SPECIALTY TRAINING CURRICULUM

FOR

COMBINED INFECTION TRAINING
AND
INFECTIOUS DISEASES

2013

Joint Royal Colleges of Physicians Training Board

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1   Introduction

The specialty of Infectious Diseases, provides the opportunity of a career ranging from challenging and constantly varied clinical management to intellectually stimulating frontier research into diseases of worldwide importance. The specialty encompasses the requirements of a clearly objective-based training curriculum and offers training programmes ranging from pure Infectious Diseases to combined training in Infectious Diseases and General Internal Medicine, Infectious Diseases and Medical Microbiology or Infectious Diseases and Medical Virology.

Trainees will progress through the Combined Infection Training (CIT) Curriculum and then onto the Higher Infectious Diseases Training (HIDT) Curriculum in order to gain a certificate of completion of training (CCT) in Infectious Diseases. (Please see separate curriculum for training in Tropical Medicine, www.jrcptb.org.uk).

The Combined Infection Training (CIT) Curriculum has been designed to provide trainees with basic but comprehensive training in Medical Microbiology, Medical Virology, Infection Prevention & Control and Infectious Diseases over a two year training period. It combines key components of the Royal College of Pathology's 2010 Curricula for Medical Microbiology and Medical Virology and the Royal College of Physician's 2010 Curriculum for Infectious Diseases, to facilitate combined training in the diagnosis and clinical management or infection. The CIT curriculum has been designed to also reflect the modernisation of UK microbiology laboratory services and the need to train infection specialists with a sound knowledge of both clinical and laboratory practice.

The Higher Infectious Diseases Training (HIDT) Curriculum has been designed to build upon the foundation provided by CIT, and expand training and competencies in the assessment, diagnosis, investigation and management of patients with infections to consultant level.

2   Rationale

2.1   Purpose of the curriculum
The purpose of this curriculum is to define the process of training and the competencies needed for the award of a certificate of completion of training (CCT) in Infectious Diseases.

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

2.2   Development
This curriculum was developed by the Specialty Advisory Committee for Infectious Diseases under the direction of the Joint Royal Colleges of Physicians Training Board (JRCPTB). It replaces the previous version of the curriculum dated 2010 (Amendments 2012), with changes to ensure the curriculum meets GMC's standards for Curricula and Assessment, and to incorporate revisions to the content and delivery of the training programme.

The Combined Infection Training component was developed by the Joint Colleges Infection Training Curriculum Sub-Group in 2013. All members of the committee have

specific interest and experience in both the supervision and organisation of training. The committee has a permanent trainee member elected by and representing the trainee body. Trainee and Lay representation have also been present at curriculum meetings and directly involved in the formulation of this curriculum.

The Higher Infectious Diseases Training component was developed by representatives for the Specialty Advisory Committee for Infectious Diseases in 2013, to complement and progress the foundation of training and competence provided by the Combined Infections Training component. The Infectious Diseases curriculum overall has developed from an objective-based curriculum agreed by the specialty and published in 2003, with adaptations as a consequence of changes in training methodologies and as a response to changes in planned workforce, and to the evolution of Infectious Diseases and other infection-related specialities. All members of the committee have specific interest and experience in both the supervision and organisation of training. The committee has a permanent trainee member elected by and representing the trainee body and Lay representation.

2.3   Training Pathway

Specialty training in Infectious Diseases consists of core and higher speciality training. Core training provides physicians with: the ability to investigate, treat and diagnose patients with acute and chronic medical symptoms; and with high quality review skills for managing inpatients and outpatients. Higher speciality training then builds on these core skills to develop the specific competencies required to practise independently as a consultant in Infectious Diseases.

Core training may be completed in either a Core Medical Training (CMT) or Acute Care Common Stem (ACCS) programme. The full curriculum for specialty training in Infectious Diseases therefore consists of the curriculum for either CMT or ACCS plus this specialty training curriculum for Infectious Diseases which includes the components for Combined Infection Training (CIT) and Higher Infectious Diseases training (HIDT).

Core Medical training programmes are designed to deliver core training for specialty training by acquisition of knowledge and skills 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.

Entrants to specialist training in Infectious Diseases must have successfully completed Core Medical Training or Acute Care Common Stem training.

2.4   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

2.5   Duration of training

Although this curriculum is competency based, the duration of training must meet the European minimum of four years for full time specialty training adjusted accordingly for flexible training (EU directive 2005/36/EC). The SAC has advised that training in Infectious Diseases from ST1 will usually be completed in six years in full time training (2 years core plus 2 years Combined Infection Training plus 2 years Higher Infectious Diseases Training). Combined Training will usually extend training as demonstrated in the Diagram 1.0.
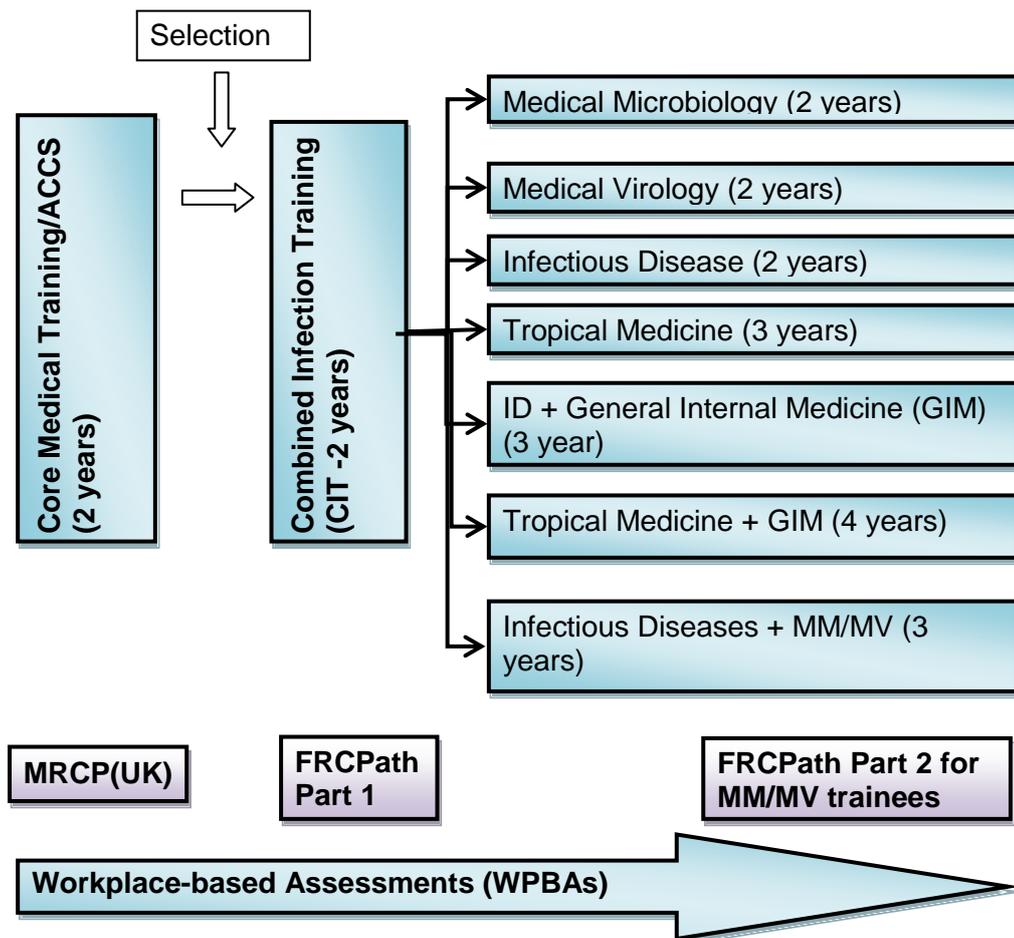

Diagram 1.0: Pathway for InfectionTrainees

2.6 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.

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 LTFT 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 competencies**.**

2.7 Dual CCT

Trainees who wish to achieve a CCT in General Internal Medicine (GIM) as well as Infectious Diseases must have applied for and successfully entered a training programme which was advertised openly as a dual training programme. Trainees will need to achieve the competencies, with assessment evidence, as described in both the Infectious Diseases and GIM 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 SACs.

