complete the LTFT application form on the JRCPTB website www.jrcptb.org.uk .

Funding for LTFT is from deaneries and these posts are not supernumerary. Ideally therefore 2 LTFT trainees should share one post to provide appropriate service cover.

Flexible/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 during annual appraisal by their TPD and chair of STC and Deanery Associate Dean for Flexible training. As long as the statutory European Minimum Training Time (if relevant), has been exceeded, then indicative training times as stated in curricula may be adjusted in line with the achievement of all stated competences

3 Content of learning

3.1 Programme content and objectives

This section lists the specific learning objectives, core knowledge areas, skills, attitudes and behaviours to be attained throughout training in CPT. As training in CPT will usually be combined with training in another clinical specialty some elements of a generic nature may appear in both curricula. It is not intended that these elements be duplicated.

At the completion of training, by a process of consolidation through the years of the training programme acquiring a variety of experience, the trainee should have acquired the following knowledge, skills and behaviours which independent of clinical specialty are core to the work of a specialist in CPT and will allow the trainee to function in that role.

Core Clinical Pharmacology (First 2 years)
This phase will provide the necessary clinical pharmacological and therapeutics competencies and will usually consist of two years. The order in which the required experience is gained will be flexible and determined by the specialty training committees for each deanery training programme.

It is envisaged that the majority of the required training will be gained in a single training centre. However, where the full spectrum of training opportunities are not available within a single training centre, the trainee will be required to gain appropriate exposure in a suitable environment by undertaking an attachment of appropriate duration in a further centre which can offer the required experience. It is envisaged that such further experience would be undertaken with the prior approval of the SAC.

Objectives

- critical evaluation of literature relevant to CPT including basic pharmacology, toxicology and phase I, II, III and IV clinical trials and meta-analyses.
- understanding uses and limitations of basic statistical tests as related to analysis of pharmacological data
- use of knowledge of mechanisms of drug action to extrapolate likely effect of new drugs, doses and combinations
- use of knowledge of pharmacological principles to use, devise or advise on appropriate dosing regimens to optimise drug effects
- prescribe rationally in individual patients
- collaborate in devising policies for rational, safe, cost-effective prescribing
- understand and work within the current drug regulatory framework.
- understand and influence what determines the pattern of use of medicines in populations.
- anticipate (and hence minimise), detect, manage, report and analyse adverse drug reactions (ADR).
- anticipate (and hence minimise), detect, manage, report possible drug prescription or administration errors
- advise on cases of overdose or poisoning, and to manage such cases as are relevant to their clinical specialty (e.g. children for paediatricians).

Advanced Specialist Area Modules in CPT (Final year)
All clinical pharmacology and therapeutics units have developed specific focused areas of clinical and research expertise. The purpose of the specialist area modules is to permit the trainee to undertake in depth training in such areas and to develop the unique specialist skills necessary to function at an expert level in these areas.

The four specialist area topics are:

- Hypertension
- Toxicology
- Clinical trials research
- Research module

Hypertension
The purpose of this module is to equip future physicians with the essential knowledge, aptitude and skill to function as independent hypertension specialists supporting other cognate specialties within the framework of the National Health Service. The training will be as an adjunct to existing specialty training and will be designed to add value to the management of hypertensive patients and cardiovascular risk.

Once training is completed the physician should:
Be able to apply diagnostic and management knowledge and skills to the prevention of cardiovascular diseases, due to hypertension and other cardiovascular risk factors.
Be able to formulate a differential diagnosis of potential causes for raised blood pressure and develop an appropriate treatment plan incorporating lifestyle and pharmacological therapy.
Have the necessary understanding and appreciation of the role of multi-disciplinary working across specialties and primary care to facilitate the most cost-effective and efficient management of hypertensive patients.

Possess the ability to advise, develop and evaluate the Clinical Effectiveness of hypertension and cardiovascular risk services in partnership with other cognate disciplines.

Toxicology
The primary purpose of the clinical toxicology advanced specialist module is to provide the trainee with a detailed knowledge and experience of toxicology relevant to the diagnosis, investigation, treatment and management of an individual or population affected by exposure to a variety of agents including drugs and other chemicals employed occupationally and environmentally. Such training will ensure that the trainee can function as a hospital based consultant with a special interest in clinical toxicology with a service commitment to the clinical care of patients exposed intentionally or accidentally to drugs or other chemicals and those patients suffering from the effects of withdrawal from drugs of abuse such as alcohol or opiates.
The trainee will also develop expert knowledge of relevant laboratory investigations and be able to advise colleagues on their appropriate use in the management of poisoned patients and be able to interpret the results of these tests accordingly.

This module will also equip the trainee to run an outpatient clinic for the assessment of those exposed to chemicals via their occupation or the environment, and provide advice at the national and local levels regarding policies pertinent to the most appropriate management of such patients, including local and national emergency planning, CBRN (Chemical, Biological, Radiation and Nuclear) arrangements.

Trainees will also gain in depth knowledge of the assessment and investigation of populations affected by chemical incidents in the workplace or as a result of terrorism and will provide advice on how to prepare and respond and recover from to such incidents.

Research
Research is integral to the development of the skills required by a fully trained clinical pharmacologist, however trainees may wish to extend their training to gain an in depth knowledge of research and the techniques required in particular areas relevant to clinical pharmacology and therapeutics. The research advanced area module is designed to give the trainee who wishes to acquire research competencies, in addition to those specified in the core specialty curriculum, a 12 month period during

which they will gain the competencies required on which to base future development as an independent scientific researcher. An ideal way to gain such competencies is to undertake a research project within an appropriate setting and with appropriate supervision. While the curriculum for this module focuses on first in to man studies, it is envisaged that the trainee will be able to undertake research into any area relevant to clinical pharmacology which will ensure exposure to scientific techniques and the development of the skills required. Trainees may consider using this period of research as the first stage of undertaking a specific research degree. In such cases trainees should consider taking time out of programme to complete a specified project or research degree. Applications to research bodies, the deanery (via an OOPR form) and the JRCPTB (via a Research Application Form) are necessary steps, which are the responsibility of the trainee. The JRCPTB Research Application Form can be accessed via the JRCPTB website. It requires an estimate of the competencies that will be achieved and, once completed, it should be returned to JRCPTB together with a job description and an up to date CV. The JRCPTB will submit applications to the relevant SACs for review of the research content including an indicative assessment of the amount of clinical credit (competence acquisition) which might be achieved. This is likely to be influenced by the nature of the research (eg entirely laboratory-based or strong clinical commitment), as well as duration (eg 12 month Masters, 2-year MD, 3-Year PhD). On approval by the SAC, the JRCPTB will advise the trainee and the deanery of the decision. The deanery will make an application to the GMC for approval of the out of programme research. All applications for out of programme research must be prospectively approved.

Upon completion of the research period the competencies achieved will be agreed by the OOP Supervisor, Educational Supervisor and communicated to the SAC, accessing the facilities available on the JRCPTB ePortfolio. The competencies achieved will determine the trainee's position on return to programme; for example if an ST3 trainee obtains all ST4 competencies then 12 months will be recognised towards the minimum training time and the trainee will return to the programme at ST5. This would be corroborated by the subsequent ARCP.

Objectives
For those trainees following the academic training pathway the following additional objectives need to be achieved

- undertake and interpret early phase studies of drug action in humans.

- select prospectively appropriate statistical methods for planned experiments (including clinical trials), perform such analyses, and interpret the resulting statistical output.

- design clinical trials, including phase 3 studies, and contribute to their execution and dissemination.

Clinical Trials Research.
Clinical Pharmacology plays a unique and vital role in all phases of clinical trials summarised as

- Translational phase 1 pharmacokinetic and pharmacodynamics evaluation in volunteers.
- Translational phase 2 pharmacokinetic and pharmacodynamic evaluation in smaller numbers of patients including comparisons with best alternative therapy.

- Phase 3 comparisons on larger scale with existing therapies allowing a broader appreciation of adverse events and in some therapeutic areas morbidity and mortality studies of effectiveness.
- Phase 4 studies typically post marketing studies on larger scale to identify rarer adverse events.

All trainees should participate in clinical trials and should spend time in an early phase 1 or 2 unit. They should be trained in the Principles of Good Clinical Practice, Research Governance and understand the role of regulators and investigators in clinical trials as defined by the EU clinical Trials directive. Clinical Pharmacologists are uniquely placed to contribute to trial design in academia, the NHS and industry and training in pharmacokinetics and pharmacodynamics and pitfalls of trial design are key competencies.

Progression into Advanced Specialist area:

All CPT trainees will undergo advanced specialist area training after completion of core competences. Although trainees should be encouraged to sit the KBA before entering one of the advanced specialist area modules passing the exam will not be an absolute requirement for progression which will be based on satisfactory confirmation of core competences using WPBAs. Allocation of advanced specialist area training is to be organised at deanery level.

Trainees are not guaranteed progression to modules of their choice.
Access to advanced specialist area training modules will be subject to trainees' aptitudes and deanery training capacity. Deaneries might need to arrange short term OOPT to provide some components of advanced specialist area training curricula that are not available locally e.g.exposure to phase 1 and 2 clinical trials and toxicology. Trainees should specify their preference to their training director and allocation should occur by interview at deanery level using person specifications for each specialty area.

A competitive selection process might be necessary for some over-subscribed modules. This should be a robust process modelled on current arrangements for ST3 allocation with an appropriate person specification, selection criteria, selection process etc. There should be no discrimination other than clinical ability/aptitude. Candidates should specify their first preference to their training director and a second in case that subspecialty advanced training module is unavailable locally and the candidate does not wish to move.

3.2 Good Medical Practice

In preparation for the introduction of licensing and revalidation, the General Medical Council has translated Good Medical Practice into a Framework for Appraisal and Assessment which provides a foundation for the development of the appraisal and assessment system for revalidation. The Framework can be accessed at http://www.gmc-uk.org/Framework_4_3.pdf_25396256.pdf

The Framework for Appraisal and Assessment covers the following domains:
Domain 1 – Knowledge, Skills and Performance
Domain 2 – Safety and Quality
Domain 3 – Communication, Partnership and Teamwork
Domain 4 – Maintaining Trust

The “GMP” column in the syllabus defines which of the 4 domains of the Good Medical Practice Framework for Appraisal and Assessment are addressed by each competency. Most parts of the syllabus relate to “Knowledge, Skills and Performance” but some parts will also relate to other domains.

3.3 Syllabus

In the tables below, the “Assessment Methods” shown are those that are appropriate as **possible** methods that could be used to assess each competency. It is not expected that all competencies will be assessed and that where they are assessed not every method will be used. See section 0 for more details.

“GMP” defines which of the 4 domains of the Good Medical Practice Framework for Appraisal and Assessment are addressed by each competency. See section 3.1 for more details.

Where there is a ***** in the syllabus this competency will be assessed, in the future, by a knowledge-based assessment method (please see section 5.1 for further details)

General Principles of Patient Centred Medical Education

For each area of competence in this section it is anticipated that trainees will recall and build upon the competencies outlined by the Foundation Programme Curriculum and which they should have acquired during the Foundation Programme training period. It is recognised that for many of the competencies outlined there is a continuing maturation process which means that the practitioners will become more adept and skilled as their career progresses. It is intended that doctors recognise that these competencies become increasingly sophisticated throughout their career leading to improved ability to ascertain patient needs, make diagnoses and formulate inclusive treatment plans.

The first two common competencies cover the simple principles of history taking and clinical examination. These are competencies with which the specialist trainee should be well acquainted from earlier training. It is vital that these competencies are practiced to a high level by all specialty trainees who should be able to achieve competencies in all the descriptors early in their specialty training career.

To further aid decisions on progression of competence there are four descriptor levels included in the progressive elements. It is anticipated that ST3 and ST4 specialty trainees will achieve competencies to level 2 as these competencies will also have been covered in CMT, whereas the competencies defined by the level 3 and 4 descriptors will be acquired in the latter part of specialty training.

Syllabus Table of Contents

Common Competencies

1. History Taking

To develop the ability to elicit a relevant focused history from patients with increasingly complex issues and in increasingly challenging circumstances

To record the history accurately and synthesise this with relevant clinical examination, establish a problem list increasingly based on pattern recognition including differential diagnosis (es) and formulate a management plan that takes account of likely clinical evolution

Knowledge	Assessment Methods	GMP
Recognises importance of different elements of history	mini-CEX	1
Recognises that patients do not present history in structured fashion	ACAT, mini-CEX	1, 3
Knows likely causes and risk factors for conditions relevant to mode of presentation	mini-CEX	1
Recognises that the patient's agenda and the history should inform examination, investigation and management	mini-CEX	1
Recognises the importance of social and cultural issues and practices that may have an impact on health	mini-CEX	1
Skills		
Identifies and overcomes possible barriers to effective communication	mini-CEX	1, 3
Manages time and draws consultation to a close appropriately	mini-CEX	1, 3
Communicates effectively with patients from diverse backgrounds and those with special communication needs, such as the need for interpreters	mini-CEX	1,3
Recognises that effective history taking in non-urgent cases may require several discussions with the patient and other parties, over time	ACAT, mini-CEX	1, 3
Supplements history with standardised instruments or questionnaires when relevant	ACAT, mini-CEX	1, 3
Manages alternative and conflicting views from family, carers, friends and members of the multi-professional team	ACAT, mini-CEX	1, 3
Assimilates history from the available information from patient and other sources including members of the multi-professional team	ACAT, mini-CEX	1, 3
Where values and perceptions of health and health promotion conflict, facilitates balanced and mutually respectful decision making	mini-CEX	1,3
Recognises and interprets appropriately the use of non verbal communication from patients and carers	mini-CEX	1, 3
Focuses on relevant aspects of history	ACAT, mini-CEX	1, 3
Maintains focus despite multiple and often conflicting agendas	ACAT, mini-CEX	1, 3
Behaviours		
Shows respect and behaves in accordance with Good Medical Practice	ACAT, mini-CEX	3, 4

Level Descriptor	
1	Obtains, records and presents accurate clinical history relevant to the clinical presentation Elicits most important positive and negative indicators of diagnosis, including an indication of

	patient's views Starts to screen out irrelevant information Is able to format notes in a logical way and writes legibly Records regular follow up notes
2	Demonstrates ability to obtain relevant focussed clinical history in the context of limited time e.g. outpatients, ward referral Demonstrates ability to target history to discriminate between likely clinical diagnoses Records information in most informative fashion Is able to write a summary of the case when the patient has been seen and clerked by a more junior colleagues Notes are always, comprehensive, focused and informative Is able accurately to summarise the details of patient notes Demonstrates an awareness that effective history taking needs to take due account of patient's beliefs and understanding
3	Demonstrates ability to rapidly obtain relevant history in context of severely ill patients Demonstrates ability to obtain history in difficult circumstances e.g. from angry or distressed patient / relatives, or where communication difficulties are significant Demonstrates ability to keep interview focussed on most important clinical issues Able to write timely. comprehensive, informative letters to patients and to GPs
4	Able to quickly focus questioning to establish working diagnosis and relate to relevant examination, investigation and management plan in most acute and common chronic conditions in almost any environment In the context of non-urgent cases, demonstrates an ability to use time effectively as part of the information collection process Writes succinct notes and is able to summarise accurately complex cases

2. Clinical Examination

To develop the ability to perform focused, relevant and accurate clinical examination in patients with increasingly complex issues and in increasingly challenging circumstances

To relate physical findings to history in order to establish diagnosis(es) and formulate a management plan

Knowledge	Assessment Methods	GMP
Understands the need for a targeted and relevant clinical examination	CbD, mini-CEX	1
Understands the basis for clinical signs and the relevance of positive and negative physical signs	ACAT, CbD, mini-CEX	1
Recognises constraints (including those that are cultural and social) to performing physical examination and strategies that may be used to overcome them	CbD, mini-CEX	1
Recognises the limitations of physical examination and the need for adjunctive forms of assessment to confirm diagnosis	ACAT, CbD, mini-CEX	1
Recognises when the offer/ use of a chaperone is appropriate or required	ACAT, CbD, mini-CEX	1
Skills		
Performs an examination relevant to the presentation and risk factors that is valid, targeted and time efficient	ACAT, CbD, mini-CEX	1
Recognises the possibility of deliberate harm (both self harm and	ACAT, CbD, mini-	1, 2

harm by others) in vulnerable patients and report to appropriate agencies	CEX	
Actively elicits important clinical findings	CbD, mini-CEX	1
Performs relevant adjunctive examinations	CbD, mini-CEX	1
Behaviours		
Shows respect and behaves in accordance with Good Medical Practice	CbD, mini-CEX, MSF	1, 4
Ensures examination, whilst clinically appropriate, considers social, cultural and religious boundaries to examination, appropriately communicates and makes alternative arrangements where necessary	CbD, mini-CEX, MSF	1, 4

Level Descriptor	
1	Performs, accurately, describes and records findings from basic physical examination Elicits most important physical signs Uses and interprets findings adjuncts to basic examination appropriately e.g. internal examination, blood pressure measurement, pulse oximetry, peak flow
2	Performs focussed clinical examination directed to presenting complaint e.g. cardiorespiratory, abdominal pain Actively seeks and elicits relevant positive and negative signs Uses and interprets findings adjuncts to basic examination appropriately e.g. electrocardiography, spirometry, ankle brachial pressure index, fundoscopy
3	Performs and interprets relevance advanced focussed clinical examination e.g. assessment of less common joints, neurological examination Elicits subtle findings Uses and interprets findings of advanced adjuncts to basic examination appropriately e.g. sigmoidoscopy, FAST ultrasound, echocardiography
4	Rapidly and accurately performs and interprets focussed clinical examination in challenging circumstances (e.g. acute medical or surgical emergency) or when managing multiple patient agendas

3. Therapeutics and Safe Prescribing

To develop your ability to prescribe, review and monitor appropriate therapeutic interventions relevant to clinical practice including non-medication-based therapeutic and preventative indications

Knowledge	Assessment Methods	GMP
Indications, contraindications, side effects, drug interactions and dosage of commonly used drugs	ACAT, CbD, mini-CEX	1
Recalls range of adverse drug reactions to commonly used drugs, including complementary medicines	ACAT, CbD, mini-CEX	1
Recalls drugs requiring therapeutic drug monitoring and interpret results	ACAT, CbD, mini-CEX	1
Outlines tools to promote patient safety and prescribing, including electronic clinical record systems and other IT systems	ACAT, CbD, mini-CEX	1, 2
Defines the effects of age, body size, organ dysfunction and concurrent illness on drug distribution and metabolism relevant to the trainee's practice	ACAT, CbD, mini-CEX	1, 2
Recognises the roles of regulatory agencies involved in drug use,	ACAT, CbD, mini-	1, 2

monitoring and licensing (e.g. National Institute for Clinical Excellence (NICE), Committee on Safety of Medicines (CSM), and Healthcare Products Regulatory Agency and hospital formulary committees	CEX	
Skills		
Reviews the continuing need for, effect of and adverse effects of long term medications relevant to the trainee's clinical practice	ACAT, CbD, mini-CEX	1, 2
Anticipates and avoids defined drug interactions, including complementary medicines	ACAT, CbD, mini-CEX	1
Advises patients (and carers) about important interactions and adverse drug effects	ACAT, CbD, mini-CEX	1, 3
Prescribes appropriately in pregnancy, and during breast feeding	ACAT, CbD, mini-CEX	1
Makes appropriate dose adjustments following therapeutic drug monitoring, or physiological change (e.g. deteriorating renal function)	ACAT, CbD, mini-CEX	1
Uses IT prescribing tools where available to improve safety	ACAT, CbD, mini-CEX	1, 2
Employs validated methods to improve patient concordance with prescribed medication	ACAT, mini-CEX	1, 3
Provides comprehensible explanations to the patient, and carers when relevant, for the use of medicines and understands the principles of concordance in ensuring that drug regimes are followed	ACAT, CbD, mini-CEX	1, 3
Understanding of the importance of non-medication based therapeutic interventions including the legitimate role of placebos	ACAT, CbD, mini-CEX	1, 3
Where involved in "repeat prescribing," ensures safe systems for monitoring, review and authorisation	ACAT, CbD, mini-CEX	1
Behaviours		
Recognises the benefit of minimising number of medications taken by a patient to a level compatible with best care	ACAT, CbD, mini-CEX	1
Appreciates the role of non-medical prescribers	ACAT, CbD, mini-CEX	1, 3
Remains open to advice from other health professionals on medication issues	ACAT, CbD, mini-CEX	1, 3
Recognises the importance of resources when prescribing, including the role of a Drug Formulary and electronic prescribing systems	ACAT, CbD, mini-CEX	1, 2
Ensures prescribing information is shared promptly and accurately between a patient's health providers, including between primary and secondary care	ACAT, CbD	1, 3
Participates in adverse drug event reporting mechanisms	mini-CEX, CbD	1
Remains up to date with therapeutic alerts, and responds appropriately	ACAT, CbD	1

Level Descriptor	
1	Understands the importance of patient compliance with prescribed medication Outlines the adverse effects of commonly prescribed medicines Uses reference works to ensure accurate, precise prescribing
2	Takes advice on the most appropriate medicine in all but the most common situations Makes sure an accurate record of prescribed medication is transmitted promptly to relevant others involved in an individuals care

	Knows indications for commonly used drugs that require monitoring to avoid adverse effects Modifies patients prescriptions to ensure the most appropriate medicines are used for any specific condition Maximises patient compliance by minimising the number of medicines required that is compatible with optimal patient care Maximises patient compliance by providing full explanations of the need for the medicines prescribed Is aware of the precise indications, dosages, adverse effects and modes of administration of the drugs used commonly within their specialty Uses databases and other reference works to ensure knowledge of new therapies and adverse effects is up to date Knows how to report adverse effects and take part in this mechanism
3/4	Is aware of the regulatory bodies relevant to prescribed medicines both locally and nationally Ensures that resources are used in the most effective way for patient benefit