3   Content of learning

3.1   Programme content and objectives

The Training Programme in Infectious Diseases aims to produce practitioners who:

- exhibit appropriate attitudes and communication skills in dealing with colleagues and patients.
- have effective team working and leadership skills
- by appropriate use of history, clinical examination and investigation can perform the core assessment required for all physicians practising in Infectious Diseases
- are able to establish a differential diagnosis of patients presenting with clinical features of Infectious Diseases
- are able to apply sufficient knowledge and skill in diagnosis and management to ensure safe independent practice in Infectious Diseases
- can apply knowledge of the appropriate basic sciences relevant to Infectious Diseases
- can develop management plans for the "whole patient" and have a sound knowledge of appropriate treatments including health promotion, disease prevention and long term management
- fully appreciate and know how to use the multi-disciplinary team approach to management of infection within the hospital and community, including a recognition and understanding of application of public health management
- have achieved a firm grasp of basic research methodology and are able to participate in and initiate research activity
- can use skills of lifelong learning to keep up-to-date with developments in Infectious Diseases
- can be an effective teacher
- are able to manage time and resources to the benefit of their patients and colleagues.

Specialty specific objectives are:

- To obtain clinical competence at consultant level in the assessment, investigation, control, diagnosis and management of community acquired infection, healthcare associated infection, and nosocomial infection
- To obtain clinical competence at consultant level in the management of immune-compromised patients including those with HIV/AIDS
- To achieve competence at consultant level in the diagnosis, investigation and management of imported infection and in the provision of advice in relation to travel medicine
- To achieve competence at consultant level in the diagnosis, investigation and management of chronic infections such as tuberculosis and viral hepatitis (B & C)
- To obtain an understanding of microbiological techniques and their interpretation in Infectious Diseases and to understand the process and constraints around the microbiological report
- To become competent in all aspects of the management of antibiotic use
- To obtain an understanding of prevention of spread of infection in both community and healthcare settings
- To obtain an understanding of research methodology and to critically appraise evidence and studies
- To have the opportunity, if desired and appropriate, to participate in clinical or laboratory based research related to Infectious Diseases by taking time out of programme if prospectively agreed by training authorities

3.2 Good Medical Practice

To obtain and maintain a licence to practice the principles and values set out in Good Medical Practice (www.gmc-uk.org/gmp2013) must be followed. Good medical Practice is set out to cover 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 5.2 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 3.2 for more details.

Syllabus Content

Common Competencies

1. Good Clinical Care

Objective: To demonstrate adequate knowledge and skills and appropriate attitudes in routine clinical work

2. Maintaining good medical practice

Objective: To keep knowledge and skills and appropriate attitudes up to date

3. Relationship with patients

Objective: To ensure that the trainee has the knowledge, skills and attitudes to act in a professional manner at all times.

4. Working with colleagues

Objective: To demonstrate good working relationships with colleagues and appropriate communication skills.

5. Personal Behaviour

Objective: To understand the importance of the personal behaviour of the doctor

Specialty specific competencies for combined infection training

6. Basic biology of bacteria, viruses, fungi and parasites: host-pathogen relationships

Objective: To understand the basic biology of micro-organisms that may cause disease in humans and how they cause disease

7. Microbiology/virology laboratory practice

Objective: To be competent in the sue of the laboratory in the investigation, management and prevention of infection.

Specialty specific competencies for infectious diseases

COMMON COMPETENCIES

1. GOOD CLINICAL CARE

Objective: To demonstrate adequate knowledge and skills and appropriate attitudes in routine clinical work.

Specialty trainees will:

- Have the breadth of knowledge and skills to take responsibility for safe clinical decisions
- Have the self-awareness to acknowledge where the limits of their competence lie and when it is appropriate to refer to senior colleagues for advice
- Have the potential (or the ability) to take responsibility for clinical governance activities, risk management and audit in order to improve the quality of service provision.

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**
Define the patterns of symptoms found in patients presenting with infection.	CbD, KBA	1,2
Understand the issues around capacity and competence, and the Mental Capacity Act	CbD, KBA	1,2,4
Describe the appropriate content of clinical records	CbD	1
Explain the problems faced by people for whom English is not a first language	CbD, mini-CEX	1,2
Explain the problems faced by people with educational and/or physical disabilities	CbD, min-CEX	1,2
Describe the relevance of data protection pertaining to patient confidentiality	CbD, KBA	1
Skills		
Take and analyse a clinical history in a relevant, succinct and logical manner	.CbD, mini-CEX, ACAT	1
Communicate with people with language difficulties associated with physical and mental impairment, and with those suffering from stigmatising conditions, discrimination and severe anxiety	CbD, mini-CEX, ACAT, MSF	1,3
Use interpreters and advocates appropriately	CbD, mini-CEX, MSF	1
Behaviours		
Show empathy with patients	MSF	1,3,4
Appreciate the importance of psychological factors for patients and relatives	CbD, MSF	1,3
Appreciate the interaction of social factors and the patient's illness	CbD, MSF	1,3
Be willing to use medical secretaries and electronic communication to communicate in an appropriate manner	MSF, CbD	1,3

Be willing to communicate promptly and accurately with clinicians and patients and their families	MSF	1,3
Show respect towards colleagues in a multidisciplinary team	MSF	1,3

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**
Define the pathophysiological basis of physical signs	CbD, mini-CEX, KBA	1
Define the clinical signs found in infection	CbD, mini-CEX	1
Skills		
Perform a reliable and appropriate clinical examination	ACAT, CbD, mini-CEX	1,2
Be able to perform a rapid physical assessment in a patient who is acutely unwell	ACAT, CbD, mini-CEX	1,2,3
Behaviours		
Respect patients' dignity and confidentiality	CbD, mini-CEX, MSF	1,3,4
Acknowledge cultural issues	CbD, mini-CEX, MSF	1,3
Appropriately involve relatives	CbD, mini-CEX, MSF	1,3,4
Appreciate situations where there is the need for a chaperone	CbD, mini-CEX, MSF	1,3

Investigations including imaging

To develop the ability to request focussed and relevant investigations (including imaging, to balance their risks and potential benefits and correctly interpret the results		
Knowledge	**Assessment Methods**	**GMP**
Define the pathophysiological basis of investigations	CbD, mini-CEX, ACAT, KBA	1
Define the indications for investigations	CbD, mini-CEX, ACAT, KBA	1
Define the risks and benefits of investigations	CbD, mini-CEX, ACAT	1
Know the clinical and cost effectiveness of individual investigations	CbD, mini-CEX, ACAT	1
Skills		
Request and organise appropriate investigations	.CbD, mini-CEX, ACAT	1,3
Interpret the results of investigations	CbD, mini-CEX, ACAT, DoPS	1
Perform appropriate clinical investigations competently where relevant	CbD, mini-CEX, ACAT	1,2
Liaise and discuss investigations with colleagues and to advise them	CbD, mini-CEX,	1,2,3

appropriately.	ACAT, MSF	

Behaviours		
Understand the importance of working with other healthcare professionals and team working	MSF	1,3
Be able to provide explanations to patients as to the rationale for investigations, and possible unwanted effects	MSF, mini-CEX	1,3

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:		
• Interpret history and clinical signs	ACAT, CbD, mini-CEX	1
• Conceptualise clinical problem in a medical and social context	ACAT, CbD, mini-CEX	1
• Understand the psychological component of disease and illness presentation	ACAT, CbD, mini-CEX	1
• Generate hypothesis within context of clinical likelihood	ACAT, CbD, mini-CEX	1
• Test, refine and verify hypotheses	ACAT, CbD, mini-CEX	1
• Develop problem list and action plan	ACAT, CbD, mini-CEX	1
Recognise how to use expert advice, clinical guidelines and algorithms	ACAT, CbD, mini-CEX	1
Recognise and appropriately responds to sources of information accessed by patients	ACAT, CbD, mini-CEX	1
Recognise 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
Define the concepts of disease natural history and assessment of risk	ACAT, CbD, mini-CEX	1
Recall methods and associated problems of quantifying risk e.g. cohort studies	ACAT, CbD	1
Outline the concepts and drawbacks of quantitative assessment of risk or benefit e.g. numbers needed to treat	ACAT, CbD	1
Describe commonly used statistical methodology	CbD, mini-CEX	1
Know 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
Demonstrate sufficient knowledge of clinical disease, and associated biochemical and haematological changes, to enable integration of clinical and laboratory findings for patient management	CbD, mini-CEX	1
Maintain clinical acumen and knowledge of advances and changes in	CbD, mini-CEX	1