4. Time Management and Decision Making

To demonstrate increasing ability to prioritise and organise clinical and clerical duties in order to optimise patient care

To demonstrate improving ability to make appropriate clinical and clerical decisions in order to optimise the effectiveness of the clinical team resource

Knowledge	Assessment Methods	GMP
Understands that effective organisation is key to time management	ACAT, CbD	1
Understands that some tasks are more urgent and/or more important than others	ACAT, CbD	1
Understands the need to prioritise work according to urgency and importance	ACAT, CbD	1
Maintains focus on individual patient needs whilst balancing multiple competing pressures	ACAT, CbD	1
Understands that some tasks may have to wait or be delegated to others	ACAT, CbD	1
Understands the roles, competences and capabilities of other professionals and support workers	ACAT, CbD	1
Outlines techniques for improving time management	ACAT, CbD	1
Understands the importance of prompt investigation, diagnosis and treatment in disease and illness management	ACAT, CbD, mini-CEX	1, 2
Skills		
Identifies clinical and clerical tasks requiring attention or predicted to arise	ACAT, CbD, mini-CEX	1, 2
Estimates the time likely to be required for essential tasks and plan accordingly	ACAT, CbD, mini-CEX	1
Groups together tasks when this will be the most effective way of working	ACAT, CbD, mini-CEX	1
Recognises the most urgent / important tasks and ensures that they managed expediently	ACAT, CbD, mini-CEX	1
Regularly reviews and re-prioritises personal and team work load	ACAT, CbD, mini-CEX	1

Organises and manages workload effectively and flexibly	ACAT, CbD, Mini-CEX	1
Makes appropriate use of other professionals and support workers	ACAT, CbD, mini-CEX	1
Behaviours		
Ability to work flexibly and deal with tasks in an effective and efficient fashion	ACAT, CbD, MSF	3
Recognises when you or others are falling behind and take steps to rectify the situation	ACAT, CbD, MSF	3
Communicates changes in priority to others	ACAT, MSF	1
Remains calm in stressful or high pressure situations and adopts a timely, rational approach	ACAT, MSF	1
Appropriately recognises and handles uncertainty within the consultation	ACAT, MSF	1

Level Descriptor	
1	Recognises the need to identify work and compiles a list of tasks Works systematically through tasks and attempts to prioritise Discusses the relative importance of tasks with more senior colleagues Understands importance of completing tasks and checks progress with more senior members of clinical team (doctors or nurses) Understands importance of communicating progress with other team members Able to express when finds workload too much
2	Organises work appropriately well and is able to prioritise When unsure, always consults more senior member of team Able to work with and guide more junior colleagues and to take work from them if they are seeming to be overloaded Discusses work on a daily basis with more senior member of team Completes work in a timely fashion
3	Able to organise own daily work efficiently and effectively and to supervise work of others Is known to be reliable Able to manage to balance apparently competing tasks Recognises the most important tasks and responds appropriately Anticipates when priorities should be changed Starting to lead and direct the clinical team in effective fashion Supports others who are falling behind Requires minimal organisational supervision
4	Automatically prioritises, reprioritises and manages workload in most effective and efficient fashion Communicates and delegates rapidly and clearly Automatically responsible for organising the clinical team Is able to manage to supervise or guide the work of more than one team – e.g. out patient and ward team Calm leadership in stressful situations

5. Decision Making and Clinical Reasoning

To develop the ability to formulate a diagnostic and therapeutic plan for a patient according to the clinical information available

To develop the ability to prioritise the diagnostic and therapeutic plan

To be able to communicate a diagnostic and therapeutic plan appropriately

Knowledge	Assessment Methods	GMP
Defines the steps of diagnostic reasoning:	ACAT, CbD, mini-CEX	1
Interprets history and clinical signs	ACAT, CbD, mini-CEX	1
Conceptualises clinical problem in a medical and social context	ACAT, CbD, mini-CEX	1
Understands the psychological component of disease and illness presentation	ACAT, CbD, mini-CEX	1
Generates hypothesis within context of clinical likelihood	ACAT, CbD, mini-CEX	1
Tests, refines and verifies hypotheses	ACAT, CbD, mini-CEX	1
Develops problem list and action plan	ACAT, CbD, mini-CEX	1
Recognises how to use expert advice, clinical guidelines and algorithms	ACAT, CbD, mini-CEX	1
Recognises and appropriately responds to sources of information accessed by patients	ACAT, CbD, mini-CEX	1
Recognises the need to determine the best value and most effective treatment both for the individual patient and for a patient cohort	ACAT, CbD, mini-CEX	1, 2
Defines the concepts of disease natural history and assessment of risk	ACAT, CbD, mini-CEX	1
Recalls methods and associated problems of quantifying risk e.g. cohort studies	ACAT, CbD	1
Outlines the concepts and drawbacks of quantitative assessment of risk or benefit e.g. numbers needed to treat	ACAT, CbD	1
Describes commonly used statistical methodology	CbD, mini-CEX	1
Knows how relative and absolute risks are derived and the meaning of the terms' predictive value, sensitivity and specificity in relation to diagnostic tests	CbD, mini-CEX	1
Skills		
Interprets clinical features, their reliability and relevance to clinical scenarios including recognition of the breadth of presentation of common disorders	ACAT, CbD, mini-CEX	1
Incorporates an understanding of the psychological and social elements of clinical scenarios into decision making through a robust process of clinical reasoning	ACAT, CbD, mini-CEX	1
Recognises critical illness and responds with due urgency	ACAT, CbD, mini-CEX	1
Generates plausible hypothesis(es) following patient assessment	ACAT, CbD, mini-CEX	1
Constructs a concise and applicable problem list using available information	ACAT, CbD, mini-CEX	1

Constructs an appropriate management plan in conjunction with the patient, carers and other members of the clinical team and communicates this effectively to the patient, parents and carers where relevant	ACAT, CbD, mini-CEX	1, 3, 4
Defines the relevance of an estimated risk of a future event to an individual patient	ACAT, CbD, mini-CEX	1
Uses risk calculators appropriately	ACAT, CbD, mini-CEX	1
Considers the risks and benefits of screening investigations	ACAT, CbD, mini-CEX	1
Applies quantitative data of risks and benefits of therapeutic intervention to an individual patient	ACAT, CbD, mini-CEX	1
Searches and comprehends medical literature to guide reasoning	AA, CbD	1
Behaviours		
Recognises the difficulties in predicting occurrence of future events	ACAT, CbD, mini-CEX	1
Shows willingness to discuss intelligibly with a patient the notion and difficulties of prediction of future events, and benefit/risk balance of therapeutic intervention	ACAT, CbD, mini-CEX	3
Shows willingness to adapt and adjust approaches according to the beliefs and preferences of the patient and/or carers	ACAT, CbD, mini-CEX	3
Is willing to facilitate patient choice	ACAT, CbD, mini-CEX	3
Shows willingness to search for evidence to support clinical decision making	ACAT, CbD, mini-CEX	1, 4
Demonstrates ability to identify one's own biases and inconsistencies in clinical reasoning	ACAT, CbD, mini-CEX	1, 3

Level Descriptor	
1	In a straightforward clinical case: Develops a provisional diagnosis and a differential diagnosis on the basis of the clinical evidence Institutes an appropriate investigative plan Institutes an appropriate therapeutic plan Seeks appropriate support from others Takes account of the patient's wishes and records them accurately and succinctly
2	In a difficult clinical case: Develops a provisional diagnosis and a differential diagnosis on the basis of the clinical evidence Institutes an appropriate investigative plan Institutes an appropriate therapeutic plan Seeks appropriate support from others Takes account of the patient's wishes and records them accurately and succinctly
3/4	In a complex, non-emergency case: Develops a provisional diagnosis and a differential diagnosis on the basis of the clinical evidence Institutes an appropriate investigative plan Institutes an appropriate therapeutic plan

	Seeks appropriate support from others Takes account of the patient's wishes and records them accurately and succinctly

6. The Patient as Central Focus of Care

To develop the ability to prioritise the patient's agenda encompassing their beliefs, concerns expectations and needs

Knowledge	Assessment Methods	GMP
Outlines health needs of particular populations e.g. ethnic minorities and recognises the impact of health beliefs, culture and ethnicity in presentations of physical and psychological conditions	ACAT, CbD	1
Ensure that all decisions and actions are in the best interests of the patient and the public good	CbD	1
Skills		
Gives adequate time for patients and carers to express their beliefs ideas, concerns and expectations	ACAT, mini-CEX	1, 3, 4
Responds to questions honestly and seek advice if unable to answer	ACAT, CbD, mini-CEX	3
Encourages the health care team to respect the philosophy of patient focussed care	ACAT, CbD, mini-CEX, MSF	3
Develops a self-management plan with the patient	ACAT, CbD, mini-CEX	1, 3
Supports patients, parents and carers where relevant to comply with management plans	ACAT, CbD, mini-CEX	3
Respond to people in an ethical, honest and non-judgmental manner	ACAT, CbD, mini-CEX	3
Encourages patients to voice their preferences and personal choices about their care	ACAT, mini-CEX	3
Behaviours		
Supports patient self-management	ACAT, CbD, mini-CEX	3
Recognises the duty of the medical professional to act as patient advocate	ACAT, CbD, mini-CEX, MSF	3, 4

Level Descriptor	
1	Responds honestly and promptly to patient questions but knows when to refer for senior help Recognises the need for disparate approaches to individual patients Is always respectful to patients Introduces self clearly to patients and indicates own place in team Always checks that patient is comfortable and willing to be seen; asks about and explains all elements of examination before undertaking even taking a pulse Always warns patient of any procedure and is aware of the notion of implicit consent Never undertakes consent for a procedure that he/she is not competent to do Always seeks senior help when does not know answer to patient's queries Always asks patient if there is anything else they need to know or ask
2	Recognises more complex situations of communication, accommodates disparate needs and develops strategies to cope

	Is sensitive to patient's own cultural concerns and norms Is able to explain diagnoses and medical procedures in ways that enable patient to understand and make decisions about their own health care
3/4	Deals rapidly with more complex situations, promotes patient's self care and ensures all opportunities are outlined Is able to discuss complex questions and uncertainties with patients and to enable them to make decisions about difficult aspects of their health – e.g. to opt for no treatment or to make end of life decisions

7. Prioritisation of Patient Safety in Clinical Practice

To understand that patient safety depends on the effective and efficient organisation of care, and health care staff working well together

To understand that patient safety depends on safe systems not just individual competency and safe practice

To never compromise patient safety

To understand the risks of treatments and to discuss these honestly and openly with patients so that patients are able to make decisions about risks and treatment options

To ensure that all staff are aware of risks and work together to minimise risk

Knowledge	Assessment Methods	GMP
Outlines the features of a safe working environment	ACAT, CbD, mini-CEX	1
Outlines the hazards of medical equipment in common use	ACAT, CbD	1
Recalls side effects and contraindications of medications prescribed	ACAT, CbD, mini-CEX	1
Recalls principles of risk assessment and management	CbD	1
Recalls the components of safe working practice in the personal, clinical and organisational settings	ACAT, CbD	1
Outlines local procedures and protocols for optimal practice e.g. GI bleed protocol, safe prescribing	ACAT, CbD, mini-CEX	1
Understands the investigation of significant events, serious untoward incidents and near misses	ACAT, CbD, mini-CEX	1
Skills		
Recognises limits of own professional competence and only practises within these	ACAT, CbD, mini-CEX	1
Recognises when a patient is not responding to treatment and reassesses the situation; encourages others to do the same	ACAT, CbD, mini-CEX	1
Ensures the correct and safe use of medical equipment, ensuring faulty equipment is reported appropriately	ACAT, CbD, mini-CEX	1
Improves patients' and colleagues' understanding of the side effects and contraindications of therapeutic intervention	ACAT, CbD, mini-CEX	1, 3
Sensitively counsels a colleague following a significant untoward event, or near incident, to encourage improvement in practice of individual and unit	ACAT, CbD	3
Recognises and responds to the manifestations of a patient's deterioration or lack of improvement (symptoms, signs, observations, and laboratory results) and supports other members of the team to act	ACAT, CbD, mini-CEX, MSF	1

similarly		
Behaviours		
Continues to maintain a high level of safety awareness and consciousness at all times	ACAT, CbD, mini-CEX	2
Encourages feedback from all members of the team on safety issues	ACAT, CbD, mini-CEX, MSF	3
Reports serious untoward incidents and near misses and co-operates with the investigation of the same	ACAT, CbD, mini-CEX, MSF	3
Shows willingness to take action when concerns are raised about performance of members of the healthcare team, and acts appropriately when these concerns are voiced to you by others	ACAT, CbD, mini-CEX, MSF	3
Continues to be aware of one's own limitations, and operates within them competently	ACAT, CbD, mini-CEX	1

Level Descriptor	
1	Respects and follows ward protocols and guidelines Takes direction from the nursing staff as well as medical team on matters related to patient safety Discusses risks of treatments with patients and is able to help patients make decisions about their treatment Does not hurry patients into decisions Always ensures the safe use of equipment Follows guidelines unless there is a clear reason for doing otherwise Acts promptly when a patient's condition deteriorates Always escalates concerns promptly
2	Demonstrates ability to lead team discussion on risk assessment and risk management and to work with the team to make organisational changes that will reduce risk and improve safety Understands the relationship between good team working and patient safety Is able to work with and when appropriate lead the whole clinical team Promotes patient's safety to more junior colleagues Recognises untoward or significant events and always reports these. Leads discussion of causes of clinical incidents with staff and enables them to reflect on the causes. Able to undertake a root cause analysis
3/4	Able to assess the risks across the system of care and to work with colleagues from different department or sectors to ensure safety across the health care system Involves the whole clinical team in discussions about patient safety Shows support for junior colleagues who are involved in untoward events Is fastidious about following safety protocols and ensures that junior colleagues to do the same. Is able to explain the rationale for protocols Demonstrates ability to lead an investigation of a serious untoward incident or near miss and synthesise an analysis of the issues and plan for resolution or adaptation

8. Team Working and Patient Safety

To develop the ability to work well in a variety of different teams and team settings – for example the ward team and the infection control team – and to contribute to discussion on the team's role in patient safety

To develop the leadership skills necessary to lead teams so that they are more effective and better able to deliver safer care

Knowledge	Assessment Methods	GMP
Outlines the components of effective collaboration and team working	ACAT, CbD	1
Describes the roles and responsibilities of members of the healthcare team	ACAT, CbD	1
Outlines factors adversely affecting a doctor's and team performance and methods to rectify these	CbD	1
Skills		
Practises with attention to the important steps of providing good continuity of care	ACAT, CbD, mini-CEX	1, 3, 4
Accurate attributable note-keeping, including appropriate use of electronic clinical record systems	ACAT, CbD, mini-CEX	1, 3
Prepares patient lists with clarification of problems and ongoing care plan	ACAT, CbD, mini-CEX, MSF	1
Detailed hand over between shifts and areas of care	ACAT, CbD, mini-CEX , MSF	1, 3
Demonstrates leadership and management in the following areas:	ACAT, CbD, mini-CEX	1, 2, 3
Education and training of junior colleagues and other members of the healthcare team		
Deteriorating performance of colleagues (e.g. stress, fatigue)		
High quality care		
Effective handover of care between shifts and teams		
Leads and participates in interdisciplinary team meetings	ACAT, CbD, mini-CEX	3
Provides appropriate supervision to less experienced colleagues	ACAT, CbD, MSF	3
Behaviours		
Encourages an open environment to foster and explore concerns and issues about the functioning and safety of team working	ACAT, CbD, MSF	3
Recognises limits of own professional competence and only practises within these	ACAT, CbD, MSF	3
Recognises and respects the request for a second opinion	ACAT, CbD, MSF	3
Recognises the importance of induction for new members of a team	ACAT, CbD, MSF	3
Recognises the importance of prompt and accurate information sharing with Primary Care team following hospital discharge	ACAT, CbD, mini-CEX , MSF	3

Level Descriptor	
1	Works well within the multidisciplinary team and recognises when assistance is required from the relevant team member Demonstrates awareness of own contribution to patient safety within a team and is able to outline the roles of other team members Keeps records up-to-date and legible and relevant to the safe progress of the patient Hands over care in a precise, timely and effective manner
2	Demonstrates ability to discuss problems within a team to senior colleagues. Provides an analysis and plan for change Demonstrates ability to work with the virtual team to develop the ability to work well in a variety of different teams – for example the ward team and the infection control team – and to contribute to

	discussion on the team's role in patient safety Develops the leadership skills necessary to lead teams so that they are more effective and able to deliver better safer care
3	Leads multidisciplinary team meetings but promotes contribution from all team members Recognises need for optimal team dynamics and promotes conflict resolution Demonstrates ability to convey to patients after a handover of care that, although there is a different team, the care is continuous
4	Leads multi-disciplinary team meetings allowing all voices to be heard and considered; fosters an atmosphere of collaboration Recognises situations in which others are better equipped to lead or where delegation is appropriate Demonstrates ability to work with the virtual team Ensures that team functioning is maintained at all times Promotes rapid conflict resolution

9. Principles of Quality and Safety Improvement

To recognise the desirability of monitoring performance, learning from mistakes and adopting no blame culture in order to ensure high standards of care and optimise patient safety

Knowledge	Assessment Methods	GMP
Understands the elements of clinical governance	CbD, MSF	1
Recognises that governance safeguards high standards of care and facilitates the development of improved clinical services	CbD, MSF	1, 2
Defines local and national significant event reporting systems relevant to specialty	ACAT, CbD, mini-CEX	1
Recognises importance of evidence-based practice in relation to clinical effectiveness	CbD	1
Outlines local health and safety protocols (fire, manual handling etc)	CbD	1
Understands risk associated with the trainee's specialty work including biohazards and mechanisms to reduce risk	CbD	1
Outlines the use of patient early warning systems to detect clinical deterioration where relevant to the trainee's clinical specialty	ACAT, CbD, mini-CEX	1
Keeps abreast of national patient safety initiatives including National Patient Safety Agency , NCEPOD reports, NICE guidelines etc	ACAT, CbD, mini-CEX	1
Skills		
Adopts strategies to reduce risk e.g. surgical pause	ACAT, CbD	1, 2
Contributes to quality improvement processes e.g.	AA, CbD	2
Audit of personal and departmental/directorate/practice performance		
Errors / discrepancy meetings		
Critical incident and near miss reporting		
Unit morbidity and mortality meetings		
Local and national databases		
Maintains a portfolio of information and evidence, drawn from own medical practice	CbD	2
Reflects regularly on own standards of medical practice in	AA	1, 2, 3,

accordance with GMC guidance on licensing and revalidation		4
Behaviours		
Shows willingness to participate in safety improvement strategies such as critical incident reporting	CbD, MSF	3
Develops reflection in order to achieve insight into own professional practice	CbD, MSF	3
Demonstrates personal commitment to improve own performance in the light of feedback and assessment	CbD, MSF	3
Engages with an open no blame culture	CbD, MSF	3
Responds positively to outcomes of audit and quality improvement	CbD, MSF	1, 3
Co-operates with changes necessary to improve service quality and safety	CbD, MSF	1, 2

Level Descriptor	
1	Understands that clinical governance is the over-arching framework that unites a range of quality improvement activities. This safeguards high standards of care and facilitates the development of improved clinical services Maintains personal portfolio
2	Able to define key elements of clinical governance i.e. understands the links between organisational function and processes and the care of individuals Engages in audit and understands the link between audit and quality and safety improvement
3	Demonstrates personal and service performance Designs audit protocols and completes audit cycle through an understanding the relevant changes needed to improve care and is able to support the implementation of change
4	Leads in review of patient safety issues Implements change to improve service Understands change management Engages and guides others to embrace high quality clinical governance

10. Infection Control

To develop the ability to manage and control infection in patients, including controlling the risk of cross-infection, appropriately managing infection in individual patients, and working appropriately within the wider community to manage the risk posed by communicable diseases

Knowledge	Assessment Methods	GMP
Understands the principles of infection control as defined by the GMC	ACAT, CbD, mini-CEX	1
Understands the principles of preventing infection in high risk groups (e.g. managing antibiotic use to reduce Clostridium difficile infection,) including understanding the local antibiotic prescribing policy	ACAT, CbD, mini-CEX	1
Understands the role of Notification of diseases within the UK and identifies the principle notifiable diseases for UK and international purposes	ACAT, CbD, mini-CEX	1
Understands the role of the Health Protection Agency and Consultants in Health Protection (previously Consultants in Communicable Disease Control – CCDC)	CbD, ACAT	1
Understands the role of the local authority in relation to infection	ACAT, CbD, mini-	1

control	CEX	
Skills		
Recognises the potential for infection within patients being cared for	ACAT, CbD	1, 2
Counsels patient on matters of infection risk, transmission and control	ACAT, CbD, mini-CEX	2, 3
Actively engages in local infection control procedures	ACAT, CbD	1
Actively engages in local infection control monitoring and reporting processes	ACAT, CbD	1, 2
Prescribes antibiotics according to local antibiotic guidelines and works with microbiological services where this is not possible	ACAT, CbD, mini-CEX	1
Recognises potential for cross-infection in clinical settings	ACAT, CbD, mini-CEX	1, 2
Practices aseptic technique whenever relevant	DOPS	1
Behaviours		
Encourages all staff, patients and relatives to observe infection control principles	ACAT, CbD, MSF	1, 3
Recognises the risk of personal ill-health as a risk to patients and colleagues in addition to its effect on performance	ACAT, CbD, MSF	1, 3

Level Descriptor	
1	Always follows local infection control protocols, including washing hands before and after seeing all patients Is able to explain infection control protocols to students and to patients and their relatives Always defers to the nursing team about matters of ward management Aware of infections of concern, including MRSA and C difficile Aware of the risks of nosocomial infections Understands the links between antibiotic prescription and the development of nosocomial infections Always discusses antibiotic use with a more senior colleague
2	Demonstrates ability to perform simple clinical procedures utilising effective aseptic technique Manages simple common infections in patients using first-line treatments Communicates effectively to the patient the need for treatment and any prevention messages to prevent re-infection or spread Liaises with diagnostic departments in relation to appropriate investigations and tests Knowledge of which diseases should be notified and undertake notification promptly
3	Demonstrates an ability to perform more complex clinical procedures whilst maintaining aseptic technique throughout Identifies potential for infection amongst high risk patients, obtaining appropriate investigations and considering the use of second line therapies Communicates effectively to patients and their relatives with regard to the infection, the need for treatment and any associated risks of therapy Works effectively with diagnostic departments in relation to identifying appropriate investigations and monitoring therapy Works in collaboration with external agencies in relation to reporting common notifiable diseases, and collaborates over any appropriate investigation or management
4	Demonstrates an ability to perform most complex clinical procedures whilst maintaining full aseptic precautions, including those procedures which require multiple staff in order to perform the procedure satisfactorily

	Identifies the possibility of unusual and uncommon infections and the potential for atypical presentation of more frequent infections. Manages these cases effectively with potential use of tertiary treatments being undertaken in collaboration with infection control specialists Works in collaboration with diagnostic departments to investigate and manage the most complex types of infection, including those potentially requiring isolation facilities Works in collaboration with external agencies to manage the potential for infection control within the wider community, including communicating effectively with the general public and liaising with regional and national bodies where appropriate

11. Managing Long Term Conditions and Promoting Patient Self-Care

To work with patients and use their expertise to manage their condition collaboratively and in partnership, with mutual benefit

Knowledge	Assessment Methods	GMP
Describes the natural history of diseases and illnesses that run a chronic course	ACAT, CbD, mini-CEX	1
Defines the role of rehabilitation services and the multi-disciplinary team to facilitate long-term care	ACAT, CbD, mini-CEX	1
Outlines the concept of quality of life and how this can be measured, whilst understanding the limitations of such measures for individual patients	CbD	1
Outlines the concept of patient self-care and the role of the expert patient	CbD, mini-CEX	1
Knows, understands and is able to compare and contrast the medical and social models of disability	CbD	1
Work with an appropriate knowledge of guidance documents on supporting people with long term conditions to self care	CbD	1
Knows about and practises within the key provisions of disability discrimination legislation	CbD	1
Understands the relationship between local health, educational and social service provision including the voluntary sector	CbD	1
Skills		
Develops and agrees on a management plan with the patient (and carers), ensuring comprehension to maximise self-care within care pathways where relevant	ACAT, CbD, mini-CEX	1, 3
Develops and sustains supportive relationships with patients with whom care will be prolonged and potentially life long	CbD, mini-CEX	1, 4
Be familiar with the range of agencies that can provide care and support in and out of hospital and how they can be accessed	CbD, mini-CEX	1
Assess the patient's ability to access various services in the health and social system and offer appropriate assistance	CbD, mini-CEX	1
Provides relevant evidence-based information and, where appropriate, effective patient education, with support of the multi-disciplinary team	ACAT, CbD, mini-CEX	1, 3, 4
Promotes and encourages involvement of patients in appropriate support networks, both to receive support and to give support to others	CbD	1, 3
Advocate and facilitate appropriate self care	CbD	1, 3

Encourages and supports patients in accessing appropriate information	CbD	1, 3
Behaviours		
Shows willingness and support for patient in his/her own advocacy, within the constraints of available resources and taking into account the best interests of the wider community	ACAT, CbD, mini-CEX	3, 4
Recognises the potential impact of long term conditions on the patient, family and friends	ACAT, CbD, mini-CEX	1
Provides relevant tools and devices when possible	ACAT, CbD, mini-CEX	1
Ensures equipment and devices relevant to the patient's care are discussed		
Puts patients in touch with the relevant agency including the voluntary sector from where they can procure the items as appropriate	ACAT, CbD, mini-CEX	1, 3
Provides the relevant tools and devices when possible	ACAT, CbD, mini-CEX	1, 2
Shows willingness to facilitate access to the appropriate training and skills in order to develop the patient's confidence and competence to self care, and adapt appropriately as those members change over time	ACAT, CbD, mini-CEX	1, 3, 4
Shows willingness to maintain a close working relationship with other members of the multi-disciplinary team, primary and community care	ACAT, CbD, mini-CEX, MSF	3
Shows a willingness to engage with expert patients and representatives of charities or networks that focus on diseases and recognises their role in supporting patients and their families/carers		
Recognises and respects the role of family, friends and carers in the management of the patient with a long term condition	ACAT, CbD, mini-CEX	1, 3
Puts patients in touch with the relevant agency, including the voluntary sector from where they can procure the items as appropriate		

Level Descriptor	
1	Describes relevant long term conditions Understands that "quality of life" is an important goal of care and that this may have different meanings for each patient Is aware of the need for promotion of patient self care and independence Helps the patient to develop an active understanding of their condition and how they can be involved in self management
2	Demonstrates awareness of management of relevant long term conditions Is aware of the tools and devices that can be used in long term conditions Is aware of external agencies that can improve patient care and/or provide support Provides the patient with evidence based information and assists the patient in understanding this material; utilises the team to promote excellent patient care
3	Develops management plans in partnership with the patient that are pertinent to the patient's long term condition Can use relevant tools and devices in improving patient care Engages with relevant external agencies to promote improving patient care
4	Provides leadership within the multidisciplinary team that is responsible for management of patients with long term conditions

	Helps the patient networks develop and strengthen

12. Relationships with Patients and Communication within a Consultation

To recognise the need, and develop the abilities, to communicate effectively and sensitively with patients, relatives and carers

Knowledge	Assessment Methods	GMP
How to structure a consultation appropriately	ACAT, CbD, mini-CEX	1
The importance of the patient's background, culture, education and preconceptions (beliefs, ideas, concerns, expectations) to the process	ACAT, CbD, mini-CEX	1
Skills		
Establishes a rapport with the patient and any relevant others (e.g. carers)	ACAT, CbD, mini-CEX,	1, 3
Utilises open and closed questioning appropriately		
Listens actively and questions sensitively to guide the patient and to clarify information	ACAT, mini-CEX	1, 3
Identifies and manages communication barriers, tailoring language to the individual patient and others, and using interpreters when indicated	ACAT, CbD, mini-CEX	1, 3
Delivers information compassionately, being alert to and managing their and your emotional response (anxiety, antipathy etc)	ACAT, CbD, mini-CEX	1, 3, 4
Uses, and refers patients to, appropriate written and other evidence based information sources	ACAT, CbD, mini-CEX	1, 3
Checks the patient's/carer's understanding, ensuring that all their concerns/questions have been covered	ACAT, CbD, mini-CEX	1, 3
Indicates when the consultation is nearing its end and concludes with a summary and appropriate action plan; asks the patient to summarise back to check his/her understanding	ACAT, CbD, mini-CEX	1, 3
Makes accurate contemporaneous records of the discussion	ACAT, CbD, mini-CEX	1, 3
Manages follow-up effectively and safely, utilising a variety if methods (e.g. phone call, email, letter)	ACAT, CbD, mini-CEX	1
Ensures appropriate referral and communications with other healthcare professional resulting from the consultation are made accurately and in a timely manner		
Behaviours		
Approaches the situation with courtesy, empathy, compassion and professionalism, especially by appropriate body language and endeavouring to ensure an appropriate physical environment - act as an equal not a superior	ACAT, CbD, mini-CEX, MSF	1, 3, 4
Ensures appropriate personal language and behaviour	ACAT, CbD, mini-CEX, MSF	1, 3, 4
Ensures that the approach is inclusive and patient-centred, and respects the diversity of values in patients, carers and colleagues	ACAT, CbD, mini-CEX, MSF	1, 3
Is willing to provide patients with a second opinion	ACAT, CbD, mini-	1, 3

	CEX, MSF	
Uses different methods of ethical reasoning to come to a balanced decision where complex and conflicting issues are involved	ACAT, CbD, mini-CEX, MSF	1, 3
Is confident and positive in own values	ACAT, CbD, mini-CEX	1, 3

Level Descriptor	
1	Conducts simple consultation with due empathy and sensitivity and writes accurate records thereof
2	Conducts interviews on complex concepts satisfactorily, confirming that accurate two-way communication has occurred
3	Handles communication difficulties appropriately, involving others as necessary; establishes excellent rapport
4	Shows mastery of patient communication in all situations, anticipating and managing any difficulties which may occur

13. Breaking Bad News

To recognise the fundamental importance of breaking bad news

To develop strategies for skilled delivery of bad news according to the needs of individual patients and their relatives / carers

Knowledge	Assessment Methods	GMP
How bad news is delivered irretrievably affects the subsequent relationship with the patient	ACAT, CbD, mini-CEX, MSF	1
Every patient may desire different levels of explanation and have different responses to bad news	ACAT, CbD, mini-CEX	1, 4
That bad news is confidential but the patient may wish to be accompanied	ACAT, CbD, mini-CEX	1
Once the news is given, patients are unlikely to take anything subsequent in, so an early further appointment should be made	ACAT, CbD, mini-CEX	1
Breaking bad news can be extremely stressful for the doctor or professional involved	ACAT, CbD, mini-CEX	1, 3
The interview at which bad news is given may be an educational opportunity	ACAT, CbD, mini-CEX	1
It is important to: Prepare for breaking bad news Set aside sufficient uninterrupted time Choose an appropriate private environment and ensure that there will be no unplanned disturbances Have sufficient information regarding prognosis and treatment Ensure the individual has appropriate support if desired Structure the interview Be honest, factual, realistic and empathic Be aware of relevant guidance documents	ACAT, CbD, mini-CEX	1, 3
'Bad news' may be expected or unexpected and it cannot always be predicted	ACAT, CbD, mini-CEX	1
Sensitive communication of bad news is an essential part of	ACAT, CbD, mini-	1

professional practice	CEX	
'Bad news' has different connotations depending on the context, individual, social and cultural circumstances	ACAT, CbD, mini-CEX	1
That a post mortem examination may be required and understand what this involves	ACAT, CbD, mini-CEX	1
The local organ retrieval process	ACAT, CbD, mini-CEX	1
Skills		
Demonstrates to others good practice in breaking bad news	CbD, DOPS, MSF	1, 3
Involves patients and carers in decisions regarding their future management	CbD, DOPS, MSF	1, 3, 4
Recognises the impact of the bad news on the patient, carer, supporters, staff members and self	CbD, DOPS, MSF	1, 3, 4
Encourages questioning and ensures comprehension	CbD, DOPS, MSF	1, 3
Responds to verbal and visual cues from patients and relatives	CbD, DOPS, MSF	1, 3
Acts with empathy, honesty and sensitivity, avoiding undue optimism or pessimism	CbD, DOPS, MSF	1, 3
Structures the interview, for example: Sets the scene Establishes understanding Discusses diagnosis(es), implications, treatment, prognosis and subsequent care	CbD, DOPS, MSF	1, 3
Behaviours		
Takes leadership in breaking bad news	CbD, DOPS, MSF	1
Respects the different ways people react to bad news	CbD, DOPS, MSF	1
Ensures appropriate recognition and management of the impact of breaking bad news on the doctor	CbD, DOPS, MSF	1

Level Descriptor	
1	Recognises when bad news must be imparted Recognises the need to develop specific skills Requires guidance to deal with most cases
2	Able to break bad news in planned settings with preparatory discussion with seniors Prepares well for interview Prepares patient to receive bad news Responsive to patient reactions
3	Able to break bad news in unexpected and planned settings Structures the interview clearly Establishes what patient wants to know and ensures understanding Able to conclude interview
4	Skilfully delivers bad news in any circumstance including adverse events Arranges follow up as appropriate Able to teach others how to break bad news

14. Complaints and Medical Error

To recognise the causes of error and to learn from them; to realise the importance of honesty and effective apology and to take a leadership role in the handling of complaints

Knowledge	Assessment Methods	GMP
Basic consultation techniques and skills described for Foundation programme, including:	CbD, DOPS, MSF	1
Describes the local complaints procedure		
Recognises factors likely to lead to complaints (poor communication, dishonesty, clinical errors, adverse clinical outcomes etc)		
Adopts behaviour likely to prevent causes for complaints		
Deals appropriately with concerned or dissatisfied patients or relatives		
Recognises when something has gone wrong and identifies appropriate staff to communicate this to		
Acts with honesty and sensitivity in a non-confrontational manner		
Outlines the principles of an effective apology	CbD, DOPS, MSF	1
Identifies sources of help and support for patients and yourself when a complaint is made about yourself or a colleague	CbD, DOPS, MSF	1
Skills		
Contributes to processes whereby complaints are reviewed and learned from	CbD, DOPS, MSF	1
Explains comprehensibly to the patient the events leading up to a medical error or serious untoward incident, and sources of support for patients and their relatives	CbD, DOPS, MSF	1, 3
Delivers an appropriate apology and explanation (either of error or for process of investigation of potential error and reporting of the same)	CbD, DOPS, MSF	1, 3, 4
Distinguishes between system and individual errors (personal and organisational)	CbD, DOPS, MSF	1
Shows an ability to learn from previous error	CbD, DOPS, MSF	1
Behaviours		
Takes leadership over complaint issues	CbD, DOPS, MSF	1
Recognises the impact of complaints and medical error on staff, patients, and the National Health Service	CbD, DOPS, MSF	1, 3
Contributes to a fair and transparent culture around complaints and errors	CbD, DOPS, MSF	1
Recognises the rights of patients, family members and carers to make a complaint	CbD, DOPS, MSF	1, 4
Recognises the impact of a complaint upon self and seeks appropriate help and support	CbD, DOPS, MSF	1, 4

Level Descriptor	
1	If an error is made, immediately rectifies it and/or reports it Apologises to patient for any failure as soon as it is recognised, however small Understands and describes the local complaints procedure Recognises need for honesty in management of complaints Responds promptly to concerns that have been raised

	Understands the importance of an effective apology Learns from errors
2	Manages conflict without confrontation Recognises and responds to the difference between system failure and individual error
3	Recognises and manages the effects of any complaint within members of the team
4	Provides timely, accurate written responses to complaints when required Provides leadership in the management of complaints

15. Communication with Colleagues and Cooperation

To recognise and accept the responsibilities and role of the doctor in relation to other healthcare professionals

To communicate succinctly and effectively with other professionals as appropriate

Knowledge	Assessment Methods	GMP
Understands the section in 'Good Medical Practice' on Working with Colleagues, in particular:	CbD, MSF	1
The roles played by all members of a multi-disciplinary team	CbD, MSF	1
The features of good team dynamics	CbD, MSF	1
The principles of effective inter-professional collaboration to optimise patient, or population, care	CbD, MSF	1
Understands the principles of confidentiality that provide boundaries to communication	CbD, MSF	1
Acts with appropriate professional and ethical conduct in challenging situations	CbD, MSF	1
Skills		
Communicates accurately, clearly, promptly and comprehensively with relevant colleagues by means appropriate to the urgency of a situation (telephone, email, letter etc), especially where responsibility for a patient's care is transferred	ACAT, CbD, mini-CEX	1, 3
Utilises the expertise of the whole multi-disciplinary team as appropriate, ensuring when delegating responsibility that appropriate supervision is maintained	ACAT, CbD, mini-CEX, MSF	1, 3
Participates in and co-ordinates an effective hospital-at-night or hospital out-of-hours team where relevant; participates effectively in General Practice out-of-hours	ACAT, CbD, mini-CEX, MSF	1
Communicates effectively with administrative bodies and support organisations	CbD, mini-CEX, MSF	1, 3
Employs behavioural management skills with colleagues to prevent and resolve conflict and enhance collaboration	ACAT, CbD, mini-CEX, MSF	1, 3
Behaviours		
Is aware of the importance of and takes part in multi-disciplinary teamwork, including adoption of a leadership role when appropriate but also recognising where others are better equipped to lead	ACAT, CbD, mini-CEX, MSF	3
Fosters a supportive and respectful environment where there is open and transparent communication between all team members	ACAT, CbD, mini-CEX, MSF	1, 3
Ensures appropriate confidentiality is maintained during	ACAT, CbD, mini-	1, 3

communication with any member of the team	CEX, MSF	
Recognises the need for a healthy work/life balance for the whole team, including yourself, but take any leave yourself only after giving appropriate notice to ensure that cover is in place	CbD, mini-CEX, MSF	1
Is prepared to accept additional duties in situations of unavoidable and unpredictable absence of colleagues, ensuring that the best interests of the patient are paramount	CbD, MSF	1

Level Descriptor	
1	Accepts own role in the healthcare team and communicates appropriately with all relevant members thereof Knows who the other members of the team are and ensures effective communication
2	Fully recognises the role of, and communicates appropriately with, all relevant potential team members (individual and corporate) Supports other members of the team; ensures that all are aware of their roles
3	Able to predict and manage conflict between members of the healthcare team
4	Able to take a leadership role as appropriate, fully respecting the skills, responsibilities and viewpoints of all team members

16. Health Promotion and Public Health

To develop the ability to work with individuals and communities to reduce levels of ill health, remove inequalities in healthcare provision and improve the general health of a community

Knowledge	Assessment Methods	GMP
Understands the factors which influence the incidence and prevalence of common conditions	ACAT, CbD, mini-CEX	1
Understands the factors which influence health and illness – psychological, biological, social, cultural and economic especially poverty and unemployment	ACAT, CbD, mini-CEX	1
Understands the influence of lifestyle on health and the factors that influence an individual to change their lifestyle	ACAT, CbD, mini-CEX	1
Understands the influence of culture and beliefs on patient's perceptions of health	ACAT, CbD, mini-CEX	1
Understands the purpose of screening programmes and knows in outline the common programmes available within the UK	CbD, mini-CEX	1
Understands the positive and negative effects of screening on the individual	CbD, mini-CEX	1
Understands the possible positive and negative implications of health promotion activities (e.g. immunisation)	CbD, mini-CEX	1
Understands the relationship between the health of an individual and that of a community and vice versa	CbD, mini-CEX	1
Knows the key local concerns about health of communities such as smoking and obesity and the potential determinants	ACAT, CbD, mini-CEX	1
Understands the role of other agencies and factors, including the impact of globalisation in increasing disease and in protecting and promoting health	ACAT, CbD, mini-CEX	1
Demonstrates knowledge of the determinants of health worldwide and strategies to influence policy relating to health issues, including the	ACAT, CbD, mini-CEX	1

impact of the developed world strategies on the third world		
Outlines the major causes of global morbidity and mortality and effective, affordable interventions to reduce these	ACAT, CbD, mini-CEX	1
Recalls the effect of addictive and self harming behaviours, especially substance misuse and gambling, on personal and community health and poverty	ACAT, CbD, mini-CEX	1
Skills		
Identifies opportunities to prevent ill health and disease in patients	ACAT, CbD, mini-CEX	1, 2
Identifies opportunities to promote changes in lifestyle and other actions which will positively improve health and/or disease outcomes.	ACAT, CbD, mini-CEX	1, 2
Identifies the interaction between mental, physical and social wellbeing in relation to health	ACAT, CbD, mini-CEX	1
Counsels patients appropriately on the benefits and risks of screening and health promotion activities	ACAT, CbD, mini-CEX	1, 3
Identifies patient's ideas, concerns and health beliefs regarding screening and health promotions programmes and is capable of appropriately responding to these	CbD, mini-CEX,	1, 3
Works collaboratively with other agencies to improve the health of communities	CbD, mini-CEX	1
Recognises and is able to balance autonomy with social justice	CbD, mini-CEX	1, 3
Behaviours		
Engages in effective team-working around the improvement of health	ACAT, CbD, MSF	1, 3
Seeks out and utilises opportunities for health promotion and disease prevention	CbD	
Encourages, where appropriate, screening to facilitate early intervention	CbD	1

Level Descriptor	
1	Discusses with patients others factors which could influence their personal health Maintains own health and is aware of own responsibility as a doctor for promoting healthy approach to life
2	Supports an individual in a simple health promotion activity (e.g. smoking cessation)
3	Knowledge of local public health and communicable disease networks Communicates to an individual and their relatives information about the factors which influence their personal health Supports small groups in a simple health promotion activity (e.g. smoking cessation) Provides information to an individual about a screening programme and offers information about its risks and benefits
4	Discusses with small groups the factors that have an influence on their health and describes steps they can undertake to address these Provides information to an individual about a screening programme, offering specific guidance in relation to their personal health and circumstances concerning the factors that would affect the risks and benefits of screening to them as an individual Engages with local or regional initiatives to improve individual health and reduce inequalities in health between communities

17. Principles of Medical Ethics and Confidentiality

To know, understand and apply appropriately the principles, guidance and laws regarding medical ethics and confidentiality