clinical practice		
Skills		
Interpret clinical features, their reliability and relevance to clinical scenarios including recognition of the breadth of presentation of common disorders	ACAT, CbD, mini-CEX	1
Incorporate 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
Recognise critical illness and responds with due urgency	ACAT, CbD, mini-CEX	1
Generate plausible hypothesis(es) following patient assessment	ACAT, CbD, mini-CEX	1
Construct a concise and applicable problem list using available information	ACAT, CbD, mini-CEX	1
Construct an appropriate management plan in conjunction with the patient, carers and other members of the clinical team and communicates this effectively to the patient, relatives and carers where relevant	ACAT, CbD, mini-CEX	1,3,4
Define the relevance of an estimated risk of a future event to an individual patient	ACAT, CbD, mini-CEX	1
Use risk calculators appropriately	ACAT, CbD, mini-CEX	1
Apply quantitative data of risks and benefits of therapeutic intervention to an individual patient	ACAT, CbD, mini-CEX	1
Search and comprehends medical literature to guide reasoning	AA, CbD	1
Interpret correctly test results and the patient's clinical condition in the context of available clinical information		
Behaviours		
Recognise the difficulties in predicting occurrence of future events	ACAT, CbD, mini-CEX	1
Show 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
Show 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
Show willingness to search for evidence to support clinical decision making	ACAT, CbD, mini-CEX	1,4
Demonstrate ability to identify one's own biases and inconsistencies in clinical reasoning	ACAT, CbD, mini-CEX	1,3

Treatment (therapeutics)

To progressively develop your ability to prescribe, review and monitor appropriate medication relevant to clinical practice including therapeutic and preventative indications		
Knowledge	**Assessment Methods**	**GMP**
Outline scientific theory relating to pharmacology and the	ACAT, CbD, mini-	1,3

pathophysiology of therapeutic interventions.	CEX, KBA	
Skills		
Assess accurately the patient's needs	ACAT, CbD, mini-CEX	1,2,3
Correctly prescribe and administer therapeutics	ACAT, mini-CEX	1,2
Advise patients (and carers) about important interactions and adverse drug effects	ACAT, mini-CEX	1,2,3,4
Use IT prescribing tools where available to improve safety	ACAT, mini-CEX	1,2
Provide comprehensible explanations to the patient, and carers when relevant, for the use of medicines	ACAT, mini-CEX	1,2,3
Clearly and openly explain treatments, the side effects of drugs, and the risks and benefits of alternative treatment options (including no treatment)	ACAT, mini-CEX	1,3
Behaviours		
Remain open to advice from other health professionals on medication issues	ACAT, CbD, mini-CEX	1,3
Recognise the importance of resources when prescribing, including the role of a Drug Formulary	ACAT, CbD, mini-CEX	1,2
Ensure prescribing information is shared promptly and accurately between a patient's health providers, including between primary and secondary care	ACAT, CbD	1,3
Remain up to date with therapeutic alerts, and respond appropriately	ACAT, CbD	1

Note-keeping, letters, etc.

To understand the importance of optimal record-keeping and correspondence, and the issues around information governance		
Knowledge	**Assessment Methods**	**GMP**
Understand how to correctly write summaries, letters, medico-legal reports	CbD, mini-CEX	1,2
Define the structure, function and legal implications of medical records and medico-legal reports	CbD, mini-CEX	1,2
Describe the principles of how to retrieve and utilise data recorded in clinical systems	CbD, mini-CEX	1
Demonstrate the principles of literature searching using medical databases	CbD, mini-CEX	1
Explain the range of possible uses for clinical data and information and appreciate the dangers and benefits of aggregating clinical data	CbD, mini-CEX	1,2
Describe the legal and good practice basis of Information Governance, including the Data Protection Act, the Freedom of Information Act and Caldicott Principles	CbD, mini-CEX	1
Skills		
Record concisely, accurately, confidentially and legibly the appropriate elements of the history, examination, results of investigations, differential diagnosis and management plan	CbD, mini-CEX	1,2,3
Write summaries, letters, medico-legal reports	CbD, mini-CEX	1,2,3

Perform competent use of database, word processing and statistics programmes	CbD, mini-CEX	1
Perform searches (including literature searches) and access websites and health related databases	CbD, mini-CEX	1
Apply the principles of confidentiality in the context of IT	CbD, mini-CEX	1,3,4
Behaviours		
Appreciate the importance of timely dictation, cost effective use of medical secretaries and electronic communication	CbD, mini-CEX, MSF	1,3
Be aware of the need for prompt and accurate communication with primary care and other agencies and patients or their family.	CbD, mini-CEX, MSF	1,3
Show respect towards medical secretaries and clerical staff	CbD, mini-CEX, MSF	1,3
Demonstrate the acquisition of new attitudes in patient consultation in order to make maximum use of IT	CbD, mini-CEX, MSF	1,3,4
Be able to share information on computer with the patient in a constructive manner	CbD, mini-CEX	1,3
Adopt proactive and enquiring attitude to new technology	CbD, mini-CEX, MSF	1,3

Management of chronic disease

To understand chronic diseases and their impact on patients and carers		
Knowledge	**Assessment Methods**	**GMP**
Define the clinical presentation and natural history of chronic diseases	CbD, KBA	1
Have knowledge of: The epidemiology, natural history and clinical management of TB and hepatitis B and C including drug resistant strains	KBA, CbD, mini-CEX	1,2
Skills		
Develop long-term management plans for control/treatment of chronic disease	CbD	1,3,4
Diagnosing illness including atypical presentations using clinical and epidemiological skills	mini-CEX, CbD	1,3
Selecting suitable hepatitis patients for treatment	mini-CEX, CbD	1
Monitoring therapy and ensuring compliance with treatment	mini-CEX, CbD	1
Counselling patients on matters of infection risk, transmission and control	mini-CEX, CbD	1,3,4
Develop and agree a holistic management plan with the patient and carers, ensuring awareness of alternative therapies and means of patient support	mini-CEX, CbD	1,4
Behaviours		
Treat each patient as an individual	MSF	1,2,3
Appreciate the effects of chronic disease states on patients and their relatives and carers	CbD, MSF	1,3
Appreciate the importance of co-operation with primary care	CbD, MSF	1,3
The importance of multi-disciplinary working	CbD, mini-CEX	1

Awareness of patient support groups	CbD, mini-CEX	1

Patient Safety

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

Knowledge	Assessment Methods	GMP
Outlines the features of a safe working environment and the hazards of medical equipment in common use	ACAT, CbD, mini-CEX	1
Recalls side effects and contraindications of medications prescribed	ACAT, CbD, mini-CEX	1
Recalls the components of safe working practice in the personal, clinical and organisational settings including local procedures for reporting, investigating and learning from clinical errors	ACAT, CbD	1
Understands the investigation of significant events, serious untoward incidents and near misses	ACAT, CbD, mini-CEX	1
Outlines factors adversely affecting a doctor's and team performance and methods to rectify these	CbD	1
Understands the elements of clinical governance	CbD, MSF	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
Skills		
Recognises when a patient is not responding to treatment and reassesses the situation; encourages others to do the same	ACAT, CbD, mini-CEX	1
Continues to maintain a high level of safety awareness and consciousness at all times	ACAT, CbD, mini-CEX	1,2
Encourages feedback from all members of the team on safety issues	ACAT, CbD, mini-CEX, MSF	1,2,3
Encourages an open environment to foster and explore concerns and issues about the functioning and safety of team working	ACAT, CbD, MSF	2,3
Behaviours		
Continues to be aware of one's own limitations, and operates within them competently	ACAT, CbD, mini-CEX	1
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

Management of Patients Requiring Palliative and End of Life Care

To be able to work and liaise with a multi-disciplinary team in the management of patients requiring palliative and terminal care.
To be able to recognise the dying phase of a terminal illness, assess and care for a patient who is dying and be able to prepare the patient and family.
To facilitate advance care planning, the establishment of aims of care.