Knowledge	Assessment Methods	GMP
Demonstrates knowledge of the principles of medical ethics	ACAT, CbD, mini-CEX	1
Outlines and follows the guidance given by the GMC on confidentiality	ACAT, CbD, mini-CEX	1
Defines the provisions of the Data Protection Act and Freedom of Information Act	ACAT, CbD, mini-CEX	1
Defines the principles of Information Governance	CbD, mini-CEX	1
Defines the role of the Caldicott Guardian and Information Governance lead within an institution, and outlines the process of attaining Caldicott approval for audit or research	ACAT, CbD, mini-CEX	1, 4
Outlines situations where patient consent, while desirable, is not required for disclosure e.g. serious communicable diseases, public interest	ACAT, CbD, mini-CEX	1, 4
Outlines the procedures for seeking a patient's consent for disclosure of identifiable information	ACAT, CbD, mini-CEX	1
Recalls the obligations for confidentiality following a patient's death	ACAT, CbD, mini-CEX	1, 4
Recognises the problems posed by disclosure in the public interest, without patient's consent	ACAT, CbD, mini-CEX	1, 4
Recognises the factors influencing ethical decision making, including religion, personal and moral beliefs, cultural practices	ACAT, CbD, mini-CEX	1
Do not resuscitate – defines the standards of practice defined by the GMC when deciding to withhold or withdraw life-prolonging treatment	ACAT, CbD, mini-CEX	1
Recognises the role and legal standing of advance directives	ACAT, CbD, mini-CEX	1
Outlines the principles of the Mental Capacity Act	ACAT, CbD, mini-CEX	1
Skills		
Uses and shares information with the highest regard for confidentiality, and encourages such behaviour in other members of the team	ACAT, CbD, mini-CEX, MSF	1, 2, 3
Uses and promotes strategies to ensure confidentiality is maintained e.g. anonymisation	CbD	1
Counsels patients on the need for information distribution within members of the immediate healthcare team	ACAT, CbD, MSF	1, 3
Counsels patients, family, carers and advocates tactfully and effectively when making decisions about resuscitation status, and withholding or withdrawing treatment	ACAT, CbD, mini-CEX	1, 3
Behaviours		
Encourages informed ethical reflection in others	ACAT, CbD, MSF	1
Shows willingness to seek advice of peers, legal bodies, and the GMC in the event of ethical dilemmas over disclosure and	ACAT, CbD, mini-CEX, MSF	1

confidentiality		
Respects patient's requests for information not to be shared, unless this puts the patient, or others, at risk of harm	ACAT, CbD, mini-CEX	1, 4
Shows willingness to share information regarding care with patients, unless they have expressed a wish not to receive such information	ACAT, CbD, mini-CEX	1, 3
Shows willingness to seek the opinion of others when making decisions about resuscitation status, and withholding or withdrawing treatment	ACAT, CbD, mini-CEX, MSF	1, 3

Level Descriptor	
1	Respects patient's confidentiality and their autonomy Understands, in respect of information about patients, the need for highest regard for confidentiality adhering to the Data Protection Act Keeps in mind when writing or storing data the importance of the Freedom of Information Act Knowledge of the guidance given by the GMC in respect of these two acts Understands that the information in patient's notes is theirs Only shares information outside the clinical team and the patient after discussion with senior colleagues Familiarity with the principles of the Mental Capacity Act; if in doubt about a patient's competence and ability to consent even to the most simple of acts (e.g. history taking or examination,) to discuss with a senior colleague Participates in decisions about resuscitation status and withholding or withdrawing treatment
2	Counsels patient on the need for information distribution within members of the immediate healthcare team and seeks patient's consent for disclosure of identifiable information Discusses with patient with whom they would like information about their health to be shared
3	Defines the role of the Caldicott Guardian within an institution, and outlines the process of attaining Caldicott approval for audit or research Understands the importance of considering the need for ethical approval when patient information is to be used for anything other than the individual's care Understands the difference between confidentiality and anonymity Knows the process for gaining ethical approval for research
4	Able to assume a full role in making and implementing decisions about resuscitation status and withholding or withdrawing treatment Able to support the decision making on behalf of those who are not competent to make decisions about their own care

18. Valid Consent

To understand the necessity of obtaining valid consent from the patient and how to obtain it

Knowledge	Assessment Methods	GMP
Outlines the guidance given by the GMC on consent, in particular: Understands that consent is a process that may culminate in, but is not limited to, the completion of a consent form Understands the particular importance of considering the patient's level of understanding and mental state (and also that of the parents, relatives or carers when appropriate) and how this may impair their capacity for informed consent	CbD, DOPS, MSF	1
Understand the social and cultural issues that might affect consent	CbD	1
Skills		

Presents all information to patients (and carers) in a format they understand, checking understanding and allowing time for reflection on the decision to give consent	ACAT, CbD, mini-CEX	1, 3
Provides a balanced view of all care options	ACAT, CbD, mini-CEX	1, 3, 4
Behaviours		
Respects a patient's rights of autonomy, even in situations where their decision might put them at risk of harm	ACAT, CbD, mini-CEX	1
Does not exceed the scope of authority given by a competent patient	ACAT, CbD, mini-CEX	1
Does not withhold information relevant to proposed care or treatment in a competent patient	ACAT, CbD, mini-CEX	1, 3, 4
Does not seek to obtain consent for procedures which they are not competent to perform, in accordance with GMC/regulatory	ACAT, CbD, mini-CEX	1, 3
Shows willingness to seek advance directives	ACAT, CbD, mini-CEX	1, 3
Shows willingness to obtain a second opinion, senior opinion and legal advice in difficult situations of consent or capacity	ACAT, CbD, mini-CEX, MSF	1, 3
Informs a patient and seeks alternative care where personal, moral or religious belief prevents a usual professional action	ACAT, CbD, mini-CEX	1, 3, 4

Level descriptor	
1	Understands that consent should be sought ideally by the person undertaking a procedure and if not by someone competent to undertake the procedure Understands consent as a process Ensures always to check for consent for the most simplest and non-invasive processes – e.g. history taking; understands the concept of "implicit consent" Obtains consent for straightforward treatments that he/she is competent to undertake with appropriate regard for patient's autonomy
2	Able to explain complex treatments meaningfully in layman's terms and thereby to obtain appropriate consent Responds appropriately when a patient declines consent even when the procedure would, on balance of probability, benefit the patient
3	Obtains consent in 'grey-area' situations where the best option for the patient is not clear
4	Obtains consent in all situations, even when there are problems of communication and capacity

19. Legal Framework for Practice

To understand the legal framework within which healthcare is provided in the UK and/or devolved administrations in order to ensure that personal clinical practice is always provided in line with this legal framework

Knowledge	Assessment Methods	GMP
All decisions and actions must be in the best interests of the patient	ACAT, CbD, mini-CEX	1
Understands the legislative framework within which healthcare is provided in the UK and/or devolved administrations, in particular death certification and the role of the Coroner/Procurator Fiscal; child protection legislation; mental health legislation (including powers to	ACAT, CbD, mini-CEX	1, 2

detain a patient and giving emergency treatment against a patient's will under common law); advanced directives and living Wills; withdrawing and withholding treatment; decisions regarding resuscitation of patients; surrogate decision making; organ donation and retention; communicable disease notification; medical risk and driving; Data Protection and Freedom of Information Acts; provision of continuing care and community nursing care by a local authorities		
Understands the differences between health related legislation in the four countries of the UK	CbD	1
Understands sources of medical legal information	ACAT, CbD, mini-CEX	1
Understands disciplinary processes in relation to medical malpractice	ACAT, CbD, mini-CEX, MSF	1
Understands the role of the medical practitioner in relation to personal health and substance misuse, including understanding the procedure to be followed when such abuse is suspected	ACAT, CbD, mini-CEX, MSF	1
Skills		
Ability to cooperate with other agencies with regard to legal requirements, including reporting to the Coroner's/Procurator Officer, the Police or the proper officer of the local authority in relevant circumstances	ACAT, CbD, mini-CEX	1
Ability to prepare appropriate medical legal statements for submission to the Coroner's Court, Procurator Fiscal, Fatal Accident Inquiry and other legal proceedings	CbD, MSF	1
Is prepared to present such material in Court	CbD, mini-CEX	1
Incorporates legal principles into day-to-day practice	ACAT, CbD, mini-CEX	1
Practices and promotes accurate documentation within clinical practice	ACAT, CbD, mini-CEX	1, 3
Behaviour		
Shows willingness to seek advice from the employer, appropriate legal bodies (including defence societies), and the GMC on medico-legal matters	ACAT, CbD, mini-CEX, MSF	1
Promotes informed reflection on legal issues by members of the team; all decisions and actions must be in the best interests of the patient	ACAT, CbD, mini-CEX, MSF	1, 3
Level Descriptor		
1	Knows the legal framework associated with medical qualification and medical practice and the responsibilities of registration with the GMC Knows the limits to professional capabilities, particularly those of pre-registration doctors	
2	Identifies to Senior Team Members cases which should be reported to external bodies and where appropriate, and initiates that report Identifies with Senior Members of the Clinical Team situations where you feel consideration of medical legal matters may be of benefit; is aware of local Trust procedures around substance abuse and clinical malpractice	
3	Works with external strategy bodies around cases that should be reported to them; collaborates with them on complex cases preparing brief statements and reports as required Actively promotes discussion on medico-legal aspects of cases within the clinical environment Participates in decision making with regard to resuscitation decisions and around decisions	

	related to driving, discussing the issues openly but sensitively with patients and relatives
4	Works with external strategy bodies around cases that should be reported to them; collaborates with them on complex cases providing full medical legal statements as required and present material in court where necessary Leads the clinical team in ensuring that medico-legal factors are considered openly and consistently wherever appropriate, in the care and best interests of the patient; ensures that patients and relatives are involved openly in all such decisions

20. Ethical Research

To ensure that research is undertaken using relevant ethical guidelines

Knowledge	Assessment Methods	GMP
Outlines the GMC guidance on good practice in research	ACAT, CbD	1
Understands the principles of research governance	AA, CbD, mini-CEX	1
Outlines the differences between audit and research	CbD	1
Describes how clinical guidelines are produced	CbD	1
Demonstrates a knowledge of research principles	CbD, mini-CEX	1
Outlines the principles of formulating a research question and designing a project	CbD, mini-CEX	1
Comprehends principal qualitative, quantitative, bio-statistical and epidemiological research methods	CbD	1
Outlines sources of research funding	CbD	1
Understands the difference between population-based assessment and unit-based studies and is able to evaluate outcomes for epidemiological work	CbD	1
Skills		
Develops critical appraisal skills and applies these when reading literature	CbD	1
Demonstrates the ability to write a scientific paper	CbD	1
Applies for appropriate ethical research approval	CbD	1
Demonstrates the use of literature databases	CbD	1
Demonstrates good verbal and written presentations skills	CbD, DOPS	1
Behaviour		
Follows guidelines on ethical conduct in research and consent for research	CbD	1
Shows willingness to the promotion in research	CbD	1

Level Descriptor	
1	Defines ethical research and demonstrates awareness of GMC guidelines Differentiates audit and research and understands the different types of research approach e.g. qualitative and quantitative Knows how to use databases
2	Demonstrates good presentation and writing skills Demonstrates critical appraisal skills and demonstrates ability to critically appraise a published paper

3	Demonstrates ability to apply for appropriate ethical research approval Demonstrates knowledge of research organisation and funding sources Demonstrates ability to write a scientific paper
4	Provides leadership in research Promotes research activity Formulates and develops research pathways

21. Evidence and Guidelines

To develop the ability to make the optimal use of current best evidence in making decisions about the care of patients

To develop the ability to construct evidence based guidelines and protocols in relation to medical practise

Knowledge	Assessment Methods	GMP
Understands of the application of statistics in scientific medical practice	CbD	1
Understands the advantages and disadvantages of different study methodologies (randomised control trials, case controlled cohort etc)	CbD	1
Understands the principles of critical appraisal	CbD	1
Understands levels of evidence and quality of evidence	CbD	1
Understands the role and limitations of evidence in the development of clinical guidelines and protocols	CbD	1
Understands the advantages and disadvantages of guidelines and protocols	CbD	1
Understands the processes that result in nationally applicable guidelines (e.g. NICE and SIGN)	CbD	1
Understands the relative strengths and limitations of both quantitative and qualitative studies, and the different types of each	CbD	1
Skills		
Ability to search the medical literature including use of PubMed, Medline, Cochrane reviews and the internet	CbD	1
Appraises retrieved evidence to address a clinical question	CbD	1
Applies conclusions from critical appraisal into clinical care	CbD	1
Identifies the limitations of research	CbD	1
Contributes to the construction, review and updating of local (and national) guidelines of good practice using the principles of evidence based medicine	CbD	1
Behaviours		
Keeps up to date with national reviews and guidelines of practice (e.g. NICE and SIGN)	CbD	1
Aims for best clinical practice (clinical effectiveness) at all times, responding to evidence-based medicine	ACAT, CbD, mini-CEX	1
Recognises the occasional need to practise outside clinical guidelines	ACAT, CbD, mini-CEX	1

Encourages discussion amongst colleagues on evidence-based practice	ACAT, CbD, mini-CEX, MSF	1

Level Descriptor	
1	Participates in departmental or other local journal club Critically reviews an article to identify the level of evidence and submits the same for objective review Understands the importance of evidence based practice; is aware of the different levels of evidence
2	Leads in a departmental or other local journal club Undertakes a literature review in relation to a clinical problem or topic and presents the same Able to explain the evidence base of clinical care to patients and to other members of the clinical team
3	Produces a review article on a clinical topic, having reviewed and appraised the relevant literature
4	Performs a systematic review of the medical literature Contributes to the development of local or national clinical guidelines and protocol

22. Audit

To develop the ability to perform an audit of clinical practice and to apply the findings appropriately and complete the audit cycle

Knowledge	Assessment Methods	GMP
Understands the different methods of obtaining data for audit, including patient feedback questionnaires, hospital sources and national reference data	AA, CbD	1
Understands the role of audit (improving patient care and services, risk management etc)	AA, CbD	1
Understands the steps involved in completing the audit cycle	AA, CbD	1
Understands the working and uses of national and local databases used for audit, such as specialty data collection systems, cancer registries etc;	AA, CbD	1
Understands the working and uses of local and national systems available for reporting and learning from clinical incidents and near misses in the UK	AA, CbD	1
Skills		
Designs, implements and completes audit cycles	AA, CbD	1, 2
Contributes to local and national audit projects as appropriate (e.g. NCEPOD, SASM)	AA, CbD	1, 2
Supports audit by junior medical trainees and within the multi-disciplinary team	AA, CbD	1, 2
Behaviours		
Recognises the need for audit in clinical practice to promote standard setting and quality assurance	AA, CbD	1, 2

Level Descriptor	
1	Attendance at departmental audit meetings

	Contributes data to a local or national audit Suggests ideas for local audits
2	Identifies a problem and develop standards for a local audit Describes the PDSA (plan, do, study, act) audit cycle and takes an audit through the first steps
3	Compares the results of an audit with criteria and standards to reach conclusions Uses the findings of an audit to develop and implement change Organises or leads a departmental audit meeting Understands the links between audit and quality improvement
4	Leads a complete clinical audit cycle, including development of conclusions, the changes needed for improvement, implementation of findings and re-audit to assess the effectiveness of the changes Becomes audit lead for an institution or organisation

23. Teaching and Training

To develop the ability to teach to a variety of different audiences in a variety of different ways
To be able to assess the quality of the teaching
To be able to train a variety of different trainees in a variety of different ways
To be able to plan and deliver a training programme with appropriate assessments

Knowledge	Assessment Methods	GMP
Describes relevant educational theories and principles	CbD	1
Outlines adult learning principles relevant to medical education	CbD	
Demonstrates knowledge of literature relevant to developments and challenges in medical education and other sectors	CbD	1
Outlines the structure of an effective appraisal interview	CbD	1
Defines the roles of the various bodies involved in medical education and other sectors	CbD	1
Identification of learning methods and effective learning objectives and outcomes	CbD	
Describes the difference between learning objectives and outcomes	CbD	
Differentiates between appraisal and assessment and performance review and is aware of the need for both	CbD	1
Differentiates between formative and summative assessment and defines their role in medical education	CbD	
Outlines the structure of the effective appraisal review	CbD	
Outlines the role of workplace-based assessments, the assessment tools in use, their relationship to course learning outcomes, the factors that influence their selection and the need for monitoring evaluation	CbD	1
Outlines the appropriate local course of action to assist a trainee experiencing difficulty in making progress within their training programme	CbD	1
Skills		
Is able to critically evaluate relevant educational literature	CbD, TO	1

Varies teaching format and stimulus, as appropriate to situation and subject	CbD, TO	
Provides effective and appropriate feedback after teaching, and promotes learner reflection	CbD, MSF	1
Conducts developmental conversations as appropriate, for example, appraisal, supervision, mentoring	CbD, MSF	1
Demonstrates effective lecture, presentation, small group and bedside teaching sessions	CbD, MSF	1, 3
Provides appropriate career support, or refers trainee to an alternative effective source of career information	CbD, MSF	1, 3
Participates in strategies aimed at improving patient education e.g. talking at support group meetings	CbD, MSF	1
Is able to lead departmental teaching programmes, including journal clubs	CbD, TO	1
Recognises the trainee in difficulty and takes appropriate action, including where relevant referral to other services	CbD, TO	1
Is able to identify and plan learning activities in the workplace	CbD	
Contributes to educational research or projects e.g. through the development of research ideas of data/information gathering	CbD	
Is able to manage personal time and resources effectively to the benefit of the educational faculty and the need of the learners	CbD	
Behaviour		
In discharging educational duties acts to maintain the dignity and safety of patients at all times	CbD, MSF, TO	1, 4
Recognises the importance of the role of the physician as an educator within the multi-professional healthcare team and uses medical education to enhance the care of patients	CbD, MSF, TO	1
Balances the needs of service delivery with education	CbD, MSF, TO	1
Demonstrates willingness to teach trainees and other health and social workers in a variety of settings to maximise effective communication and practical skills and to improve patient care	CbD, MSF, TO	1
Demonstrates consideration for learners, including their emotional, physical and psychological wellbeing, along with their development needs; acts to ensure equality of opportunity for students, trainees, staff and professional colleagues	CbD, MSF	
Encourages discussions with colleagues in clinical settings to share knowledge and understanding	CbD, MSF, TO	1, 3
Maintains honesty and objectivity during appraisal and assessment	CbD, MSF	1
Shows willingness to participate in workplace-based assessments and demonstrates a clear understanding of their purpose	CbD, MSF	1
Shows willingness to take up formal training as a trainer and responds to feedback obtained after teaching sessions	CbD, MSF	1, 3
Demonstrates a willingness to become involved in the wider medical education activities and fosters an enthusiasm for medical education activity in others	CbD, MSF	1
Recognises the importance of personal development as a role model to guide trainees in aspects of good professional behaviour	CbD, MSF	1

Demonstrates a willingness to advance own educational capability through continuous learning	CbD, MSF	1
Acts to enhance and improve educational provision through evaluation of own practice	CbD, MSF	
Contributes to educational policy and development at local or national levels	CbD, MSF	

Level Descriptor	
1	Able to prepare appropriate materials to support teaching episodes Able to seek and interpret simple feedback following teaching
2	Able to supervise a medical student, nurse or colleague through a procedure Able to perform a workplace based assessment including being able to give effective and appropriate feedback Delivers small group teaching to medical students, nurses or colleagues Able to teach clinical skills effectively
3	Able to devise a variety of different assessments (e.g. multiple choice questions, work place based assessments) Able to appraise a medical student, nurse or colleague Able to act as a mentor to a medical student, nurses or colleague
4	Able to plan, develop and deliver educational activities with clear objectives and outcomes Able to plan, develop and deliver an assessment programme to support educational activities

24. Personal Behaviour

To develop the behaviours that will enable the doctor to become a senior leader able to deal with complex situations and difficult behaviours and attitudes. To work increasingly effectively with many teams and to be known to put the quality and safety of patient care as a prime objective

To develop the attributes of someone who is trusted to be able to manage complex human, legal and ethical problem. To become someone who is trusted and is known to act fairly in all situations

Knowledge	Assessment Methods	GMP
Recalls and builds upon the competences defined in the Foundation Programme Curriculum:	ACAT, CbD, mini-CEX, MSF	1, 2, 3, 4
Deals with inappropriate patient and family behaviour		
Respects the rights of children, elderly, people with physical, mental, learning or communication difficulties		
Adopts an approach to eliminate discrimination against patients from diverse backgrounds including age, gender, race, culture, disability and sexuality		
Places needs of patients above own convenience		
Behaves with honesty and probity		
Acts with honesty and sensitivity in a non-confrontational manner		
Knows the main methods of ethical reasoning: casuistry, ontology and consequential		
Understands the overall approach of value-based practice and how this relates to ethics, law and decision-making		
Defines the concept of modern medical professionalism	CbD	1

Outlines the relevance of professional bodies (Royal Colleges, JRCPTB, GMC, Postgraduate Dean, BMA, specialist societies, medical defence societies)	CbD	1
Skills		
Practises with professionalism including:	ACAT, CbD, mini-CEX, MSF	1, 2, 3, 4
Integrity		
Compassion		
Altruism		
Continuous improvement		
Aspiration to excellence		
Respect of cultural and ethnic diversity		
Regard to the principles of equity		
Works in partnership with patients and members of the wider healthcare team	ACAT, CbD, mini-CEX, MSF	3
Liaises with colleagues to plan and implement work rotas	ACAT, MSF	3
Promotes awareness of the doctor's role in utilising healthcare resources optimally and within defined resource constraints	ACAT, CbD, mini-CEX, MSF	1, 3
Recognises and responds appropriately to unprofessional behaviour in others	ACAT, CbD	1
If appropriate and permitted, is able to provide specialist support to hospital and community-based services	ACAT, CbD, MSF	1
Is able to handle enquiries from the press and other media effectively	CbD, DOPS	1, 3
Behaviour		
Recognises personal beliefs and biases and understands their impact on the delivery of health services	ACAT, CbD, mini-CEX, MSF	1
Where personal beliefs and biases impact upon professional practice, ensures appropriate referral of the patient	ACAT, CbD, mini-CEX, MSF	1
Recognises the need to use all healthcare resources prudently and appropriately	ACAT, CbD, mini-CEX	1, 2
Recognises the need to improve clinical leadership and management skill	ACAT, CbD, mini-CEX	1
Recognises situations when it is appropriate to involve professional and regulatory bodies	ACAT, CbD, mini-CEX	1
Shows willingness to act as a leader, mentor, educator and role model	ACAT, CbD, mini-CEX, MSF	1
Is willing to accept mentoring as a positive contribution to promote personal professional development	ACAT, CbD, mini-CEX	1
Participates in professional regulation and professional development	CbD, mini-CEX, MSF	1
Takes part in 360 degree feedback as part of appraisal	CbD, MSF	1, 2, 4
Recognises the right for equity of access to healthcare	ACAT, CbD, mini-CEX,	1
Recognises need for reliability and accessibility throughout the healthcare team	ACAT, CbD, mini-CEX, MSF	1
Level Descriptor		