Knowledge	Assessment Methods	GMP
Knowledge of spectrum of professional and complementary therapies available, e.g. palliative medicine, community services, nutritional	CbD	1,2

support, pain relief, psychology of dying		
Describe different disease trajectories and prognostic indicators and the signs that a patient is dying	ACAT, CbD, mini-CEX	1
Know about Advance Care Planning documentation and End of Life Integrated Care Pathway documentation	CbD, mini-CEX	1
Knowledge of the major cultural & religious practices relevant to the care of dying people	CbD, mini-CEX	1
Describe the role of the coroner and when to refer to them and how to complete death certificates and cremation forms	CbD, mini-CEX	1
Skills		
Delivery of effective pain relief, symptom control (including for agitation, excessive respiratory secretions, nausea & vomiting, breathlessness), spiritual, social and psychological management	MSF, CbD, mini-CEX	1
Communicate honestly and sensitively with the patient (and family), about the benefits and disadvantages of treatment allowing the patient to guide the conversation	ACAT, CbD, mini-CEX	1,3,4
Is able to lead a discussion about cardiopulmonary resuscitation with patient, carers, family and colleagues appropriately and sensitively ensuring patients interests are paramount	ACAT, mini-CEX	1,3,4
Discuss and agree clear and appropriate management plan with the patient such as hospice care	ACAT, CbD, mini-CEX	1,3,4
Behaviours		
Refer to specialist palliative care services when recognises that care is complex	ACAT, CbD, mini-CEX	1,2,3
Recognise the needs of the carers and is able to support them	ACAT, CbD, mini-CEX	1,3
Commit to continuity of care through physical illness to death	MSF, CbD, mini-CEX	1

2. MAINTAINING GOOD MEDICAL PRACTICE

Objective: To keep knowledge and skills and appropriate attitudes up to date.

Specialty Trainees will:

- Take responsibility for and keep up-to-date in their own relevant professional and self-development, and facilitate that of others.
- Acknowledge that the balance of their skills and expertise will change as their careers progress and they specialise in certain areas of clinical practice.

Lifelong learning

To recognise the importance of, and develop systems for, lifelong learning		
Knowledge	**Assessment Methods**	**GMP**
Know the importance of continuing professional development	CbD, mini-CEX	1
Skills		
Recognise and use learning opportunities	CbD, mini-CEX	1
Use the potential of study leave to keep one up to date	CbD, mini-CEX	1
Produce and keep up to date a professional portfolio	CbD, mini-CEX	1
Be able to collect information efficiently from a range of sources including paper-based, computer-based and audio-visual	CbD, mini-CEX	1,3
Monitor own performance through audit and feedback	CbD, mini-CEX	1,2
Behaviours		
Be self-motivated and eager to learn	CbD, mini-CEX, MSF	1,2,3
Show willingness to learn from colleagues and to accept constructive feedback	CbD, mini-CEX, MSF	1,2,3

Self-development

To recognise the importance of self-development, reflection and a commitment to continual improvement		
Knowledge	**Assessment Methods**	**GMP**
Describe the local processes for dealing with and learning from clinical errors	CbD, mini-CEX	1,2
Acknowledge the importance of best practice, transparency and consistency	CbD, mini-CEX	1,2
Skills		
Use a reflective approach to practice with an ability to learn from previous experience	CbD, mini-CEX	1
Use assessment, appraisal, complaints and other feedback to discuss and develop an understanding of own development needs	CbD, mini-CEX	1,3,4
Behaviours		
Be prepared to accept responsibility	CbD, mini-CEX, MSF	1,2,4
Show commitment to continuing professional development which involves seeking training and self-development opportunities, learning	CbD, mini-CEX, MSF	1,2,3,4

from colleagues and accept constructive criticism

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	1
Recognises that governance safeguards high standards of care and facilitates the development of improved clinical services	CbD	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. • 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	CbD	2
Maintains a portfolio of information and evidence, drawn from own medical practice	CbD	2
Reflects regularly on own standards of medical practice in accordance with GMC guidance on licensing and revalidation	CbD	1,2,3,4
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

Clinical audit

To develop a detailed understanding of the process of audit, undertake clinical audits, and appreciate the benefits obtainable		
Knowledge	**Assessment Methods**	**GMP**
Describe the process of clinical audit	ECE	1
Have an understanding of the audit process (including how to register an audit)		
Skills		
Audit and evaluate; personal and departmental activities, existing and new tests, techniques or clinical services	ECE	1
Use clinical audit with the purpose of highlighting resources required		1,2
Demonstrate experience in designing, registering, data collection analysing and implementing an audit		
Behaviours		
Establish a close rapport and understanding with laboratory staff	ECE	1,3
Respond constructively to change	ECE, CbD	1,2,4
Demonstrate appropriate behaviours in multidisciplinary team working	ECE, MSF	1,3
Display leadership qualities	ECE, MSF	1,3
Show prompt and relevant decision making with clear communication	ECE, MSF	1,3
Recognise need for change, and principles involved	ECE, MSF	1,3
Be open minded	ECE, MSF	1,2

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**
Understand the application of statistics in scientific medical practice	CbD	1
Understand the advantages and disadvantages of different study methodologies (randomised control trials, case control, cohort etc.)	CbD	1
Understand the relative strengths and limitations of both quantitative and qualitative studies, and the different types of each	CbD	1
Understand the principles of critical appraisal	CbD	1
Understand levels of evidence and quality of evidence	CbD	1
Understand the role and limitations of evidence in the development of clinical guidelines and protocols	CbD	1
Understand the advantages and disadvantages of guidelines and protocols	CbD	1
Understand the processes that result in nationally applicable guidelines (e.g. NICE and SIGN)	CbD	1
Skills		
Able to search the medical literature including use of PubMed,	CbD	1

Medline, Cochrane reviews		
Apply conclusions from critical appraisal to clinical care	CbD	1
Identify the limitations of research	CbD	1
Contribute 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	1,2
Aim for best clinical practice (clinical effectiveness) at all times, responding to evidence-based medicine	ACAT, CbD, mini-CEX	1,2
Recognise the occasional need to practise outside clinical guidelines	ACAT, CbD, mini-CEX	1,2
Encourage discussion amongst colleagues on evidence-based practice	ACAT, CbD, mini-CEX, MSF	1,2

Structure of the NHS and the principles of management

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**
Describe the structure of the NHS in the relevant jurisdiction of the UK	ACAT, CbD	1
Describe about finance issues in general in the NHS, especially budgetary management and commissioning	ACAT, CbD, mini-CEX	1
Describe the importance of a health service for the population	ACAT, CbD, mini-CEX	1
Explain commissioning, funding and contracting arrangements relevant to the specialty	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 • Patient and public involvement processes and role	ACAT, CbD, mini-CEX	1
Skills		
Demonstrate developing skills in managing change and managing people	ACAT, CbD, mini-CEX	1,3
Demonstrate developing interviewing techniques including those required for performance reviews	ACAT, CbD, mini-CEX	1,3
Contribute to the writing of a business plan	ACAT, CbD, mini-CEX	1
Behaviours		
Show an awareness of equity in healthcare access and delivery	CbD	
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
Show a commitment to the proper use of public money and take action when resources are not used efficiently or effectively	CbD, MSF	1, 2,3
Demonstrate awareness that in addition to patient specific clinical records, clinical staff also have responsibilities for other records (e.g. research)	CbD, MSF	1,2,3

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

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
Describe how to identify adult learning principles	CbD	1
Describe how to identify learner needs	CbD	1
Outline how to structure a teaching activity	CbD	1
Explain varied teaching strategies	CbD	1
Describe how to identify learning styles	CbD	1
Describe principles of evaluation	CbD	1
Skills		
Facilitate learning process	CbD, ECE	1
Identify learning outcomes	CbD, ECE	1
Construct educational objectives	CbD, ECE	1
Design and deliver an effective teaching event	CbD, ECE	1
Communicate effectively with the learners	CbD, ECE, MSF	1
Use effective questioning techniques	CbD, ECE	1
Teach large and small groups effectively	CbD, ECE, MSF	1
Select and use appropriate teaching resources	CbD, ECE	1
Give constructive effective feedback	CbD, ECE, MSF	1,3
Evaluate programmes and events	CbD, ECE	1,3
Use teaching media that is appropriate to the teaching setting	CbD, ECE	1,3
Behaviours		
Demonstrate a willingness and enthusiasm to teach	CbD, ECE, MSF	1,3
Show respect for the learner	CbD, ECE, MSF	1,3
Demonstrate a professional attitude towards teaching	CbD, ECE, MSF	1,3
Show commitment to teach	CbD, ECE, MSF	1,3
Demonstrate a learner centred approach to teaching	CbD, ECE, MSF	1,3