1	Works work well within the context of multi-professional teams Listens well to others and takes other viewpoints into consideration Supports patients and relatives at times of difficulty e.g. after receiving difficult news Is polite and calm when called or asked to help
2	Responds to criticism positively and seeks to understand its origins and works to improve Praises staff when they have done well and where there are failings in delivery of care provides constructive feedback Wherever possible, involves patients in decision making
3	Recognises when other staff are under stress and not performing as expected and provides appropriate support for them. Takes action necessary to ensure that patient safety is not compromised
4	Helps patients who show anger or aggression towards staff or with regards to their care or situation, and works with them to find an approach to manage their problem Is able to engender trust so that staff feel confident about sharing difficult problems and feel able to point out deficiencies in care at an early stage

25. Management and NHS Structure

To understand the structure of the NHS and the management of local healthcare systems in order to be able to participate fully in managing healthcare provision

Knowledge	Assessment Methods	GMP
Understands the guidance given on management and doctors by the GMC	CbD	1
Understands the local structure of NHS systems in the locality, recognising the potential differences between the four countries of the UK	ACAT, CbD	1
Understand, the structure and function of healthcare systems as they apply to your specialty	ACAT, CbD	1
Understands the consistent debates and changes that occur in the NHS including the political, social, technical, economic, organisational and professional aspects that can impact on provision of service	CbD	1
Understands the importance of local demographic, socio-economic and health data and the use to improve system performance	CbD	1
Understands the principles of: Clinical coding European Working Time Regulations including rest provisions National Service Frameworks Health regulatory agencies (e.g., NICE, Scottish Government) NHS Structure and relationships NHS finance and budgeting Consultant contract and the contracting process Resource allocation The role of the Independent sector as providers of healthcare	ACAT, CbD, mini-CEX	1

Patient and public involvement processes and role		
Understands the principles of recruitment and appointment procedures	CbD	1
Skills		
Participates in managerial meetings	ACAT, CbD	1
Takes an active role in promoting the best use of healthcare resources	ACAT, CbD, mini-CEX	1
Works with stakeholders to create and sustain a patient-centred service	ACAT, CbD, mini-CEX	1
Employs new technologies appropriately, including information technology	ACAT, CbD, mini-CEX	1
Conducts an assessment of the community needs for specific health improvement measures	CbD, mini-CEX	1
Behaviour		
Recognises the importance of equitable allocation of healthcare resources and of commissioning	CbD	1, 2
Recognises the role of doctors as active participants in healthcare systems	ACAT, CbD, mini-CEX	1, 2
Responds appropriately to health service objectives and targets and take part in the development of services	ACAT, CbD, mini-CEX	1, 2
Recognises the role of patients and carers as active participants in healthcare systems and service planning	ACAT, CbD, mini-CEX	1, 2, 3
Shows willingness to improve managerial skills (e.g. management courses) and engage in management of the service	CbD, MSF	1

Level Descriptor	
1	Works as a valued member of the multi-professional team. Listens well to others and takes other viewpoints into consideration Supports patients and relatives at times of difficulty e.g after receiving difficult news Is polite and calm when called or asked to help Acknowledges the skills of all members of the team
2	Can describe in outline the roles of primary care, including general practice, public health, community, mental health, secondary and tertiary care services within healthcare Can describe the roles of members of the clinical team and the relationships between those roles Participates fully in clinical coding arrangements and other relevant local activities.
3	Can describe the relationship between PCTs/Health Boards, General Practice and Trusts including relationships with local authorities and social services Participates in team and clinical directorate meetings including discussions around service development Discusses the most recent guidance from the relevant health regulatory agencies in relation to the specialty
4	Describes the local structure for health services and how they relate to regional or devolved administration structures; is able to discuss funding allocation processes from central government in outline and how that might impact on the local health organisation Participates fully in clinical directorate meetings and other appropriate local management structures in planning and delivering healthcare within the specialty Participates as appropriate in staff recruitment processes in order to deliver an effective clinical team

	Within the Directorate, collaborates with other stake holders to ensure that their needs and views are considered in managing services

Medical Leadership and Management

The Medical Leadership Competency Framework, developed by the Academy of Medical Royal Colleges and the NHS Institute for Innovation and Improvement, has informed the inclusion of leadership competencies in this curriculum. The Framework identified possible assessment methods, but in reviewing these we identified a need for more specific methods. JRCPTB and the RCP Education Department has established a working group to develop and evaluate leadership assessment methods.

26. Medical Leadership and Management

To demonstrate the personal qualities required to plan, deliver and develop CPT services. The trainee will be required to draw upon their own values, strengths and abilities to deliver high standards of care.

Knowledge	Assessment Methods	GMP
Awareness of the trainee's own values and principles and how these may differ from those of other individuals and groups.	MSF, CbD	1,3,4
Describe systems which help the trainee and others to manage time and workload effectively.	CbD, mini-CEX	1,3
Awareness of time taken to see CPT patients compared with colleagues.	mini-CEX, CbD	1,3,4
Understand the need to prioritise work and to delegate to others according to urgency and importance.		1,3
Understand the roles, competences and capabilities of other professionals and support workers.		1,3,4
Outline techniques for improving time management.		1
Outline factors adversely affecting a doctor's and team performance and methods to rectify these.		1,3
Describe processes for allocating weekly out-patient clinic rotas and maintaining flexibility to take account of service needs and unscheduled leave.		3
Describe the local process for agreeing staff leave (annual/professional/sick/carer) to ensure adequate staffing.		1,4
Understand the processes for recording and monitoring sick leave, the return to work interview and when and how to make referrals to occupational health.		1,4
Skills		
Identify own strengths and weaknesses.	MSF	1,3
Develop understanding of personality styles and how different profiles fit into a team.		3
Demonstrate personal commitment to improve own performance in light of feedback and assessment.		1, 3
Regularly review and re-prioritise personal and team work load.		1, 3
Obtain and act upon feedback from variety of sources.	MSF, mini-CEX	3

Work effectively with other professionals and support workers.		1, 3
Lead and participate in interdisciplinary team meetings.		1, 3
Reliability in meeting scheduled and unscheduled responsibilities and commitments with ability to prioritise.	MSF, CbD, mini-CEX	1,2,3,4
Identify clinical and clerical tasks requiring attention or predicted to arise.		1, 3
Estimate the time likely to be required for essential tasks and plan accordingly.		1, 3
Organise and manage workload effectively and flexibly.		1, 3
Can formulate clear messages for the media whilst recognising corporate responsibilities.		3
Behaviours		
Display self awareness: being aware of their own values, principles, assumptions, and by being able to learn from experiences.	MSF, mini-CEX	3
Remain calm in stressful or high pressure situations and adopt a timely, rational approach.		1, 3
Recognise when self or others are falling behind and take steps to rectify the situation.		1, 3
Recognise the importance of induction for new members of a team.		1, 3
Demonstrate self management: organising and managing themselves while taking account of the needs and priorities of others.	CbD	3
Self development: learns through participating in continuing professional development and from experience and feedback.	MSF, mini-CEX	3
Acting with integrity: behaving in an open and ethical manner.		4

Level Descriptor	
1	Awareness of own values and principles and how these may differ from those of other individuals and groups. Able to meet scheduled and unscheduled responsibilities and commitments.
2	Delivers high standard care with supervision. Punctuality and fulfilment of work rota commitments. Only occasionally takes longer to see patients compared with other colleagues. Participation in multidisciplinary and multiagency case conferences. Able to prioritise tasks with assistance
3	Delivers high standard care with minimal supervision. Can successfully chair a multidisciplinary meeting. Supports others who need help. Able to apply guidance in relation to medical ethics and confidentiality. Shows self awareness and acts with integrity.
4	Fully competent. Demonstrates full range of personal qualities required to plan, deliver and develop GUM services. Draws upon own values, strengths and abilities to deliver high standards of care. Calm leadership in stressful situations.

Clinical Pharmacology Core Module

27. Assessing Clinical Pharmacology literature

The trainee will be able to critically evaluate literature relevant to CPT including basic pharmacology, toxicology and phase I, II, III and IV clinical trials and meta-analyses		
Knowledge	**Assessment Methods**	**GMP**
Be able to describe:-		
The different phases of drug development and the information to be gained at each stage.	*	1
The different designs of both observational and interventional drug studies.	PbD *	1
The major sources of error for each design.	PbD	1,2
The principles of controlled experiments, randomization, use of placebo control and blinding.	PbD *	1
Skills		
critical analysis of papers regarding rationale, cogency, experimental design, analytical methodology, method of analysis, potential sources of bias, confounding, conflict of interest, appropriateness of discussion, validity of conclusions.	PbD	1,3
Critical analysis of advertising claims made for medicinal products.	PbD	1,4
Appropriate use of electronic databases (eg Medline, Embase, Toxbase, Cochrane, NeLH).	PbD	1
Behaviours		
Respects ethical principles underlying peer review.	MSF	4
Participates in peer review.	PbD	1,2,4
Evaluates expert reviews (e.g. NICE, SMC and AWMSG).	PbD	1
Communicates effectively in journal clubs, drug and therapeutics and audit committee meetings.	MSF	2,3

28. Use of statistical techniques pertinent to Clinical Pharmacology

The trainee will be able to understand uses and limitations of basic statistical tests as related to analysis of pharmacological data		
Knowledge	**Assessment Methods**	**GMP**
Be able to describe:-		
The sources of biological variation and explain the principles involved in quantifying this.	*	1
Common parametric and non-parametric tests including t-tests, ANOVA, Chi-squared, Mann-Whitney, and linear, Pearson and Spearman rank regression.	PbD, *	1
risks of multiple hypothesis testing and methods to obviate this (e.g. Bonferroni correction)	PbD	1
the difference between absolute and relative risk reduction	PbD	1
Skills		
Interprets P values and confidence intervals (CI) including Confidence intervals of differences.	PbD	1
Uses basic statistics package(s).	*	1
Behaviours		
Possesses a balanced attitude to interpretation of numerical data dependent upon context.	PbD	1
Demonstrates a willingness to consult appropriately.	MSF	1,3
Undertakes work in a patient and meticulous manner.	MSF	1,2

29. Mechanism of drug action

The trainee will be able to use knowledge of mechanisms of drug action to extrapolate likely effect of new drugs, doses and combinations		
Knowledge	**Assessment Methods**	**GMP**
Be able to describe:-		
mechanisms of action and modes of use of common therapeutic drugs.	PbD, *	1
sources of individual variation including genetic, age- and gender-related (including pregnancy and lactation), and other sources of individual variation especially co-existing renal, hepatic and other disease, and drug interaction (both beneficial and adverse).	CbD, *	1
Skills		
ability to predict likely effects both beneficial or adverse of novel drug with known mechanism of action	PbD	1
ability to predict effect of deviation from normal dose or dosing regimen	PbD	1
ability to predict likely effect of ethnicity, gender, co-morbid or physiological state on drug action in an individual	PbD	1
ability to predict effect of combinations of drugs	PbD	1
Behaviours		
relies where possible on peer reviewed evidence	PbD	1
uses extrapolated data with appropriate caution	PbD	1,2
balances potential harms and benefits	PbD	1,2

30. Dosing regimens

The trainee will have a knowledge base of pharmacological principles to use, devise or advise on appropriate dosing regimens to optimise drug effects		
Knowledge	**Assessment Methods**	**GMP**
Be able to describe:-		
underlying determinants of drug kinetics including absorption, distribution and elimination	PbD, *	1
basic pharmacokinetic concepts such as AUC, clearance and half-life	PbD, *	1
different types of relationship between blood concentration and drug effect	PbD	1
Skills		
ability to manipulate numerical values of AUC, clearance half-life using a PK modelling package.	PbD, DOPS	1
constructs and adjusts dose regimens correctly.	mini-CEX, PbD	1
Behaviours		
checks mathematical calculations and asks others to check them	MSF	1,2,3

31. Rational prescribing - individuals

The trainee will be able to prescribe rationally in individual patients		
Knowledge	**Assessment Methods**	**GMP**
Be able to describe:-		
the principles of choosing the correct drug from those available for indication	CbD, *	1,2
The principles of choice of dose, route of administration, duration of treatment.	CbD, *	1
the methods of measuring drug response	CbD, *	1
when measurement of drug concentrations is applicable and how results are to be interpreted	CbD, *	1
Skills		
identifies desired outcome of treatment	CbD, mini-CEX	1
negotiates an acceptable regimen with the patient where appropriate	CbD, mini-CEX	1,4
gives patients appropriate education necessary for safe drug use	mini-CEX	2,3,4
appropriately interprets drug concentration measurements	CbD	1,2
Behaviours		
Recognises the importance of individualisation of therapy.	CbD	1,4
Recognises the importance of taking responsibility for repeated observation and ongoing patient follow-up on the wards.	MSF	1,2
Respects patient/ subject autonomy.	mini-CEX, MSF	1,3,4

32. Rational prescribing population

The trainee will be able to collaborate in devising policies for rational, safe, cost-effective prescribing		
Knowledge	**Assessment Methods**	**GMP**
Be able to describe:-		
methods of determining clinical efficacy from broad/ conflicting literature	PbD	1
factors which determine difference between efficacy and clinical effectiveness	PbD, *	1
the basic principles of pharmacoeconomics	PbD, *	1
the factors which are likely to make a drug high risk in routine use	PbD, *	1,2
Skills		
performs structured literature search to answer specific efficacy question	PbD	1
Develops prescribing policies, formularies and guidelines.	MSF	1,3
Makes effective submissions to formulary committees for new drugs.	PbD, MSF	1,3
Audits drug utilisation.	PbD	2
Behaviours		
Respects the varied expertise of drug and therapeutics committee members with diverse skills and backgrounds.	MSF	3
participates in decision making/ consensus building in the context of a M&T committee	MSF	3

33. Drug regulation

The trainee will understand and work within the current drug regulatory framework.		
Knowledge	**Assessment Methods**	**GMP**
Be able to describe:-		
the roles of National and European bodies including the medicines and Healthcare Products Regulatory agency (MHRA) and the European medicines evaluation agency (EMEA)	*	1
the roles of the National Institute for Health and Clinical Excellence (NICE), the Scottish Medicines Consortium (SMC) and the All Wales Medicines Strategy Group (AWMSG) in ensuring rational and cost effective use of medicines.	*	1
The rules surrounding non-medical prescribing, including patient group directives (PGDs), supplementary and independent prescribing.	PbD, *	1
the use of over-the counter, complementary and alternative medicine use, and unlicensed and off-label use of drugs in the UK	PbD, *	1
Skills		
applies this knowledge in individual patient practice and in drafting management guidelines.	mini-CEX, CbD	1,2
ability to provide appropriate additional information to patients when prescribing unlicensed drugs or when advising others in this practice	mini-CEX	1,3
Behaviours		
respects the law relating to medicines in the UK and understands its main exclusions (e.g. the Medicines Act 1968).	CbD, MSF	1,4
as a default, adheres to current UK guidance on prescribing, and when deviates has reasoned justification for so doing	CbD, MSF	2,4

34. Pharmacoepidemiology

The trainee will be able to describe and influence what determines the pattern of use of medicines in populations.

Knowledge	Assessment Methods	GMP
Be able to describe:-		
factors that affect drug utilisation including effects of: social class, ethnicity, nationality (especially within Europe), economic status, co-morbidity, age and gender (including pregnancy and lactation).	PbD, *	1
factors affecting public perception of drugs and their use in treating and preventing disease, including effects of media on medicines utilisation.	PbD, *	1
the role of the pharmaceutical industry in the public perception of drug use.	*	1
the factors which are important in determining adherence in an individual patient	PbD, *	1,3
Skills		
Applies this knowledge in individual patient practice and in drafting management guidelines.	mini-CEX, PbD	1,3
Handles potential conflicts of interest appropriately.	PbD, MSF	4
Behaviours		
Respects ethnic diversity.	mini-CEX, CbD	3,4
Respects individual autonomy.	mini-CEX, MSF	4
Contributes to public education about drugs and their utilisation.	PbD	3

35. Adverse drug reactions

The trainee will be able to anticipate (and hence minimise), detect, manage, report and analyse adverse drug reactions (ADR).

Knowledge	Assessment Methods	GMP
Be able to describe:-		
Important (common and/or severe) adverse effects of drugs used in their area of clinical practice.	*	1,2
The mechanisms whereby drugs cause ADRs.	*	1
Common clinical presentations of ADRs.	*	1
Appropriate management of suspected ADRs.	*	1,2
How ADRs are identified and reported.	*	1,3
The classification of ADRs.	*	1
Skills		
Manages common and serious ADRs, including anaphylaxis, appropriately.	CbD, mini-CEX	1
Uses printed and electronic resources to identify unusual or uncertain ADR.	CbD	1
Analyses post-marketing surveillance studies critically.	PbD	1
Reports suspected ADRs appropriately.	CbD	1,4
strategy for managing minor ADRs threatening to interrupt necessary drug treatment	mini-CEX, CbD	1,3
Behaviours		
Alert to the possibility that clinical events are drug-related.	MSF, CbD	1,2
Shows good judgement in when to alert others to possible drug adverse effects	MSF, CbD	2,3
Consults with colleagues over judgements such as risk/benefit of re-challenge.	MSF	3
Maintains a critical but balanced attitude towards promotional literature	MSF	4

36. Drug errors

The trainee will be able to anticipate (and hence minimise), detect, manage, report possible drug prescription or administration errors.

Knowledge	Assessment Methods	GMP
Be able to describe:-		
the human factors which lead to drug use errors	PbD, *	1,2
the system factors which increase the risk of drug errors	PbD, *	1,2
methods which can be used to avoid drug use errors	PbD, *	1,2
Skills		
Observes good practice to avoid errors when personally prescribing	mini-CEX, CbD	1,2
Shows ability to identify possible medication errors.	CbD	1,2
Analyses factors contributing to identified error of drug use.	CbD, PbD	1,2
Contributes to policies for avoidance of future errors in drug use	PbD	1,2,3
Behaviours		
non-judgemental attitude in analysis of drug errors	MSF, PbD	1,2,3
acknowledges primacy of patient safety	MSF	2
participates in audits of unit and personal prescribing	PbD, AA	2,3

37. Drug overdose

The trainee will be able to advise on cases of overdose or poisoning, and to manage such cases as are relevant to their clinical speciality (e.g. children for paediatricians).

Knowledge	Assessment Methods	GMP
Be able to describe:-		
Mechanisms of action of important poisons, including therapeutic drugs commonly taken accidentally or deliberately in overdose.	CbD, *	1,2
Strategies for management of poisoned patients including: protection of staff and other patients, decontamination, resuscitation, monitoring, antidotes including for digoxin, iron, cyanide and cholinesterase inhibitors.	PbD, *	1,2
Skills		
Accesses information effectively, including via the UK National Poisons Information Service.	CbD	1,3
Accesses and keeps up to date with National Guidance on chemical attack.	CbD, PbD	1
Develops diagnostic skills relevant to the epidemiological context of chemical attack.	PbD	1
Maintains up to date qualifications in resuscitation skills.	ACLS	1,2
Possesses skills in managing poisoning with paracetamol, aspirin, benzodiazepines, tricyclics, opioids, and other drugs of abuse.	mini-CEX, CbD	1,2
Behaviours		
Prepares prudently in the face of possible chemical incident, protecting self and other staff and avoiding self contamination.	MSF, CbD	1
Once prepared, accepts necessary residual risk in order to care for poisoned patients.	MSF	1,4
Respects patients with behavioural and psychiatric problems, and consults appropriately with colleagues in provision of psychiatric support.	mini-CEX, MSF	1,3,4

Clinical Pharmacology – Advanced Specialist Area Modules
Hypertension

Hypertension and Cardiovascular Risk and Disease Prevention

The World Health Organisation reported that there are approximately one billion individuals with hypertension worldwide and that raised blood pressure is implicated in 69% of stroke and 49% of ischaemic heart disease events. In 2007 17.1 million people died from cardiovascular disease, and blood pressure alone accounted for 13% (7.1 million) deaths worldwide. Hypertension is estimated to cause about 7 million premature deaths throughout the world, and 4.5% of the disease burden (64 million disability-adjusted life years (DALYs)).

Hypertension is a major risk factor for cerebrovascular disease, coronary heart disease, and cardiac and renal failure. The treatment of hypertension has been associated with a 35–40% reduction in the risk of stroke and at least a 16% reduction in the risk of myocardial infarction. Hypertension often coexists with other cardiovascular risk factors, such as tobacco use, overweight or obesity, dyslipidaemia and dysglycaemia, which increase the cardiovascular risk attributable to any level of blood pressure. Worldwide, these coexisting risk factors are often inadequately addressed in patients with raised blood pressure, with the result that, even if blood pressure is lowered, these people still have high cardiovascular morbidity and mortality rates. The focus of the proposed sub-speciality programme will be upon effective cardiovascular risk reduction as well as good blood pressure control in line with the National Guidance emphasises upon multiple risk factor intervention. The inclusion of cardiovascular disease prevention is intended to complement the training in other cognate specialities of cardiovascular risk management and not to duplicate effort.