Ethical Research projects

To be able to plan and analyse a research project
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, mini-CEX	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

Policy, research and change management

To understand the principles behind policy, research and change management		
Knowledge	**Assessment Methods**	**GMP**
Be aware of current UK screening, immunisation and reporting programmes that relate to infection	ACAT, CbD, mini-CEX	1
Be aware of current guidance for the clinical care of infection patients	ACAT, CbD, mini-CEX	1
Be aware of and maintain an up to date knowledge of research evidence relating to infection	ACAT, CbD, mini-CEX, ECE	1
Apply a variety of methodologies for developing creative strategies for improving services	ACAT, CbD, mini-CEX	1
Know how to access and use local health data	ACAT, CbD, mini-CEX	1
Know how to access resources for action and advocacy (e.g. resources, legislation, policy documents)	ACAT, CbD, mini-CEX	1
Know the function and responsibilities of national bodies such as DH, CQC, NICE, NPSA, NCAS; Royal Colleges and Faculties, specialty specific bodies, representative bodies; regulatory bodies; educational and training organisations relevant to the particular developed administration in which practising	ACAT, CbD, mini-CEX	1
Skills		
Be able to access and make use of appropriate population, demographic, socio-economic and health data	ACAT, CbD, mini-CEX	1
Adjust central policy and guidance for local circumstances and conditions	ACAT, CbD, mini-CEX	1,2

Implement policy and directives applicable to local and global practice	ACAT, CbD, mini-CEX	1
Discuss the local, national and UK health priorities and how they impact on the delivery of health care relevant to the specialty	ACAT, CbD, mini-CEX	1
Identify trends, future options and strategy relevant to the specialty and delivering patient services	ACAT, CbD, mini-CEX	1
Question existing practice in order to improve services	ACAT, CbD, mini-CEX	1,2
Apply creative thinking approaches (or methodologies or techniques) in order to propose solutions to service issues	ACAT, CbD, mini-CEX	1,2
Behaviours		
Be open to directives, policy and advice from government, specialist society, local management and others	CbD, mini-CEX	1
Comply with national guidelines that influence healthcare provision	CbD, mini-CEX	1
Willingly articulate strategic ideas and use effective influencing skills	CbD, mini-CEX	1
Demonstrate a commitment to implementing proven improvements in clinical practice and services	CbD, mini-CEX	1

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
Recognise the links between health and work, including the benefits of work on well-being	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 impact of the developed world strategies on the third world	ACAT, CbD, mini-CEX	1
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
Knowledge of any existing indicators or potential health risks related to overweight/obesity including clinical indicators, medication, lifestyle factors and family history	ACAT, CbD, mini-CEX	1
Detailed knowledge of national and local obesity prevalence and probable future trends	ACAT, CbD, mini-CEX	1
Skills		
Identifies opportunities to prevent ill health and disease in patients	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
Recognises and is able to balance autonomy with social justice	CbD, mini-CEX	1, 3
Work collaboratively with other agencies, e.g. occupational health services, to improve the health of individual patients, and help them to remain at or return to work whenever appropriate	CbD, mini-CEX	1,3
Identify opportunities to promote changes in lifestyle and other actions which will positively improve health, e.g. to encourage smoking cessation and / or weight reduction	CbD, mini-CEX	1,3
Encourage patients to remain at or return to work whenever appropriate	CbD, mini-CEX	1,3
Provide information to an individual about mechanisms to support them remaining at work or returning to work, and offering encouragement that they should do so whenever possible	CbD, mini-CEX	1,3
Behaviours		
Engages in effective team-working around the improvement of health	ACAT, CbD, MSF	1, 3
Encourages, where appropriate, screening to facilitate early intervention	CbD	1
Seeks out and utilises opportunities for health promotion and disease prevention	CbD	1

3.RELATIONSHIPS WITH PATIENTS

Objective: to ensure that the trainee has the knowledge, skills and attitudes to act in a professional manner at all times.

New specialists will:
- Be skilled in building relationships of trust with patients and their families, through effective interpersonal skills, a courteous and compassionate approach, and respect for their privacy and dignity, and cultural and religious beliefs
- Follow the principles and legal aspects of consent and confidentiality
- Be able to manage difficult and complex situations with patients and their families, to advise them appropriately and to manage complaints effectively.

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. .adolescents / young adults. 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
Use by patients of on-line health information and pharmaceutical purchasing	CbD, mini-CEX	1,2,4
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
Encourages patients to voice their preferences and personal choices about their care	ACAT, mini-CEX	3
Respond to people in an ethical, honest and non-judgmental manner	CbD	1,3,4
Behaviours		
Supports patient self-management	ACAT, CbD, mini-CEX	3
Respond to questions honestly and seek advice if unable to answer	ACAT, CbD, mini-CEX	3
Recognises the duty of the medical professional to act as patient advocate	ACAT, CbD, mini-CEX, MSF	3, 4

Continuity of care

To understand and proactively encourage continuity of care		
Knowledge	**Assessment Methods**	**GMP**
Explain the relevance of continuity of care	ACAT, CbD, mini-CEX	1
Skills		
Ensure satisfactory completion of reasonable tasks at the end of the shift/day with appropriate handover	ACAT, CbD, mini-CEX	1,2
Ensure appropriate documentation for handover	ACAT, CbD, mini-CEX	1,2,3
Make adequate arrangements to cover leave	ACAT, CbD, mini-CEX	1,2,3
Behaviours		
Recognise the importance of punctuality and attention to detail	ACAT, CbD, mini-CEX, MSF	1,3
Recognise importance of communication with patients/carers	ACAT, CbD, mini-CEX, MSF	1,3

Valid consent

To understand the necessity of obtaining valid consent from the patient and how to obtain it		
Knowledge	**Assessment Methods**	**GMP**
Describe the process for gaining informed 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
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
Understand the social and cultural issues that might affect consent	CbD	1,3,4
Provides a balanced view of all care options	ACAT, CbD, mini-CEX	1, 3, 4
Understand the legal aspects of consent in respect to adolescents and young adults and how this differs across the countries in the UK	CbD, MSF	1
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	ACAT, CbD, mini-	1, 3

| competent to perform, in accordance with GMC/regulatory | CEX | |

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	CbD, mini-CEX	1
Outlines and follows the guidance given by the GMC on confidentiality	CbD, mini-CEX	1
Defines the provisions of the Data Protection Act and Freedom of Information Act	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	CbD, mini-CEX	1, 4
Outlines situations where patient consent, while desirable, is not required for disclosure e.g. serious communicable diseases, public interest	CbD, mini-CEX	1, 4
Outlines the procedures for seeking a patient's consent for disclosure of identifiable information	CbD, mini-CEX	1
Recalls the obligations for confidentiality following a patient's death	CbD, mini-CEX	1, 4
Recognises the problems posed by disclosure in the public interest, without patient's consent	CbD, mini-CEX	1, 4
Recognises the factors influencing ethical decision making, including religion, personal and moral beliefs, cultural practices	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	CbD, mini-CEX	1
Recognises the role and legal standing of advance directives	CbD, mini-CEX	1
Outlines the principles of the Mental Capacity Act	CbD, mini-CEX	1
Demonstrate an understanding of adolescents' and young adults' right to confidentiality and the importance of safeguarding	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	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	CbD, MSF	1, 3
Counsels patients, family, carers and advocates tactfully and effectively when making decisions about resuscitation status, and withholding or withdrawing treatment	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

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
Listen actively and question sensitively to guide the patient and to clarify information in particular with regard to matters that they may find it difficult to discuss, e.g. domestic violence or other abuse	mini-CEX	1, 3
Understands that the needs and issues of adolescents, young adults and those in transition to adult services may differ from others	ACAT, CbD, mini-CEX	1,3
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	CbD, mini-CEX	1,3
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 of 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	CbD	1,3

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	CbD	1,3
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-CEX, MSF	1, 3
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

Complaints

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: • 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	CbD, MSF	1
Describe systems of independent review	CbD, MSF	1
Skills		
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, 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, MSF	1, 3, 4
Behaviours		
Contributes to a fair and transparent culture around complaints and errors	CbD, MSF	1
Recognises the rights of patients, family members and carers to make a complaint	CbD, MSF	1, 4

4. WORKING WITH COLLEAGUES

Objective: To demonstrate good working relationships with colleagues and appropriate communication skills.

New specialists will:

- Strive for continuing improvement in all aspects of their work and that of colleagues while mindful of priorities and high standards
- Have effective interpersonal skills which enable them to bring out the best in colleagues, to resolve conflicts when they arise and to develop working relationships within the team
- Support teams that bring together different professions and disciplines and other agencies, to provide high quality healthcare
- Develops an understanding of leadership by drawing on values, strengths and abilities to deliver high standards of care.

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
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	ACAT, CbD, mini-	3

	CEX, MSF	
teamwork, including adoption of a leadership role when appropriate but also recognising where others are better equipped to lead	CEX, MSF	
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 communication with any member of the team	ACAT, CbD, mini-CEX, MSF	1, 3
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

Acting with integrity

Summary description of this objective goes here		
Knowledge	**Assessment Methods**	**GMP**
Describe the professional, legal and ethical codes of the GMC, e.g. Fitness to Practice and any other codes pertaining to the trainee's specialty	ACAT, CbD, mini-CEX	1
Summarise the key issues of prejudice and preferences within self, others, society and cultures	ACAT, CbD, mini-CEX	1
Skills		
Recognise, analyse and appropriately deal with unprofessional behaviours in clinical practice, taking into account local and national regulations	ACAT, CbD, mini-CEX	1,4
Create open and non-discriminatory professional working relationships with colleagues	ACAT, CbD, mini-CEX	1,3,4
Awareness of the need to prevent bullying and harassment	ACAT, CbD, mini-CEX	1,3,4
Behaviours		
Accept of professional regulation	CbD, mini-CEX, MSF	1,2
Promote professional attitudes and values	ACAT, CbD, mini-CEX, MSF	1,2,3,4
Act with probity and the willingness to be truthful and to admit errors	ACAT, CbD, mini-CEX, MSF	1,2,3,4

5.PERSONAL BEHAVIOUR

Objective: To understand the importance of the personal behaviour of the doctor.

 will:

- Act quickly and effectively if they have reason to believe that their own or a colleague's conduct, performance or health may put patients at risk.

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 Core Medical Training Curriculum: • 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	ACAT, CbD, mini-CEX, MSF	1,2,3,4
Outlines the relevance of professional bodies (Royal Colleges, JRCPTB, GMC, Postgraduate Deans, BMA, specialist societies, medical defence societies)	CbD	1
Skills		
Practises with professionalism including: • Integrity • Compassion • Altruism • Continuous improvement • Aspiration to excellence • Respect of cultural and ethnic diversity	ACAT, CbD, mini-CEX, MSF	1, 2, 3, 4

• Regard to the principles of equity		
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
Is able to handle enquiries from the press and other media effectively	CbD, DOPS	1, 3
Ability to prepare rotas; delegate; organise and lead teams	CbD	1, 3
Ability to contribute to the recruitment and selection of staff	CbD	1, 3
Behaviour		
Recognises the need to use all healthcare resources prudently and appropriatel	ACAT, CbD, mini-CEX	1, 2
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
Takes part in 360 degree feedback as part of appraisal	CbD, MSF	1, 2, 4
Recognises need for reliability and accessibility throughout the healthcare team	ACAT, CbD, mini-CEX, MSF	1

SPECIALTY SPECIFIC COMPETENCIES FOR COMBINED INFECTION TRAINING

This section outlines the core scientific and clinical training in infection which underpins and prepares trainees for specialist training in medical microbiology, medical virology and infectious diseases, and the competencies acquired in relation to the practice of these specialties. This section will be complemented by training and courses organised by the local Deanery holding the trainee's NTN. It is the responsibility of the educational supervisor to liaise with the local Programme Director and the Postgraduate Dean to ensure that the trainee has access to the necessary training opportunities, including attendance at courses, to enable them to acquire the competencies as outlined in this curriculum.

6. BASIC BIOLOGY OF BACTERIA, VIRUSES, FUNGI AND PARASITES; HOST-PATHOGEN RELATIONSHIPS

To understand the basic biology of micro-organisms that may cause disease in humans, and how they cause disease.		
Knowledge	**Assessment Methods**	**GMP**
Understand basic biology, including structure, function, genetics, and pathogenesis, of major bacterial, viral, fungal and parasitic agents	KBA, CbD, mini-CEX	1
Understand the principles of microbiological and clinical classification of microorganisms	KBA, CbD, mini-CEX	1
Describe local and global epidemiology of major infectious agents and their disease associations	KBA, CbD, mini-CEX	1
Understand the principles of the immune response to infection and the role of innate and adaptive immunity	KBA, CbD, mini-CEX	1
Understand the basis of different types of host-parasite relationships, e.g. the importance and evolution of normal flora, viral latency and quasispecies evolution	KBA, CbD, mini-CEX	1
Understand the principles of active and passive immunisation	KBA, CbD, mini-CEX	1
Skills		
Apply knowledge of basic biology and host-pathogen relationship to inform clinical management of infection	KBA, CbD, mini-CEX	1,2
Behaviours		
Enthusiastic approach to learning	MSF	1,4
Involve appropriate multi-disciplinary specialties in the management of infection	MSF	1,3

7.MICROBIOLOGY/VIROLOGY LABORATORY PRACTICE

Objective:
To be competent in the use of the laboratory in the investigation, management and prevention of infection

Pre analytical phase

To appreciate the range of investigation and diagnostics available in different clinical scenarios, the optimal samples to send and the conditions in which to send them		
Knowledge	**Assessment Methods**	**GMP**
Be aware of the repertoire of investigations available for a given clinical scenario, and understand their merits and limitations	KBA, CbD, mini-CEX	1
Be able to refer to the local laboratory standard operating procedures (SOPs) for guidance on the nature of the sample and the tests performed	KBA	1
Understand the correct sample type, volume (where relevant) and optimal conditions for storage and transport that are required for the individual test.	KBA	1
Skills		
Be able to select the most appropriate investigations for the individual patient.	KBA, CbD, mini-CEX	1
Behaviours		
Ability to liaise closely with laboratory staff	MSF	3
Willingness to communicate with, guide, inform and educate other clinicians	MSF	3

Analytical Phase

To understand and appreciate the advantages, limitations and use of investigations and diagnostics, and the role and use of reference laboratories To appreciate the methods and risks of routine laboratory diagnostics		
Knowledge	**Assessment Methods**	**GMP**
Have knowledge of health and safety aspects of laboratory diagnostic procedures and bio-safety level classification when dealing with pathogens (See Health and Safety section)	KBA, CbD, mini-CEX	1
Understand the principles, uses and limitations of laboratory diagnostic procedures (manual, automated and Point-of-Care) – including microscopy, culture, protein/nucleic acid-based, serological/other assays of host-response, and more novel diagnostics	KBA, CbD, mini-CEX	1
Understand the repertoire and use of reference laboratories when dealing with pathogens	KBA, CbD, mini-CEX	1

Skills		
To be able to follow an SOP/examination procedure and use time effectively and efficiently to achieve an optimal turnaround time	MSF, mini-CEX	1,2
Behaviours		
Establish a close rapport and understanding with laboratory staff and reference centres.	MSF, mini-CEX	3
Observe good laboratory practice	MSF	1,2
Show willingness to learn from members of a multi-disciplinary team and to accept constructive feedback.	MSF	3

Post-analytical Phase:

To understand and appreciate the importance of correctly recording, interpreting and relaying the results of laboratory investigations and diagnostics		
Knowledge	**Assessment Methods**	**GMP**
Understand the importance of keeping concise, accurate, confidential, and legible records of laboratory investigations	CbD, mini-CEX	1,2
Interpret laboratory investigations and their results accurately.	CbD, mini-CEX KBA	1,1
Understands results comprehensively with results from other specimens and other investigations such as radiology, biochemistry and haematology	CbD, mini-CEX KBA	1
Skills		
Produce a laboratory report containing correct results and appropriate interpretative comments using appropriate IT systems	MSF, CbD	1,2
Behaviours		
Communicate promptly and accurately with clinician	MSF	3
Ensure patient confidentiality	MSF	3
Be able to place the patient and the clinical condition at the centre of all deliberations and interpret laboratory results accordingly	MSF	3

Laboratory Management and Quality assurance:

To appreciate the requirements for laboratory quality assurance and accreditation, and the methods used to assess the adequacy of the laboratory processes		
Knowledge	**Assessment Methods**	**GMP**
Understand the principles of internal and external quality assurance, and laboratory accreditation	KBA, CbD, mini-CEX	1,2
Understand the importance of good record keeping	KBA, CbD, mini-CEX	1,2
Skills		
Be able to perform horizontal, vertical, and examination audits, as appropriate to level of training	KBA, CbD, mini-CEX	1,2

Behaviours		
Show commitment to maintaining high standards of laboratory practice	CbD	1,2
Establish a close rapport and mutual respect with laboratory staff	MSF	3

8.HEALTH AND SAFETY

Health & Safety

To obtain an in-depth understanding of health and safety issues both locally and nationally in order to practise safely in a laboratory and in a clinical or other setting, and to advise on safe practice
To obtain an understanding of risk assessment for dealing with category 3 and 4 pathogens and be familiar with the requirements for handling of such pathogens and of patients potentially infected with them.