The UK Perspective

The British Heart Foundation 2006 statistics indicate that 30% of the British population can be considered hypertensive by the current definition (blood pressure $\geq$ 140/90mmHg). Raised blood pressure is identified as the second most important cause of death after tobacco consumption. Blood pressure control and treatment is assuming much greater importance with the publication of the National Institute of Clinical Excellence and British Hypertension Society guidelines in 2006. These link closely with the Joint British Society's Cardiovascular Risk Assessment recommendations published in 2005. Despite evidence that improved blood pressure control reduces morbidity and mortality, around 78% of men and 66% of women with raised blood pressure are not receiving adequate treatment. Of those treated just under two thirds remain poorly controlled. Hypertension continues to contribute significantly to the 208,000 deaths per year from cardiovascular disease in the United Kingdom. In 2001 £838 million was spent on anti-hypertensive therapies in the National Health Service. All of these statistics set in context the importance of hypertension as a major public health threat within the UK and make a strong case for Hypertension Sub-Specialty training.

Role of the Hypertension Module

The primary purpose of a the hypertension/cardiovascular risk module is to ensure that physicians become skilled in assessment, investigation and management of blood pressure in the context of other cardiovascular disease risk factors. This will become increasingly important in support of the Primary Care Multi-Disciplinary Team, because of the focus on blood pressure as part of the General Practice

Contract. The British Hypertension Society therefore anticipates increased referral for investigation and assistance with management to enable primary care clinicians to reach target. The precise role of the physician who undertakes the hypertension/cardiovascular risk module will depend upon the arena in which they are operating; this may range from stroke medicine through endocrinology to cardiology, general internal medicine, geriatric medicine, clinical pharmacology and therapeutics or nephrology. The module programme will recognise the diversity of trainee backgrounds and will demand core competencies in all areas of diagnosis, investigation and treatment relevant to the care of the hypertensive patient in any setting. It is envisaged that physicians who complete the hypertension/cardiovascular risk module will require skills in service development, multi-disciplinary team-working, teaching, critical appraisal and service evaluation to be effective in a range of arenas in which blood pressure and cardiovascular risk are important as a major public health problem.

Aims of the Hypertension/Cardiovascular Risk Module

The purpose of this module is to equip future physicians with the essential knowledge, aptitude and skill to function as independent hypertension specialists supporting other cognate specialties within the framework of the National Health Service. The training will be as an adjunct to existing specialty training and will be designed to add value to the management of hypertensive patients and cardiovascular risk.

Once training is completed the physician should:

- Be able to apply diagnostic and management knowledge and skills to the prevention of cardiovascular diseases, due to hypertension and other cardiovascular risk factors.
- Be able to formulate a differential diagnosis of potential causes for raised blood pressure and develop an appropriate treatment plan incorporating lifestyle and pharmacological therapy.
- Have the necessary understanding and appreciation of the role of multi-disciplinary working across specialties and primary care to facilitate the most cost-effective and efficient management of hypertensive patients.
- Possess the ability to advise, develop and evaluate the Clinical Effectiveness of hypertension and cardiovascular risk services in partnership with other cognate disciplines.

Duration and Organisation of Training for the Hypertension/Cardiovascular Risk Module

The duration of the hypertension/cardiovascular risk module is an indicative 12 months. Trainees will not require complete secondment from their primary National Training Number Programmes, and will undertake formal hypertension training alongside another aspect of their specialist training programmes.

Trainees undertaking the hypertension/cardiovascular risk module will need to demonstrate acquisition of knowledge, skills and behaviours, which are essential for an active, enthusiastic hypertension specialist, and which are additional to those of the parent specialty. The training programme will therefore comprise of:

- Clinical hypertension and cardiovascular risk assessment
- Investigation and diagnosis,
- Formulation of a management plan to include lifestyle and pharmacological therapy
- Further effective monitoring and evaluation of reversal of cardiovascular risk.

It is expected that the training environment will be based predominantly in dedicated hypertension and cardiovascular risk outpatient clinics in a secondary and tertiary care environment. These will expose the sub-specialist trainee to a wide range of patients with essential and secondary hypertension.

The hypertension trainee should also incorporate in-patient assessment of blood pressure related problems, e.g. pre-operative patients, and patients with hypertension in pregnancy. Experience in a specialist hypertension or cardiovascular risk clinic, prior to applying for sub-specialty status, may receive retrospective accreditation for up to three months of their work, provided the training environment meets the criteria laid out above.

Learning Objectives

- Be able to apply diagnostic and management knowledge and skills to the prevention of cardiovascular diseases, due to hypertension and other cardiovascular risk factors.
- Be able to formulate a differential diagnosis of potential causes for raised blood pressure and develop an appropriate treatment plan incorporating lifestyle modification and pharmacological therapy.

- Have the necessary understanding and appreciation of the role of multi-disciplinary working across specialties and primary care to facilitate the most cost-effective and efficient management of hypertensive patients.

- Possess the ability to advise, develop and evaluate the Clinical Effectiveness of hypertension and cardiovascular risk services in partnership with other cognate disciplines.

Responsibility of the Trainee

Ultimately, the individual trainee is directly responsible for assuring that they meet all the competencies for completion of the Hypertension/Cardiovascular Risk module**.** At the outset the trainee will provide the Educational Supervisor with a clear description of prior training already undertaken in the parent specialty by way of a written training record. The trainee will then be made aware of the requirements and core competencies essential for completion of the hypertension/cardiovascular risk module. In the light of the prior training record, and the core competencies required, a training programme may be tailored to assure that the individual will accrue a suitable range of experience over the 12 months to meet requirements for module completion.

To provide the trainee with the knowledge and skills to contribute to a comprehensive specialist service for the diagnosis of hypertension and the prevention of cardiovascular disease due to hypertension and other cardiovascular risk factors.

To ensure that the trainee has the basic knowledge to be competent in the assessment and management of hypertension and cardiovascular risk.

Knowledge	Assessment Methods	GMP Domains
Define epidemiology of hypertension(e.g. prevalence, risk, systolic, race, geography etc)	CbD	1
Outline the pathophysiology of hypertension (e.g. renal, hormonal, neural, vascular mechanisms, etc)	CbD, mini-CEX	1
Describe the genetics of hypertension (e.g. monogenic, polygenic etc)	CbD, mini-CEX	1
Identify environmental risk factors for hypertension (e.g. drugs, alcohol, sodium, smoking, etc	CbD	1
Outline pre-natal factors	CbD, mini-CEX	1
Describe the risks attributable to hypertension (e.g. cardiovascular, renal, foetal, etc	CbD	1
Skills		
Discuss the epidemiology of hypertension.	mini-CEX, CbD	1,2
Discuss the mechanisms underlying the genesis of hypertension.	mini-CEX, CbD	1,2
Discuss monogenic and polygenetic causes of hypertension	mini-CEX, CbD	1,2
Discuss the importance of environmental, foetal and post natal factors in the development of hypertension	CbD	1,2
Discuss the short-term and long-term effects of hypertension in different patient groups	mini-CEX, CbD	1,2
Behaviours		
Recognise the importance of basic science to an understanding of hypertension and cardiovascular risk	CbD	1
Appreciate the interaction between environmental and genetic factors in the development of hypertension and cardiovascular risk	CbD	1
Exhibit an awareness of the potential patient outcomes with failure to control hypertension and cardiovascular risk	CbD	1

To ensure that the trainees are competent in the practical aspects of diagnosis and assessment of hypertension and cardiovascular risk.

Knowledge	Assessment Methods	GMP Domains
Outline patient assessment (e.g. history, drug history, physical examination, identify cause, target organ damage, risk assessment)	CbD	1,3,4
Explain the diagnostic assessment of hypertension in adults, children and during pregnancy (BP measurement, equipment, technique, ABPM, white coat, masked, BHS guidelines)	CbD	1,2

Describe the use and interpretation of investigations such as renin-aldosterone levels, plasma catecholamines, renal ultrasound, renal angiography, MRA, CT)	CbD	1
Identify the causes of secondary hypertension (e.g. renal and renovascular disease, aldosterone/cortisol excess, phaeochromocytoma etc)	CbD, mini-CEX	1,2
Explain cardiovascular risk calculation (e.g. cardiovascular risk algorithms)	mini-CEX, CbD	1,2
Skills		
Take a relevant patient history, including drug history and perform an appropriate physical examination.	mini-CEX	1,2
Formulate an appropriate investigation plan to identify end organ damage.	mini-CEX, CbD	1,2
Undertake an accurate blood pressure assessment.	DOPS	1,2
Analyse patient blood pressure data accurately and assess cardiovascular risk	mini-CEX	1,2
Formulate a plan of investigation to identify secondary causes of hypertension.	mini-CEX, CbD, DOPS	1,2
Calculate cardiovascular risk accurately	DOPS	1,2
Behaviours		
Exhibit an awareness of the need to tailor investigation to the patient's needs and wishes.	mini-CEX, CbD	1,4
Recognise the importance of investigating a patient appropriately.	CbD, MSF	1,2,4
Recognise the importance of secondary causes of hypertension.	CbD	1,2
Recognise the need to calculate cardiovascular risk for patient management.	mini-CEX	1,2

To provide the trainee with the knowledge and skills to assess and manage patients with hypertension and metabolic abnormalities

Knowledge	Assessment Methods	GMP Domains
Outline the key features of dyslipidaemia (e.g. epidemiology, risk, and risk assessment).	CbD, mini-CEX	1
Describe the management of dyslipidaemia (e.g. Diet, drug, therapy).	CbD, mini-CEX	1
Outline the epidemiology, aetiology pathophysiology of diabetes mellitus.	CbD, mini-CEX	1
Outline the assessment of the diabetic patient (e.g. micro, macro-angiopathy, risk).	CbD	1
Outline the management of the hypertensive diabetic patient (e.g. risk assessment, drug therapy, targets).	mini-CEX	1
Explain the relationship between obesity and hypertension (e.g. epidemiology, pathophysiology).	CbD, mini- CEX	1
Outline the assessment of the obese patient (e.g. BP measurement, cardio-vascular risk assessment, sleep apnoea).	CbD	1

Outline the management of the obese patient	CbD	1
Skills		
Take a relevant history from the dyslipidaemic patient.	mini-CEX	1
Formulate and initiate a management plan for the dyslipidaemic patient.	mini-CEX, CbD	1,2
Take an accurate and relevant history from a diabetic patient.	mini-CEX	1
Accurately assess the diabetic patient for cardiovascular risk.	CbD, mini-CEX	1
Formulate and implement a management plan for the diabetic patient.	CbD	1
Communicate with other professionals involved in the care of the complex patient.	mini-CEX, MSF	1,3
Demonstrate a multi-disciplinary approach to patient management.	mini-CEX, CbD	1,2
Take a relevant history from the obese patient.	mini-CEX, CbD	1
Undertake an appropriate examination in the obese patient.	mini-CEX, CbD	1
Accurately evaluate the obese patient for cardiovascular risk.	CbD	1
Formulate and initiate a management plan for the obese patient.	CbD	1
Behaviours		
Exhibit an awareness of the need to tailor investigation and treatment to the patient's needs and wishes.	CbD, MSF	1,2,3
Recognise the need to involve a multi-disciplinary team in the assessment and treatment of the diabetic patient.	mini-CEX, MSF	1,3
Exhibit an awareness of the multiple family, societal and physical difficulties experienced by obese patients.	CbD	1,3
Recognise the difficulties for obese patients in achieving weight control, and chooses targets which the patient believes are attainable.	mini-CEX	1,2
Participate in multidisciplinary discussions to develop an appropriate management plan.	MSF, CbD	1,3

To provide the trainee with the knowledge and skills to manage hypertensive patients and reduce cardiovascular risk using non-pharmacological therapies.		
Knowledge	Assessment Methods	GMP Domains
Outline the effects of lifestyle modification on hypertension and cardiovascular risk.	CbD	1
Outline a management plan for lifestyle modification.	mini-CEX	1
Describe the roles of multi-disciplinary teams and other professionals.	CbD	1
Skills		
Take a relevant and accurate life-style history.	mini-CEX	1
Formulate and implement a relevant management plan.	mini-CEX	1
Communicate with other professionals involved in the care of the complex patient.	mini-CEX	1,3

Demonstrate a multi-disciplinary approach to patient management.	mini-CEX	1,3
Behaviours		
Recognise the need for individualisation of therapy where necessary.	mini-CEX	1
Recognise the importance of taking responsibility for repeated observation and ongoing patient follow-up.	mini-CEX	1

To provide the trainee with the knowledge and skills to manage hypertensive patients and reduce cardiovascular risk using pharmacological therapies.		
Knowledge	Assessment Methods	GMP Domains
Describe BHS/NICE treatment guideline recommendations.	CbD	1
Describe the mechanism of action, of commonly used pharmacological therapies (e.g. ACEI, diuretics, CCB, ARBs, beta-blockers, alpha-blockers, statins, anti-platelets etc	CbD	1
Outline the pharmacokinetics, metabolism, efficacy and toxicity of commonly used agents.	CbD, mini-CEX	1
Formulate a therapeutic treatment plan.	CbD, mini-CEX	1
Explain the role of combination therapy	CbD, mini-CEX	1
Outline drug therapy in special patient groups including children and pregnant women.	CbD, mini-CEX	1
Define resistant hypertension, the causes, assessment and treatment.	CbD	1
Outline the issues affecting concordance and compliance.	CbD, mini-CEX	1
Evaluate clinical trials appropriately.	CbD	1
Skills		
Apply the BHS/NICE guidelines to a wide variety of patient groups.	mini-CEX	1
Discuss the strengths and weaknesses of different therapeutic regimens in special patient groups.	CbD, mini-CEX	1,3
Demonstrate an understanding of the factors which affect the design of a personalised management plan.	mini-CEX, CbD	1,3
Initiate appropriate pharmacological treatment in a variety of patient groups including children and pregnancy	CbD, mini-CEX	1
Discuss factors associated with resistant hypertension.	mini-CEX, CbD	1
Appropriately assess the patient with resistant hypertension.	mini-CEX, CbD	1,2,3
Discuss the issues affecting patient/doctor concordance/compliance.	mini-CEX, CbD	1,3,4
Behaviours		
Recognise the strengths and weaknesses of guidelines in the treatment of patients with cardiovascular risk.	mini-CEX, CbD	1,2
Recognise the need for individualisation of therapy where necessary.	mini-CEX	1
Recognise the importance of taking responsibility for repeated	mini-CEX, CbD	1,2,3

observation and ongoing patient follow-up.		
Consult with other professionals when formulating a management plan for special patient groups.	MSF, CbD	1,3
Demonstrate a non judgemental approach to the patient with compliance /concordance issues.	mini-CEX, PS	1

To provide the trainee with the knowledge and skills to manage patients with accelerated hypertension (Grade 3; malignant, emergencies and urgencies).		
Knowledge	Assessment Methods	GMP Domains
Define accelerated hypertension or hypertensive urgency.	CbD, mini-CEX	1
Outline the mechanisms/causes of accelerated hypertension or hypertensive urgency.	CbD, mini-CEX	1
Describe the clinical features of accelerated hypertension or hypertensive urgency.	CbD, mini-CEX	1
Outline the treatment of accelerated hypertension or hypertensive urgency in general and in specific circumstances.	CbD	1
Skills		
Take a relevant history and perform an appropriate examination of the patient with accelerated hypertension.	CbD, mini-CEX	1
Select appropriate investigations in the patient with accelerated hypertension.	CbD	1
Select appropriate treatment options for the accelerated hypertensive patient.	CbD	1
Discuss the investigation and treatment of special patient groups including children, pregnant women.	CbD, mini-CEX	1,3
Behaviours		
Recognise the urgency required for the assessment of the patient with accelerated hypertension or hypertensive urgency.	CbD, mini-CEX, MSF	1,3
Recognise the signs indicating need for urgent blood pressure control.	DOPS, CbD	1
Recognise the need to involve others.	MSF	1
Contribute to the multidisciplinary care of special patient groups who require blood pressure control.	MSF	1

Clinical Toxicology

Background and Introduction

The primary purpose of this curriculum is to provide detailed guidance for trainees in obtaining the appropriate level of knowledge, clinical skills, and competence to be awarded a certificate of completion of sub-specialty training in Clinical Toxicology.

This document will also enable postgraduate deans, regional specialty training committees, and educational supervisors to ensure that the required standards of clinical care are being met by having structured training programmes and objective assessment procedures within each region. The curriculum has been produced using the standards specified by the General Medical Council.

Clinical toxicologists are physicians with a detailed knowledge and experience of toxicology relevant to the diagnosis, investigation, treatment and management of an individual or population affected by exposure to a variety of agents including drugs and other chemicals employed occupationally and environmentally.

A consultant with a special interest in clinical toxicologist may be a hospital-based physician with a service commitment to the clinical care of patients exposed intentionally or accidentally to drugs or other chemicals and those patients suffering from the effects of withdrawal from drugs of abuse such as alcohol or opiates.

Clinical toxicologists will also have knowledge of relevant laboratory investigations and be able to advise colleagues on their appropriate use in the management of poisoned patients and be able to interpret the results of these tests accordingly.

A clinical toxicologist may also run an outpatient clinic for the assessment of those exposed to chemicals via their occupation or the environment. They would also be expected to advise the local Trust concerning policies pertinent to the most appropriate management of these patients.

Clinical toxicologists working in a public health domain will also assess and investigate populations affected by chemical incidents and will provide advice on how to prepare and respond to such incidents and recover from them. They may also provide telephone and internet based advice to professionals managing patients with suspected poisoning and contribute to local and national emergency planning, CBRN (Chemical, Biological, Radiation and Nuclear) arrangements and assist in increasing the evidence-base. Where appropriate they will develop and foster good working relationships with professional colleagues in public health bodies particularly responsible for health protection.

Clinical toxicologists are likely to contribute to undergraduate and postgraduate medical training and be involved in the planning and delivery of postgraduate qualifications in toxicology, environmental public health, clinical pharmacology and/or occupational medicine.

Clinical toxicologists will have knowledge of occupational toxicology, particularly with regard to the prevention and recognition of poisoning in the workplace and relevant legislation. Where appropriate they will develop and foster a good working relationship with clinicians in the Health and Safety Executive.

Clinical toxicologists will be equipped to advise locally on the clinical management of victims of chemical terrorism and to this end will usually be involved in disaster planning for their hospital Trust. They may also be involved in advising the Department of Health on planning for the optimal management of deliberate chemical releases.

Many clinical toxicologists have interests in research, and some will have a significant academic research role, the training and experience for which is separate from this sub speciality training

Clinical toxicologist may also be asked to assist with regulatory committee assessment and government departments locally, nationally and internationally, particularly within the European Union.

The main careers for those with sub-specialty training in Clinical Toxicology will be:

NHS Consultant. Such physicians may practice both in Clinical Toxicology and Clinical Pharmacology and Therapeutics in one of the National Poisons Information Service Units or in a Poisons Unit. In the future, however, clinical toxicologists are likely to hold NHS consultant posts in other specialties such as acute medicine, and a significant proportion of acute medical presentations to the NHS involve cases where this expertise is necessary. Expertise in Clinical Toxicology is also likely to be put to use in drug and therapeutics committees, research ethics committees and formulary committees. Such a consultant will spend a significant proportion of their time supervising the care of medical inpatients and running outpatient clinics, and training junior staff in the management of poisoning. They may also provide telephone and internet based advice to professionals managing patients with suspected poisoning.

Academic. Senior lecturer/ reader/ professor in a medical school with an honorary NHS consultant contract. Most academics with expertise in Clinical Toxicology currently also possess a CCT in Clinical Pharmacology and Therapeutics, In the future, however it is likely that expertise in this discipline will be of use to research physicians working in other disciplines such as emergency medicine, critical care and paediatrics.

Public Health Physician with an interest in toxicology, potentially important in disaster planning and environmental risk assessment.

Drug regulation (e.g. Medicines and Healthcare Products Regulatory Agency) and Pharmaceutical industry. These specialities rely on this type of expertise to assess drug toxicities in both clinical trial development and most marketing

To ensure the trainee will have a basic understanding of toxicokinetics; have knowledge of the epidemiology of poisoning; be fully conversant with the principles underlying the management of patients poisoned by drugs and other chemicals and the evidence base for each intervention; will also be familiar with the social and psychiatric assessment and management of the poisoned patient.