Knowledge	Assessment Methods	GMP
Have an understanding of the current legislative framework underpinning Health & Safety (H&S) at work	KBA	1,2,3
Explain basic laboratory hazards and precautions against them	KBA, DOPS	1
Explain principles of universal precautions, hazard groups and containment levels	KBA, ECE, DOPS, CbD	1
Skills		
Have an understanding of infection-prevention and control risk assessment procedures	KBA, CbD, ECE	1,2
Work safely in a laboratory at appropriate Advisory Committee of Dangerous Pathogens (ACDP) level, including sterilisation, disinfection and waste disposal	KBA, DOPS	1
Behaviours		
Act in accordance with the principles of *Good Medical Practice*	MSF, ECE, CbD	1,2,3,4

9.PRINCIPLES OF PUBLIC HEALTH IN RELATION TO COMMUNICABLE DISEASES

Principles of Public Health in relation to Infection

To understand the importance of control of communicable diseases and be able to evaluate effectiveness of services to prevent, diagnose and treat infection.		
Knowledge	**Assessment Methods**	**GMP**
Provide an overview of public health issues related to infectious diseases, including identifying and describing the key communicable disease threats: aetiology, how these diseases spread, and how they are prevented	mini-CEX, ACAT, CbD ; KBA	1,3
Outline modes of transmission, incubation period, period of communicability of common agents with public health importance	mini-CEX, ACAT, CbD ; KBA	1,3
Describe basic epidemiological methods	mini-CEX, ACAT, CbD ; KBA	1,3
Understand the requirements for statutory and 'good practice' notification of infectious disease	mini-CEX, ACAT, CbD	1,3
Understand the function of the health protection and environmental health officers (or their equivalents), and their relationship with key infection control personnel in the hospital and community	mini-CEX, ACAT, CbD	1,3
Outline the role of the UK's health protection agencies and other NHS and governmental organisations at local, national and International levels in the control of, and emergency planning for, outbreaks of infection	CbD, KBA	1,3
Understand the role of vaccination in vaccine preventable communicable diseases	CbD, KBA	1,2
Skills		
Notify infectious disease (statutory requirements and 'good practice' notifications) when required	mini-CEX, ACAT, CbD	1,3
Provide appropriate vaccine advise	mini-CEX, ACAT, CbD	1,3
Behaviours		
Demonstrate good working relationships with CsCDC, environmental health officers (or equivalent functions) and other colleagues that provide health protection functions	CbD, MSF	1,3

10. INFECTION PREVENTION AND CONTROL

Objective: To understand the principles of infection prevention and control in order to reduce risk of acquiring infection and to control its spread.

Organisation of Infection Prevention & Control responsibilities

To understand the legislative and organisational frameworks of infection prevention and control.		
Knowledge	**Assessment Methods**	**GMP**
Understand the responsibilities of healthcare institutions for IPC under relevant legislations and guidelines.	ECE, CbD	1,2
Describe the roles and responsibilities of individual members of healthcare institutions in monitoring, responding to, and resourcing IPC needs.	ECE, CbD	1,2
Understand the role of public health bodies as well as reference laboratories in relation to the management of healthcare associated infections (HCAIs).	ECE, CbD	1,3
Recognise the benefits of adhering to scientifically sound practices of IPC to patients and staff as well as the adverse outcomes resulting from failure to comply with them	ECE, CbD	1,2,3
Skills		
Keep up-to-date and comply with national legislation and guidance on IPC	ECE, CbD, KBA	1
Behaviours		
Willingness to learn	ECE, CbD, MSF	1
Appreciate the nature of the multi-disciplinary team involved with infection prevention and control	ECE, MSF	3

Principles of Infection Prevention and Control

To understand the principles underpinning the principles and practices of infection prevention and control		
Knowledge	**Assessment Methods**	**GMP**
Understand the basic biology of common agents implicated in HCAIs and their pathogenesis	CbD, mini-CEX, KBA	1
Understand the mode of spread and optimum prevention and control strategies of HCAIs	CbD, mini-CEX, KBA	1
Understand the concept of "The Chain of Infection" • Pathogen or infectious agent • Reservoir (patient, healthcare worker, environment) • Portal of exit • Portal of entry • Mode of transmission • Susceptible host risk factors	CbD, mini-CEX, KBA	1

Understand the concept of colonisation, infection and disease	CbD, mini-CEX, KBA	1
Understand the mechanisms by which organisms acquire antimicrobial resistance and how to use this knowledge to inform appropriate antimicrobial prescribing	CbD, mini-CEX, KBA	1
Understand the concept of • Universal Precautions • Protecting Healthcare workers from infection in the work place, including prevention of sharps/splash incidents • Source and protective isolation • Antibiotic stewardship • Aseptic non-touch technique (ANTT) • Single use items	ACAT, ECE, CbD, mini-CEX	1
Understand specific control measures employed to prevent transmission of infection, • Hand hygiene • Personal Protective Equipment (PPE) • Isolation and Cohorting Strategies	ACAT, ECE, CbD, mini-CEX	1
Understand the basic principles of environmental control measures • Cleaning, disinfection, and sterilization of patient care equipment • Environmental cleaning (housekeeping	ACAT, CbD, mini-CEX	1
Understand the role of the local authority in relation to infection control	ECE, CbD, mini-CEX	1,3

Skills		
Recognise potential for transmission of infection in clinical settings	ACAT, ECE, CbD, mini-CEX	1, 2
Counsel patients on matters of infection risk, transmission, and control	ACAT, mini-CEX, CbD	2,3,4
Follow local infection prevention and control procedures	ACAT, mini-CEX	1,2
Perform practical clinical procedures using aseptic techniqu	DOPs	1,2
Prescribe antibiotics according to local antibiotic guideline	ACAT, CbD, mini-CEX	1,2
Undertake audits of infection prevention and control practices	ECE, CbD	1, 2

Behaviours		
Lead by example for all staff, patients, students and relatives to observe infection control principles	ACAT, ECE, MSF	1,2,3,4

Management and reporting health-care associated infections (HCAIs)

To understand the epidemiological and clinical aspects of healthcare-associated infections (HCAIs)		
Knowledge	**Assessment Methods**	**GMP**
Describe the important clinical syndromes of HCAIs, risk factors, organisms involved, clinical presentation, diagnosis, treatment, prevention and control	ACAT, CbD, mini-CEX, KBA	1

	Assessment Methods	GMP
Understand the principles of Root Cause Analysis (RCA) and reporting infection-related adverse events including 'serious untoward incidents' (SUI)	ECE, CbD	1,2
Understand the principles of infection control audits and their importance to maintaining good medical practice.	ECE, CbD	1,2
Skills		
Report and interpret IPC surveillance data accurately	ECE, CbD, MSF	1,2,3,4
Undertake an IPC related audit	ECE, MSF	1,2,3
Behaviours		
Conform with good infection control practice	ACAT, ECE, MSF	1,2,4
Appreciate the nature of the Multi-Disciplinary team working in infection prevention and control	ACAT, ECE, MSF	3

Outbreak and Surveillance

To understand the principles of diseases outbreak management		
Knowledge	**Assessment Methods**	**GMP**
Understand the role of the laboratory in investigating disease outbreaks	ACAT, ECE, CbD, mini-CEX	1,3
Understand the key principles underpinning outbreak investigation, control, and reporting	ACAT, ECE, CbD, mini-CEX	1,3
Skills		
Utilise laboratory resources appropriately when investigating an outbreak	ACAT, ECE, CbD, mini-CEX	1
Behaviours		
Abe to work effectively within a team	ACAT, ECE, MSF	3
Appreciation of roles of other health professionals	ACAT, ECE, MSF	3
Have an alert and vigilant mind	ACAT, ECE, MSF	1,2