Knowledge	Assessment Methods	GMP Domains
Understand the principles of toxicokinetics (absorption by different routes, pathways of elimination, basic kinetic modelling, modifications of elimination, dialysis, chelation)	CbD	1
Define epidemiology of poisoning (e.g. prevalence, risk groups, environmental factors, geographical variation etc)	CbD, mini-CEX	1
Describe approaches to reducing toxicity, by altering absorption, and increasing elimination.	CbD, mini-CEX	1,2
Understand the types of antidote, their mechanisms of action, indications and dosing	CbD	1
Have knowledge of classification of psychiatric disorders and principles of treatment relevant to the poisoned patient.	CbD	1,4
Understand the Mental Health Act and concept of competency	CbD	1,4
Understand approaches to the assessment and management of vulnerable, violent and disturbed individuals	CbD	1,2,4
Skills		
Discuss the principles of toxicokinetics	CbD	1,2
Discuss the epidemiology of poisoning.	CbD	1,2
Be able to appropriately assess the poisoned patient	mini-CEX	1,2
Discuss the approaches to decontamination and altering toxin elimination	CbD	1,2
Describe the mechanism of action of antidotes, indications and dose.	CbD, mini-CEX	1,2
Outline the classification of psychiatric disorders and treatment as relevant to the poisoned patient	CbD, mini-CEX	1,2
Describe the principles of the Mental Health Act and competency	CbD	1,2,4
Understand policies for assessment and management of venerable patients	CbD	1,2,4
Behaviours		
Recognises the importance of basic science to an understanding of poisons management and the need to keep up to date	CbD	1
Appreciates the need to target therapies appropriately and manage vulnerable patients sensitively	CbD	1,4
Exhibit an awareness of the psychological and mental state of the patient and the impact on management	CbD	1,3

To ensure that trainees have a broad knowledge of the mechanisms of toxicity, features and management of poisoning due to drugs and other chemicals and the importance of the route of exposure. The trainee will also be aware of local and National arrangements for preparedness

against deliberate chemical releases.		
Knowledge	Assessment Methods	GMP Domains
Explain the mechanism of toxicity, features and management of drugs commonly taken in overdose (antidepressants, antipsychotic drugs, anticonvulsants, antidiabetic drugs, antihistamines, aspirin [and other salicylates], $ß_2$ agonists, benzodiazepines, calcium channel blockers, chloroquine, digoxin, iron, lithium, NSAIDs, opioids, paracetamol, quinine, sedatives and hypnotics, theophylline, thyroxine and tri-iodothyronine, and warfarin).	CbD, mini-CEX	1,2,3,4
Explain the features, complications and management of substances of abuse including amfetamines and related drugs, cannabis, cocaine, GHB, LSD, opiates and opioids, solvents, volatile nitrites and the commonly used herbal drugs of abuse.	CbD, mini-CEX	1,2,3,4
Describe features of poisoning due to chemicals including acetone, ammonia, alcohols and glycols, carbon monoxide, chlorine, corrosives, cyanide, household products, hydrofluoric acid, hydrogen sulphide, isopropanol, nitrogen oxides, sulphur dioxide, and volatile substances.	CbD, mini-CEX	1,2
Understand features of poisoning due to heavy metals, particularly lead, arsenic, copper, mercury and thallium.	CbD	1,2
Understand poisoning due to pesticides including insecticides, herbicides and rodenticides.	CbD	1,2
Identify the causative agents leading to methaemoglobinaemia.	CbD, mini-CEX	1,2
Describe the likely presentation and management of poisoning due to chemical warfare agents.	CbD, mini-CEX	1,2
Outline the principles of chemical preparedness, the structure of local and national provision, the role of first responders, the role of the HPA Centre for Radiation Chemicals and Environmental Hazards, the location of and access to antidote stocks.	CbD, mini-CEX	1,2,3
Skills		
Take a relevant patient history and perform an appropriate physical examination.	mini-CEX	1,2,3,4
Formulate an appropriate investigation plan to identify common poisons and their potential end organ damage.	mini-CEX, CbD	1,2,3
Manage aggressive, confused, and delirious patients.	CbD	1,2,3,4
Be able to access data on unusual poisonings using tools, including NPIS facilities	CbD	1,2,3,4
Formulate a plan to manage chemical release and know where to access appropriate guidance on complex scenarios	CbD,	1,2,3
Develop diagnostic skills in the diagnosis of unusual poisonings	CbD	1,2
Behaviours		
Exhibits an awareness of the need to tailor investigation to the patient's clinical need and respect confidentiality.	mini-CEX, CbD	1,3,4
Recognises the importance of investigating a patient appropriately.	CbD	1,2,3,4
Prepare to manage unusual cases including chemical release.	CbD	1,2,3,4
Use information systems appropriately to support clinical care	mini-CEX	1,2,3,4

To provide the trainee with a broad understanding of the mechanisms of toxicity, features and management of poisoning due to plant and animal toxins		
Knowledge	Assessment Methods	GMP Domains
Outline the different types of plant and mushroom toxins, their effects and management of poisoning by these agents.	CbD, mini-CEX	1,2,3
Describe common venomous animals and management of poisoning.	CbD, mini-CEX	1,2,3
Understand the potential for some plant and animal toxins to be used as chemical weapons e.g. ricin, abrin, botulinum toxin.and their likely effects	CbD	1,2
Skills		
Discuss the management approaches to common plant and animal toxins	CbD, mini-CEX	1,2
To be able use printed and electronic information resources and other specialist sources of advice.	CbD, mini-CEX	1,2,3
Behaviours		
Exhibits an awareness of the need to consult colleagues or literature when at the limits of knowledge	CbD, MSF	1,2,3,4

To provide the trainee with the knowledge of those aspects of analytical and forensic toxicology relevant to the poisoned patient		
Knowledge	Assessment Methods	GMP Domains
Outline the principles of analytical and forensic toxicology, including the role of bioanalysis, (including sample collection, analysis and interpretation).	CbD, mini-CEX	1
Skills		
Understand the need for, and interpret investigations relevant to poisoned patients.	mini-CEX	1
Discuss the results of investigations with colleagues	CbD, mini-CEX	1,3,4
Behaviours		
Recognises the need for good professional working relationships with colleagues in analytical toxicology	CbD, mini-CEX	1,3,4
Appreciate the operations of a toxicological laboratory and the nature of their work.	CbD	1,2,3

To provide the trainee with a broad knowledge of occupational and environmental toxicology including the concepts of hazard and risk, risk assessment and risk management. The trainee will be familiar with the role of governmental bodies responsible for occupational and environmental health and safety		
Knowledge	Assessment Methods	GMP Domains
Knowledge of important acute and chronic chemical hazards of the	mini-CEX	1,2

workplace, including chemical-induced occupational lung disease, occupational cancer, and occupational skin disease.		
Knowledge of basic concepts of workplace and industrial hygiene including the concepts of hazard and risk, risk assessment and risk management	CbD	1,2,3
Understand how occupational exposures can be prevented, the role of the Health and Safety Executive (HSE) and have knowledge of legislation regarding reporting of work-related poisonings, role of heath & safety inspectors and industrial hygienists	mini-CEX	1,2,3
Knowledge of biomonitoring, exposure assessment and medical surveillance.	mini-CEX	1
Awareness of air and water safety standards and their regulation.	CbD	1
Skills		
Develop diagnostic skills relevant to occupational exposures.	mini-CEX	1
Be able to manage acute and chronic occupational poisonings.	mini-CEX, CbD	1,3,4
Be able to access current information regarding Health and Safety legislation	mini-CEX, CbD	1
Undertake appropriate workplace visits with occupational health colleagues.	mini-CEX, CbD	1,3,4
Participate in relevant local and national occupational medicine meetings.	mini-CEX, CbD	1,3,4
Contribute to education of occupational medicine colleagues with regard to clinical toxicology.	mini-CEX, CbD, MSF	1,3,4
Behaviours		
Communicate effectively with colleagues in occupational health, both in the local Trust and in industry.	mini-CEX, CbD	1,3
Respect Health and Safety legislation pertinent to the local working environment	mini-CEX, CbD	1,4

To provide the trainee with a broad understanding of the methods used to assess organ-specific toxicity experimentally and of the safety of drugs and chemicals to individuals, populations and the environment. This will include knowledge of the basic mechanisms of teratogenesis, mutagenicity and carcinogenicity and the mechanisms by which drugs cause adverse effects and have knowledge of the monitoring and reporting of these adverse effects

Knowledge	Assessment Methods	GMP Domains
Have some knowledge of experimental methods used to assess toxicity experimentally and the safety of drugs and chemicals to humans and be aware of the limitations in extrapolating the results of experimental toxicological studies to humans.	mini-CEX, CbD	1
Skills		
Be familiar with adverse drug reaction reporting and able to complete a spontaneous report (Yellow Card).	DOPS, mini-CEX, CbD	1,2,3,4
Be able to assess and investigate patients with suspected organ-specific toxicity due to drugs or other chemicals.	mini-CEX, CbD	1,2
Behaviours		
Encourage adverse drug reaction reporting by example and consider adverse drug reactions as important causes of morbidity and mortality	MSF, mini-CEX, CbD	1,2,3,4
Ability to recognise the signs indicating need for considering adverse reaction as a cause of disease	mini-CEX, CbD	1

To provide the trainee with the skills to evaluate critically the literature relevant to clinical toxicology, including trials of new treatments. The trainee will be provided with a basic knowledge of statistical methods used in toxicological research and skills to able to comment on the validity of the statistical methods employed, and an understanding of the principles of research ethics. The trainee will also be aware of the various sources of toxicological information available and how to access and utilize these optimally.

Knowledge	Assessment Methods	GMP Domains
Have knowledge of toxicology sufficient to evaluate the methodology and conclusions of published literature.	mini-CEX, CbD	1
Have knowledge of the principles involved in trial design, including the principles of controlled experiments, randomization and blinding.	mini-CEX, CbD	1,2
Have knowledge of the principles underpinning ethics of research on human subjects and understand how to apply the principles of informed consent.	mini-CEX, CbD	1,2,3,4
Demonstrate knowledge of good clinical practice.	CbD	1,2,3,4
Understand the role of the UK National Poisons Information Service and TOXBASE and have knowledge of internet-based toxicological information sources, toxicological books and journals and relevant UK Government publications and be able to demonstrate an up-to-date knowledge of the literature using search engines	DOPS, CbD	1,2,3
Have knowledge of toxicological organizations nationally and internationally	mini-CEX, CbD	1
Skills		
Be able to analyse critically the scientific literature relevant to clinical toxicology regarding the rationale, experimental design, analytical	DOPS	1,2,3

methodology, method of analysis, potential sources of bias, and appropriateness of discussion and validity of conclusions.		
Be aware of how to access TOXBASE, to use it optimally and to contribute to its development, and the complexity of ensuring quality and minimising risk in delivering health advice over the telephone and internet.	CbD	1
Use electronic databases (e.g. TOXBASE, Medline, Embase, Cochrane) optimally	CbD	1
Communicate effectively in journal clubs and other meetings	KBA	1,3
Contribute to writing papers and reporting findings by oral and poster presentations at meetings.	KBA	1,2,3
Behaviours		
Accurate evaluation the toxicological literature critically and appreciation of the importance of evidence-based toxicological advice, and the issues affecting its effective delivery to others.	CbD, MSF	1,3
Participation in peer review and respect ethical principles underlying peer review and confidentiality of information	DOPS, CbD	1,3,4
Maintenance of absolute honesty and respect for the opinion of others.	MSF, CbD	4
Avoidance of circumstances which may be, or be perceived to be, a conflict of interest.	MSF	2,4
Maintenance of meticulous attention to detail.	mini-CEX	1,2,4

Research

Research is integral to the development of the skills required by a fully trained clinical pharmacologist, however trainees may wish to extend their training to gain an in depth knowledge of research and the techniques required in particular areas relevant to clinical pharmacology and therapeutics. The research advanced area module is designed to give the trainee who wishes to acquire research competencies, in addition to those specified in the core specialty curriculum, a 12 month period during which they will gain the competencies required on which to base future development as an independent scientific researcher. An ideal way to gain such competencies is to undertake a research project within an appropriate setting and with appropriate supervision. While the curriculum for this module focuses on first in to man studies, it is envisaged that the trainee will be able to undertake research into any area relevant to clinical pharmacology which will ensure exposure to scientific techniques and the development of the skills required. The Skills and competencies defined in the ARCP should be regarded as generic and applicable/transferable to any appropriate area of research undertaken by the trainee. Trainees may consider using this period of research as the first stage of undertaking a specific research degree. In such cases trainees should consider taking time out of programme to complete a specified project or research degree.

To ensure that research is undertaken using relevant ethical guidelines. To make the optimal use of current best evidence in making decisions about the care of patients

Knowledge	Assessment Methods	GMP
Understands the principles of research governance	AA, CbD, mini-CEX	1
Outlines the differences between audit and research	CbD, SCE	1
Demonstrates a knowledge of research principles	CbD, mini-CEX	1
Outlines the principles of formulating a research question and designing a project	CbD, mini-CEX	1
Comprehends principal qualitative, quantitative, bio-statistical and epidemiological research methods	CbD, SCE	1
Outlines sources of research funding	CbD	1
Understands the difference between population-based assessment and unit-based studies and is able to evaluate outcomes for epidemiological work	CbD	1
Know the advantages and disadvantages of different study methodologies	SCE, CbD	1
Understand the principles of critical appraisal	CbD	1
Understand the processes that result in nationally applicable guidelines	CbD	1
Understands the different methods of obtaining data for audit, including patient feedback questionnaires, hospital sources and national reference data	AA, CbD	1
Understands the role of audit (improving patient care and services, risk management etc)	AA, CbD	1
Understands the steps involved in completing the audit cycle	AA, CbD	1
Understands the working and uses of national and local databases	AA, CbD	1

used for audit, such as specialty data collection systems etc;		
Understands the working and uses of local and national systems available for reporting and learning from clinical incidents and near misses in the UK	AA, CbD	1
Describe methods of analysing drug concentration-time data including non-linear least squares fits and concept of population analyses	PbD, *	1
Describe methods of analysis interval outcome data including repeated measures ANOVA	PbD, *	1
Describe methods of analysing survival data including Cox proportional hazards	PbD, *	1
Skills		
Uses critical appraisal skills and applies these when reading literature	CbD	1
Applies for appropriate ethical research approval	CbD	1
Demonstrates the use of literature databases	CbD	1
Understand the difference between population-based assessment and unit-based studies and be able to evaluate outcomes	CbD	1
Ability to search the medical literature including use of PubMed, Medline, Cochrane reviews and the internet	CbD	1
Appraises retrieved evidence to address a clinical question and apply conclusions	CbD	1
Contributes to the construction, review and updating of local (and national) guidelines using the principles of evidence based medicine	CbD	1
Designs, implements and completes audit cycles	AA, CbD	1, 2
Contributes to local and national audit projects as appropriate	AA, CbD	1, 2
Supports audit by junior medical trainees and within the multi-disciplinary team	AA, CbD	1, 2
Consults effectively with statisticians during the planning stage of complex experimental studies.	PbD	3
Determines the power of a study to evaluate differences between therapies, and estimate the sample size needed	PbD	1
Behaviours		
Follows guidelines on ethical conduct in research and consent for research	CbD	1
Shows willingness to the promotion in research	CbD	1
Recognises the need for audit in clinical practice to promote standard setting and quality assurance	AA, CbD	1, 2
Appreciates the limitations of statistical analysis, trial design and the need for trial validation	PbD	1,2

The trainee will be able to undertake and interpret early phase studies of drug action in humans.		
Knowledge	Assessment Methods	GMP
Be able to describe:-		
theories of drug-receptor interactions and the related concepts of	PbD, *	1

agonists, antagonists, structure activity relationships, dose response relationships		
structures and principles of early phase studies	PbD, *	1
appropriate use of controls	PbD, *	1
appropriate safety measures	PbD, *	1
choice of surrogate endpoints	PbD, *	1
methods for drug level measurement	PbD, *	1
Skills		
Writes trial protocols.	PbD	1,3
Writes and submits REC submissions.	PbD	1,3
Able to recruit subjects for studies and obtain valid informed consent.	mini-CEX	1,3,4
Measures end points reliably.	DOPS, AA	1,2
Records data accurately.	PbD, AA	1,2
Analyses data including risk-benefit analysis and dose determination for definitive phase-3 studies.	PbD	1,2
Communicates with co-workers and drafts a final manuscript for submission.	PbD	1,3
Behaviours		
Consults appropriately.	MSF	3
Recognises the primacy of subject safety.	MSF, PbD	2,4
Appreciate the need for meticulous record keeping and research governance.	PbD	2,4
Appreciates the importance of communicating research data orally and in written form and is diligent in writing and rehearsal.	PbD	3

Clinical Trials Research

The trainee will be able to design clinical trials, including phase 3 studies, and contribute to their execution and dissemination.		
Knowledge	Assessment Methods	GMP
Be able to describe:-		
Principles of good clinical practice (GCP), as set out in the ICH (International Conference on Harmonisation) and the European Clinical Trials Directive.	PbD, *	1,4
Different trial designs, eg parallel versus cross-over	PbD, *	1
Principles of controlled experiments, randomization, use of placebo and blinding	PbD, *	1
The responsibilities of investigators and their sponsors	PbD, *	1,2,4
Detection and reporting of suspected unexpected serious adverse drug reactions (SUSARs)	PbD, *	1,2
The role of the Data Safety Monitoring Board	PbD, *	
Types of early stopping rules used in clinical trials	PbD, *	
Skills		
Selects a trial design appropriate to the research question.	PbD	1
Writes an REC application.	PbD	1,3
Justifies a research proposal in terms that are understood by the lay members of an REC.	PbD	1,3
Able to recruit research subjects.	PbD	3,4
Screens potential subjects for inclusion/exclusion criteria.	mini-CEX	1
Obtains valid informed consent.	mini-CEX	3,4
Arranges visits of research subject to clinical laboratory or research clinic	PbD	1
Perform and/ or supervises clinical measurements.	DOPs	1,2
Keeps records to the standard required by GCP.	PbD, AA	1,2
Ability to assess causation of adverse events	PbD	1
Ability to understand and interpret in-trial adverse event data	PbD	1,2
Ability to weigh adverse event data against risk of terminating trial prematurely	PbD	1,2,4
Contributes to writing papers and reporting findings by oral and poster presentations at meetings.	PbD	3
Behaviours		
Maintains absolute integrity	MSF	2,4
Does not embark on a human investigation where an external sponsor has ultimate control over the right to publish or otherwise disseminate resulting information.	PbD	4
Maintains meticulous attention to detail.	MSF	2

Exhibits balanced approach to interpretation of safety data	PbD, MSF	2
Recognises the primacy of safety of the subject.	PbD	2
Maintains a professional relationship with study sponsors and their employees (CROs etc).	MSF	3,4

4 Learning and Teaching

4.1 The training programme

The organisation and delivery of postgraduate training is the statutory responsibility of the General Medical Council (GMC) which devolves responsibility for the local organisation and delivery of training to the deaneries. Each deanery oversees a "School of Medicine" which is comprised of the regional Specialty Training Committees (STCs) in each medical specialty. Responsibility for the organisation and delivery of specialty training in CPT in each deanery is, therefore, the remit of the regional CPT STC. Each STC has a Training Programme Director who coordinates the training programme in the specialty.

Dual specialty programmes will be a minimum of 60 months depending upon the specialty with which CPT is combined and the progression through the programme will be determined by using the decision grid (see section 5.5 ARCP Decision Aid). The final award of the CCT will be dependent on achieving competences as evidenced by successful completion as evidenced by the type and number of assessments set out in the curriculum.

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 entire curriculum is covered and also that unnecessary duplication and educationally unrewarding experiences are avoided. However, the sequence of training should ideally be flexible enough to allow the trainee to develop a special interest.

Acting up as a consultant (AUC)

"Acting up" provides doctors in training coming towards the end of their training with the experience of navigating the transition from junior doctor to consultant while maintaining an element of supervision.

Although acting up often fulfills a genuine service requirement, it is not the same as being a locum consultant. Doctors in training acting up will be carrying out a consultant's tasks but with the understanding that they will have a named supervisor at the hosting hospital and that the designated supervisor will always be available for support, including out of hours or during on-call work. Doctors in training will need to follow the rules laid down by the Deanery / LETB within which they work and also follow the JRCPTB rules which can be found at www.jrcptb.org.uk/trainingandcert/Pages/Out-of-Programme.

4.2 Teaching and learning methods

The curriculum will be delivered through a variety of learning experiences. Trainees will learn from practice, clinical skills appropriate to their level of training and to their attachment within the department.

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. There must be robust arrangements for quality assurance in place to ensure consistent local implementation of the curriculum. Most competencies are acquired over a sustained period of experience.

The curriculum will be delivered in a University and/or teaching hospital NHS-based department of clinical pharmacology, supervised by one or more trainers who are at least consultants or senior lecturers in seniority, and supported by an independent educational supervisor trained in CPT and of similar seniority. There will be annual appraisals and a record of in-training assessment.

The majority of learning will comprise of a balance of work based experiential learning. Trainees will learn from practice (work-based training) on ward rounds, in outpatients, in the laboratory and at the computer. They will undertake activities both independently and directly supervised and observed by senior staff; trainees will have opportunities for concentrated practice in skills and practical procedures during their hospital placements; they will learn from peers and be supervised when not yet fully competent in skills by senior staff. This will be regularly backed up by feedback from senior staff including consultants and monitored by clinical, educational and research supervisors. Experience will be graded to the level of training and proportionate to the level of expertise. Supervision will always be given where the trainee has not yet acquired a sufficient level of competence.

Trainees will learn about drug action in humans in the setting of a clinical laboratory; about pharmacokinetic principles in seminar rooms and from reading; about cost-effective use of drugs in committee and classroom; to evaluate literature in library and seminar room; about statistical analysis, clinical trial design and population drug epidemiology in lecture room, tutorial, reading and practical experience; about adverse drug reactions at the bedside and in one or more of poisons centre, library, office, drug information pharmacy and classroom; about rational and cost effective therapeutics in drug and therapeutics committees, formulary committees and about the process whereby ethical research in humans is ensured in research ethics committees. In each of these settings the trainee will be in contact with the trainer and their staff who will provide direct feedback and contribute to multi-source feedback.
Practical prescribing and review skills will be learned in special ward rounds focussing on all aspects of drug treatment and in specialty clinics e.g. hypertension.

Peer learning is also important with discussion amongst colleagues at all levels in the clinical placements and at regional meetings.

Rotations to various work places will be arranged to enable delivery of the totality of the curriculum. Trainees will rotate to different work places often on an annual basis. There will be regular work place-based assessment by educational supervisors who will be able to assess, with the trainee, their on-going progress and whether parts of the curriculum are not being delivered within their present work place. The practice of educational supervisors is described below under supervision and feedback.

The curriculum is blueprinted so that key competencies will be delivered, and the various assessments of knowledge, skills, behaviours and attitudes will be fit for purpose and give coverage across the domains of the curriculum by a process of sampling. All assessments will be appropriate to the training level of the trainee and will be valid, reliable, systematically collected, judged against pre-determined criteria and appropriately weighted. Feedback will be given confidentially to each trainee with suggestions for improvements where appropriate.

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

Learning with Peers - There are many opportunities for trainees to learn with their peers. National scientific meetings of the British Pharmacological Society have a

dedicated trainee's day allow trainees of varied levels of experience to come together for small group sessions. Trainees in CPT will often work with non-clinical scientists including postgraduate research students

Trainees have supervised responsibility for the care of in-patients. 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 as learning outcomes are achieved (see Section 5: Feedback and Supervision).

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 (e.g. a weekly core training hour of teaching within a Trust)
- Case presentations
- Journal clubs
- Research and audit 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.

Independent Self-Directed Learning -Trainees will use this time in a variety of ways it may take place in clinical laboratory and laboratory settings, and off the job education. Suggested activities include:

- Reading, including web-based material
- Maintenance of personal portfolio (self-assessment, reflective learning, personal development plan)
- Audit and research projects
- Reading journals
- Achieving personal learning goals beyond the essential, core curriculum
- Study days

Formal Study Courses - Time to be made available for formal courses is encouraged, subject to local conditions of service. Examples include management courses and communication courses.

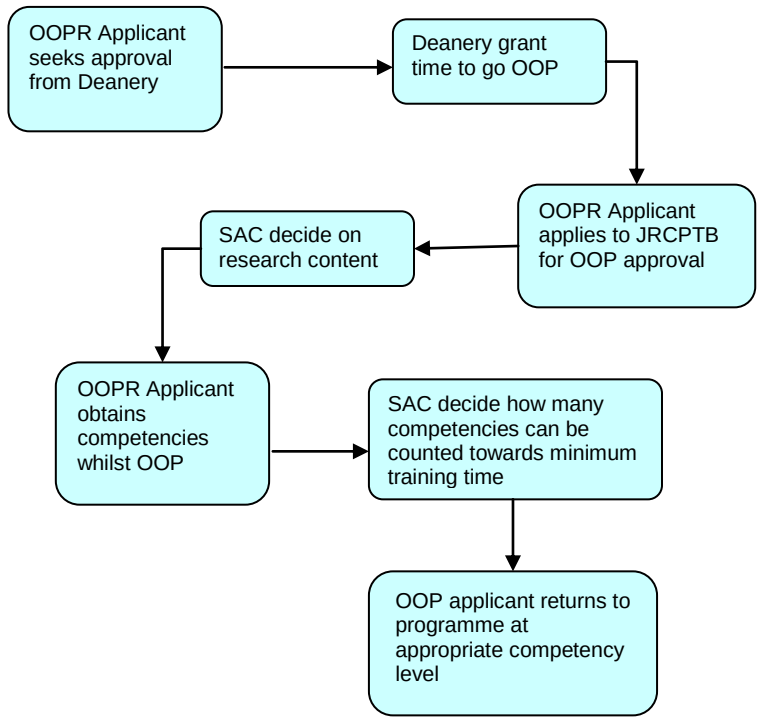
There will be regular work-based assessment by educational supervisors who will be able to assess, with the trainee, their on-going progress and whether parts of the curriculum are not being delivered within their present work place. The practice of educational supervisors is described below under supervision and feedback.

4.3 Research

Trainees who wish to acquire research competencies, in addition to those specified in their specialty curriculum, may undertake a research project as an ideal way of obtaining those competencies. For those in specialty training, one option to be considered is that of taking time out of programme to complete a specified project or research degree. Applications to research bodies, the deanery (via an OOPR form) and the JRCPTB (via a Research Application Form) are necessary steps, which are the responsibility of the trainee. The JRCPTB Research Application Form can be accessed via the JRCPTB website. It requires an estimate of the competencies that will be achieved and, once completed, it should be returned to JRCPTB together with a job description and an up to date CV. The JRCPTB will submit applications to the relevant SACs for review of the research content including an indicative assessment of the amount of clinical credit (competence acquisition) which might be achieved. This is likely to be influenced by the nature of the research (eg entirely laboratory-based or strong clinical commitment), as well as duration (eg 12 month Masters, 2-year MD, 3-Year PhD). On approval by the SAC, the JRCPTB will advise the trainee and the deanery of the decision. The deanery will make an application to the GMC for approval of the out of programme research. All applications for out of programme research must be prospectively approved.

Upon completion of the research period the competencies achieved will be agreed by the OOP Supervisor, Educational Supervisor and communicated to the SAC, accessing the facilities available on the JRCPTB ePortfolio. The competencies achieved will determine the trainee's position on return to programme; for example if an ST3 trainee obtains all ST4 competencies then 12 months will be recognised towards the minimum training time and the trainee will return to the programme at ST5. This would be corroborated by the subsequent ARCP.

This process is shown in the diagram below:



Funding will need to be identified for the duration of the research period. Trainees need not count research experience or its clinical component towards a CCT

programme but must decide whether or not they wish it to be counted on application to the deanery and the JRCPTB.

A maximum period of 3 years out of programme is allowed and the SACs will recognise up to 12 months towards the minimum training times.

4.4 Academic Training

For those contemplating an academic career path, there are now well-defined posts at all levels in the Integrated Academic Training Pathway (IATP) involving the National Institute for Health Research (NIHR) and the Academy of Medical Sciences (AMS). For full details see http://www.nccrcd.nhs.uk/intetacatrain and http://www.academicmedicine.ac.uk/uploads/A-pocket-guide.pdf. Academic trainees may wish to focus on education or research and are united by the target of a consultant-level post in a university and/or teaching hospital, typically starting as a senior lecturer and aiming to progress to readership and professor. A postgraduate degree will usually be essential (see "out of programme experience") and academic mentorship is advised (see section 6.1). Academic competencies have been defined by the JRCPTB in association with AMS and the Colleges and modes of assessment have been incorporated in the latest edition of the Gold Guide (section 7, see http://www.jrcptb.org.uk/forms/Documents/GoldGuide2009.pdf).

Academic integrated pathways to CCT are a) considered fulltime CCTs as the default position and b) are run through in nature. The academic programmes are CCT programmes and the indicative time academic trainees to achieve the CCT is the same as the time set for non-academic trainees. If a trainee fails to achieve all the required competencies within the notional time period for the programme, this would be considered at the ARCP, and recommendations to allow completion of clinical training would be made (assuming other progress to be satisfactory). An academic trainee working in an entirely laboratory-based project would be likely to require additional clinical training, whereas a trainee whose project is strongly clinically oriented may complete within the "normal" time (see the guidelines for monitoring training and progress) http://www.academicmedicine.ac.uk/careersacademicmedicine.aspx. Extension of a CCT date will be in proportion depending upon the nature of the research and will ensure full capture of the specialty outcomes set down by the Royal College and approved by GMC.

All applications for research must be prospectively approved by the SAC and the regulator, see www.jrcptb.org.uk for details of the process.

5 Assessment

5.1 The assessment system

The purpose of the assessment system is to:

- enhance learning by providing formative assessment, enabling trainees to receive immediate feedback, measure 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;
- provide robust, summative evidence that trainees are meeting the curriculum standards during the training programme;

- ensure trainees are acquiring competencies within the domains of Good Medical Practice*;*
- assess trainees' actual performance in the workplace;
- ensure that trainees possess the essential underlying knowledge required for their specialty;
- inform the Annual Review of Competence Progression (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.

The integrated assessment system comprises workplace-based assessments and knowledge – base assessments. Individual assessment methods are described in more detail below.

Workplace-based assessments will take place throughout the training programme to allow trainees to continually gather evidence of learning and to provide trainees with formative feedback. They are not individually summative but overall outcomes from a number of such assessments provide evidence for summative decision making. 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.

5.2 Assessment Blueprint

In the syllabus (3.3) the "Assessment Methods" shown are those that are appropriate as **possible** methods that could be used to assess each competency. It is not expected that all competencies will be assessed and that where they are assessed not every method will be used.
Assessment methods

The following assessment methods are used in the integrated assessment system:

Examinations and certificates

The small size of the specialty means that it is not feasible to run a full specialty certificate examination to assess knowledge. The specialty is currently planning to pilot a formative knowledge-based assessment method and, if successful, it is intended that this method will be used in the future.

Where there is a ***** in the syllabus this competency will be assessed, in the future, by a knowledge-based assessment method

- Advanced Life Support Certificate (ALS)

Workplace-based assessments (WPBAs)

- Multi-Source Feedback (MSF)
- mini-Clinical Evaluation Exercise (mini-CEX)
- Direct Observation of Procedural Skills (DOPS)
- Case-Based Discussion (CbD)
- Project-Based Discussion (PbD)
- Audit Assessment (AA)
- Teaching Observation (TO)

These methods are described briefly below. More information about these methods including guidance for trainees and assessors is available in the ePortfolio and on the JRCPTB website www.jrcptb.org.uk. Workplace-based assessments should be

recorded in the trainee's ePortfolio. The workplace-based assessment methods include feedback opportunities as an integral part of the assessment process, this is explained in the guidance notes provided for the techniques.

Multisource 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 objective 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, administration staff, and other allied professionals. The trainee will not see the individual responses by raters, feedback is given to the trainee by the Educational Supervisor.

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 assess 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.

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 include discussion about a written record (such as written case notes, out-patient letter, discharge summary). A typical encounter might be when presenting newly referred patients in the out-patient department.

Project based Discussion (PbD)
The PbD assesses the performance of a trainee in their use of clinical pharmacology knowledge in practice to provide an indication of competence in areas such as reasoning, decision-making and application of knowledge in relation to drug treatment usually at a population level. It also serves as a method to document conversations about, and presentations of, projects by trainees. The PbD should include discussion about a written or formal verbal report (such as analysis of a published paper at a journal club, an application to a research ethics committee, a presentation at a Medicines Management Committee, a formal trial protocol designed by the trainee, a draft paper for publication or presentation at a scientific meeting. written case notes, out-patient letter, discharge summary).

The PbD is a structured narrative-based instrument for assessment of areas of application, learning, competency and performance related to non-standard project(s) being undertaken by the trainee at a point in time.

Given that departments may be small it is important that in this specific assessment of CPT activity assessment does not rely on a single supervisor and access to an independent expert supervisor from outside the trainees department might be necessary.

It enables the trainee to include reflective commentary and self-assessment in relation to such structured questions as:
What did you do?
What supporting documents are available (evidence)?
What have you learned from this project (so far)?
How does this project fulfil the requirements (all or partial) of the curricular Modules/Items listed?

It enables the assessor to comment critically on areas of trainee performance on this occasion:
Summary of what was described and the evidence available to support this.
Was the evidence presented satisfactory?
Does the Project fulfil the requirements (all or partial) of the curricular Modules/Items listed?
Key points covered by the discussion.
If so, which competencies were assessed?

Audit Assessment Tool (AA)
The Audit Assessment Tool is designed to assess a trainee's competence in completing an audit. The Audit Assessment can be based on review of audit documentation OR on a presentation of the audit at a meeting. If possible the trainee should be assessed on the same audit by more than one assessor.

Teaching Observation (TO)
The Teaching Observation form is designed to provide structured, formative feedback to trainees on their competence at teaching. The Teaching Observation 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).

5.3 Decisions on progress (ARCP)

The Annual Review of Competence Progression (ARCP) is the formal method by which a trainee's progression through her/his training programme is monitored and recorded. ARCP is not an assessment – it is the review of evidence of training and assessment. The ARCP process is described in A Reference Guide for Postgraduate Specialty Training in the UK (the "Gold Guide" – available from www.mmc.nhs.uk). Deaneries are responsible for organising and conducting ARCPs. The evidence to be reviewed by ARCP panels should be collected in the trainee's ePortfolio.

The ARCP Decision Aid is included in section 5.5, giving details of the evidence required of trainees for submission to the ARCP panels.

5.4 ARCP Decision Aid

CPT Curriculum areas	CPT Year 1	CPT Year 2
Assessing CPT literature	Evidence of a basic ability to critically review published literature (1 ×PbD)	Evidence of ability to critically analyse published literature and participation in the review process . e.g. undertaken formal peer review on behalf of a journal. (1 ×PbD)
CPT statistical techniques	Evidence of an understanding of basic statistical techniques (1 ×PbD)	Evidence of an understanding of advanced statistical techniques, including population statistics (1 ×PbD + MSF)
Mechanism of drug action	Evidence of in depth knowledge for common therapeutic drugs, and partial knowledge of the importance of special patient groups Participation in delivery of CPT education (1 ×PbD + 1 ×CbD)	Evidence of in depth knowledge of therapeutics and special therapeutic groups. Participation in CPT teaching and special group clinics (1 ×PbD)
Dosing regimens	Demonstrate a knowledge of basic pharmacokinetics. (1 ×PbD + 1 ×DOPS)	Demonstrate a knowledge of advanced pharmacokinetics including population pharmacokinetics (1 ×PbD + 1 ×mini-CEX)
Rational prescribing - individuals	Evidence of rational prescribing skills (1 ×CbD + 1 ×DOPS)	Evidence of advanced prescribing skills and individualiusation of therapy. Delivery of such skills to undergraduates (1 ×CbD + 1 ×mini-CEX +mini-CEX + AA)
Rational prescribing - populations	Evidence of attendance at Formulary and or Policy /Guideline development committees (1 ×PbD)	Participation and contribution to Formulary and or Policy development committees. Some experience of National prescribing committees (1 ×PbD + MSF)
Drug regulation	Evidence of an understanding of the basic regulations concerning medicine use. (1 ×PbD)	Evidence of an in-depth understanding of medicine regulations as they affect all healthcare professionals. Awareness of local and national drug regulatory committees and issues (1 ×PbD + 1 ×CbD)

Pharmacoepidemiology	Evidence of a basic understanding of pharmacoepidemiology (1 ×PbD)	Evidence of understanding advanced pharmacoepidemiological techniques and the role of pharmacoepidemiology in maintenance of health (1 ×mini-CEX + MSF)
Adverse drug reactions	Evidence of an understanding of ADRs. Participation in undergraduate teaching (1 ×PbD)	Evidence of advanced understanding of and participation in ADR surveillance/ reporting/ monitoring systems (1 ×CbD + 1 ×mini-CEX + MSF)
Drug errors	Evidence of a basic understanding of the personal and systems causes of drug errors (1 ×PbD + 1 ×CbD)	Evidence of advanced understanding of errors and an appreciation of error theory. Evidence of participation in drug error monitoring/audit (1 ×PbD + 1 ×mini-CEX + MSF + AA)
Drug overdose	Evidence of a basic knowledge of common causes of drug overdose and treatments. (1 ×CbD + 1 ×mini-CEX)	Evidence of participation in the treatment and provision of service for patients suffering from drug overdose. Evidence of advanced understanding of toxicology and overdose (1 ×PbD + MSF)
Management and Leadership	Evidence of participation in and awareness of aspects of management relevant to CPT.-e.g. taking part in formulary and policy and guideline committees	Evidence of participation in and awareness of aspects of management relevant to CPT. Evidence of participation, contribution to drug error and/or patient safety committees

CPT Advanced Specialist area modules	**Minimum assessments required**
Hypertension	100% completed (5 ×PbD +1 ×DOPS + 1 ×mini-CEX + 2xCbD)
Clinical Toxicology	100% completed (5 ×PbD +1 ×DOPS + 1 ×mini-CEX + 2xCbD)
Clinical Trials Research	100% completed (5 ×PbD +1 ×DOPS + 1 ×mini-CEX + 2xCbD)

Research	100% completed (5 ×PbD +1 ×DOPS + 1 ×mini-CEX + 2xCbD)

5.5 Penultimate Year Assessment (PYA)

The penultimate ARCP prior to the anticipated CCT date will include an external assessor from outside the training programme. JRCPTB and the deanery will coordinate the appointment of this assessor. This is known as “PYA”. Whilst the ARCP will be a review of evidence, the PYA will include a face to face component.

5.6 Complaints and Appeals

All workplace-based assessment methods incorporate direct feedback from the assessor to the trainee and the opportunity to discuss the outcome. If a trainee has a complaint about the outcome from a specific assessment this is their first opportunity to raise it.

Appeals against decisions concerning in-year assessments will be handled at deanery level and deaneries are responsible for setting up and reviewing suitable processes. If a formal complaint about assessment is to be pursued this should be referred in the first instance to the chair of the Specialty Training Committee who is accountable to the regional deanery. Continuing concerns should be referred to the Associate Dean.

6 Supervision and feedback

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 personally discuss all cases if required. As training progresses the trainee should have the opportunity for increasing autonomy, consistent with safe and effective care for the patient.

Trainees will at all times have a named Educational Supervisor and Clinical Supervisor, responsible for overseeing their education. Depending on local arrangements these roles may be combined into a single role of Educational Supervisor.

The responsibilities of supervisors have been defined by GMC in the document “Operational Guide for the PMETB Quality Framework”. These definitions have been agreed with the National Association of Clinical Tutors, the Academy of Medical Royal Colleges and the Gold Guide team at MMC, and are reproduced below:

Educational supervisor
A trainer who is selected and appropriately trained to be responsible for the overall supervision and management of a specified trainee’s educational progress during a training placement or series of placements. The Educational Supervisor is responsible for the trainee’s Educational Agreement.

Clinical supervisor
A trainer who is selected and appropriately trained to be responsible for overseeing a specified trainee’s clinical work and providing constructive feedback during a training placement. Some training schemes appoint an Educational Supervisor for each placement. The roles of Clinical and Educational Supervisor may then be merged.

The Educational Supervisor, when meeting with the trainee, should discuss issues of clinical governance, risk management and any report of any untoward clinical

incidents involving the trainee. The Educational Supervisor should be part of the clinical specialty team. Thus if the clinical directorate (clinical director) have any concerns about the performance of the trainee, or there were issues of doctor or patient safety, these would be discussed with the Educational Supervisor. 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.

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.

Academic trainees are encouraged to identify an academic mentor, who will not usually be their research supervisor and will often be from outside their geographical area. The Academy of Medical Sciences organises one such scheme (see http://www.acmedsci.ac.uk/index.php?pid=91) but there are others and inclusion in an organised scheme is not a pre-requisite. The Medical Research Society organises annual meetings for clinician scientists in training (see http://www.medres.org.uk/j/index.php?option=com_content&task=view&id=54&Itemid=1) and this type of meeting provides an excellent setting for trainees to meet colleagues and share experiences.

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 mandatory (except 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

7 Managing curriculum implementation

7.1 Intended use of curriculum by trainers and trainees

This curriculum and ePortfolio are web-based documents which are available from the Joint Royal Colleges of Physicians Training Board (JRCPTB) website www.jrcptb.org.uk.

The educational supervisors and trainers can access the up-to-date curriculum from the JRCPTB website and will be expected to use this as the basis of their discussion with trainees. 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 a portfolio. The trainee will use the curriculum to develop learning objectives and reflect on learning experiences.

7.2 Recording progress

On enrolling with JRCPTB trainees will be given access to the ePortfolio for Clinical Pharmacology and Therapeutics. 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.

8 Curriculum review and updating

The specialty curriculum will be reviewed and updated with minor changes on an annual basis. The curriculum should be regarded as a fluid, living document and the SAC will ensure to respond swiftly to new clinical and service developments. In addition, the curriculum will be subject to three-yearly formal review within the SAC. This will be informed by curriculum evaluation and monitoring. The SAC will have available:

- The trainees' survey, which will include questions pertaining to their specialty (GMC to provide)
- Specialty-specific questionnaires (if applicable)
- Reports from other sources such as educational supervisors, programme directors, specialty deans, service providers and patients.
- Trainee representation on the Deanery STC and the SAC of the JRCPTB
- Informal trainee feedback during appraisal.

Evaluation will address:

- The relevance of the learning outcomes to clinical practice
- The balance of work-based and off-the-job learning
- Quality of training in individual posts
- Feasibility and appropriateness of on-the-job assessments in the course of training programmes
- Availability and quality of research opportunities
- Current training affecting the service

Evaluation will be the responsibility of the JRCPTB and GMC. These bodies must approve any significant changes to the curriculum.

Interaction with the NHS will be particularly important to understand the performance of specialists within the NHS and feedback will be required as to the continuing needs for that specialty as defined by the curriculum. It is likely that the NHS will have a view as to the balance between generalist and specialist skills, the development of generic competencies and, looking to the future, the need for additional specialist competencies and curricula. In establishing specialty issues which could have implications for training, the SAC will produce a summary report to discuss with the NHS employers and ensure that conclusions are reflected in curriculum reviews.

Trainee contribution to curriculum review will be facilitated through the involvement of trainees in local faculties of education and through informal feedback during appraisal and College meetings.

The SAC will respond rapidly to changes in service delivery. Regular review will ensure the coming together of all the stakeholders needed to deliver an up-to-date, modern specialty curriculum. The curriculum will indicate the last date of formal review monitoring and document revision.

9 Equality and diversity

The Royal Colleges of Physicians will comply, and ensure compliance, with the requirements of equality and diversity legislation, such as the:

- Race Relations (Amendment) Act 2000
- Disability Discrimination Act 1995
- Human Rights Act 1998
- Employment Equality (Age) Regulation 2006
- Special Educational Needs and Disabilities Act 2001
- Data Protection Acts 1984 and 1998

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. Accordingly, it warmly welcomes contributors and applicants from as diverse a population as possible, and actively seeks to recruit people to all its activities regardless of race, religion, ethnic origin, disability, age, gender or sexual orientation.

Deanery quality assurance will ensure that each training programme complies with the equality and diversity standards in postgraduate medical training as set by GMC.

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 must ensure that educational supervisors have had equality and diversity training (at least as an e learning module) every 3 years
- Deaneries must ensure that any specialist participating in trainee interview/appointments committees or processes has had equality and diversity training (at least as an e module) every 3 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.
- monitoring of College Examinations;
- ensuring all assessments discriminate on objective and appropriate criteria and do not unfairly disadvantage trainees because of gender, ethnicity, sexual orientation or disability (other than that which would make it impossible to practise safely as a physician). All efforts shall be made to ensure the participation of people with a disability in training.