11. IMPORTANT CLINICAL SYNDROMES

Important clinical syndromes

To be able to diagnose and manage important clinical syndromes where infection is in the differential diagnosis		
Knowledge	**Assessment Methods**	**GMP**
Describe the epidemiology, presentation, diagnosis and management of key clinical syndromes associated with community-acquired infections, healthcare-associated infections, and infections related to primary or secondary immunodeficiency	KBA, CbD	
Understand the nature of infection in special populations including the complexity of their management e.g. alcohol and drug users, elderly, pregnant and postpartum women	KBA, CbD	
Explain the types of immunodeficiency and how they affect susceptibility to and control of infections	KBA, CbD	
Demonstrate a detailed knowledge of important conditions and syndromes in Infectious Diseases including: • Sepsis and systemic inflammatory response syndrome (SIRS) • pyrexia of unknown origin, • chronic infections, including blood borne viruses (HIV, viral hepatitis) and tuberculosis • cardiovascular infections • skin and soft tissue, musculoskeletal, bone and joint infections • Upper and lower respiratory tract infections, • gastro-intestinal, hepatic, pancreatic and biliary infections, • urological and genital infections including Sexually Transmitted Infections (STIs), • neurological and ocular infections • multisystem infections • Prevention and management of Congenital and perinatal infection including exposure to viral exanthems • Device associated infection • Zoonotic infections	KBA, CbD	
Skills		
Take relevant clinical/infection history, perform clinical examination, and use relevant investigations (e.g. imaging) to establish a differential diagnosis	CbD, mini-CEX	
Select appropriate investigations and subsequently interpret the results to guide the management of infection	KBA, CbD, mini-CEX	
Use relevant local, regional, national guidelines especially those from specialty societies to manage infection	KBA, CbD, mini-CEX	
Able to adjust management plan depending on progress and developments	KBA, CbD, mini-CEX	
Behaviours		
Establish rapport with other clinical staff	MSF	
Be able to interpret and explain results and treatments simply and	MSF, mini-CEX	

effectively to both clinicians and patients	
Appreciate the importance of being adaptable and open in the face of new or changing information	MSF
Maintain confidentiality	MSF
Maintain non-judgemental attitude to disease and its acquisition	MSF

12. UNDERSTANDING USE OF ANTIMICROBIAL AGENTS

Properties of antimicrobial agents

Acquire a basic understanding of antimicrobial agents and their use in clinical settings		
Knowledge	**Assessment Methods**	**GMP**
Understand the concept of broad and narrow spectrum antibiotics	KBA, CbD	**1**
Understand the key properties of the classes of antimicrobial agents. • Mechanism of action • Spectrum of activity • Route of administration • Dosing regimen • Penetration • Side-effects • Resistance patterns • Cost	KBA, CbD	1
Understands mechanisms of resistance to antimicrobial agents..	KBA, CbD	1
Understand the mechanism of action and role of monoclonal antibodies, antitoxins, and immunoglobulins in prophylaxis and treatment of infections	KBA, CbD	1
Describe the pharmacodynamic and pharmokinetics of antimicrobials, and how these affect choice and dosing of antimicrobials	KBA, CbD	1
Understand the limitations of in vitro methods used to detect antimicrobial resistance and their limitations	KBA, CbD	1
Skills		
Appropriate prescribing of antimicrobial drugs	KBA, CbD, mini-CEX	1
Adherence to evidence based guidance	KBA, CbD, mini-CEX	1,2
Behaviours		
Seek expert advice when necessary	CbD, MSF	1,3
Remain abreast of new developments and knowledge and apply this to clinical practice	CbD, MSF	1

Use of antimicrobials agents in Clinical Management

To be able to use antimicrobial agents rationally based on evidence and existing policies		
Knowledge	**Assessment Methods**	**GMP**
Understand the principles of empirical use of antimicrobials for common infections and syndromic presentations, before laboratory results are available	KBA, CbD, mini-CEX	1
Understand the selection of optimal antimicrobials for treatment of infection based on susceptibility report, the clinical scenario and results of other investigations	KBA, CbD, mini-CEX	1
Understand the optimal duration of appropriate therapy and when to escalate/ de-escalate	KBA, CbD, mini-CEX	1

	Assessment Methods	GMP
Understand the importance of measuring blood levels of certain antimicrobial agents to ensure clinical efficacy and reduce toxicity	KBA, CbD	1
Skills		
Appropriate use of antimicrobial drugs	KBA, CbD, mini-CEX	1,2
Appropriate use of local antibiotic polices and national guidelines	CbD, mini-CEX	1,2
Behaviours		
Establish a rapport and understanding with both laboratory and clinical staff	MSF	1,3
Keep accurate and legible records	MSF	1,2
Ability to apply theoretical knowledge to practical situations	MSF, CbD	1

Safe use of antimicrobial agents

To be able to use antimicrobial agents safely and competently

Knowledge	Assessment Methods	GMP
Understand the importance of the safe use of antimicrobial agents	KBA, CbD	
Knowledge of symptoms and signs of antimicrobial toxicity	KBA, CbD, mini-CEX	
Understand the adverse consequences of antimicrobials, including effects on normal microbial flora, toxicity and interactions with other drugs	KBA, CbD	
Understand the importance of measuring blood levels of certain antimicrobial agents to avoid toxicity	KBA, CbD	
Skills		
Use the most effective and non-toxic antimicrobial regimes.	KBA, CbD, mini-CEX	
Be vigilant for potential side effects and monitor appropriately	KBA, CbD, mini-CEX	
Able to prescribe in patients particularly in relation to allergy, in pregnancy, in children and in individuals with deranged liver or kidney function	KBA, CbD, mini-CEX	
Behaviours		
Enthusiastic approach to learning	MSF	
Establish a rapport with both laboratory and clinical staff	MSF, CbD	
The ability to seek expert advice when necessary	MSF	

Antimicrobial stewardship and control

To understand the evidence that underpins policy development and stewardship

Knowledge	Assessment Methods	GMP
Knowledge of Department of Health and other regulatory bodies' requirements for antimicrobial stewardship	KBA, CbD	
Understand the importance of antimicrobial formularies, and prescribing control policies and processes.	CbD	
Understand the role of the Medicines Management Committees (or equivalent) and antimicrobial pharmacist	CbD	
Skills		

Communicate effectively on antibiotic policy and stewardship with antimicrobial pharmacist	Mini-CEX, MSF
Behaviours	
Enthusiastic approach to learning.	MSF
Appreciation of roles of other healthcare professionals especially the antimicrobial pharmacist or equivalent	MSF
Ability to apply theoretical knowledge to practical situations	MSF, CbD
Ability to liaise with and support other healthcare professionals	MSF

13. THE MANAGEMENT OF HIV INFECTION

Ability to recognise and manage infection including opportunistic infections in the HIV positive patient, and to manage infection risk		
Knowledge	**Assessment Methods**	**GMP**
Knowledge of the function of the intact immune system	KBA, mini-CEX, CbD	1,2
Knowledge of pathophysiology of HIV infection	KBA, mini-CEX, CbD	1,2
Knowledge of the epidemiology and natural history of HIV	KBA, mini-CEX, CbD	1,2
Ability to provide relevant counselling to patients, carers and relatives, and to individuals potentially exposed to HIV	KBA, mini-CEX, CbD	1,2
Knowledge of therapeutic options in HIV management	KBA, mini-CEX, CbD	1,2
Understanding of risk/benefit analysis of therapies for HIV and for prophylaxis against HIV and opportunistic infections	KBA, mini-CEX, CbD	1,2
Ability to recognise the clinical features of infections and other disease processes in the HIV infected host	KBA, mini-CEX, CbD	1,2
Recognition of the relevance of specific aspects of history and specific physical signs (and their absence)	KBA, mini-CEX, CbD	1
Understanding of the utility of appropriate laboratory investigations	KBA, mini-CEX, CbD	1
Skills		
Ability to recognize clinical and laboratory manifestations of immune deficiency	mini-CEX	1,3
Ability to interpret test results relating to the direct management of HIV infection and explain their significance to the patient	mini-CEX	1,3
Ability to advise regarding risk reduction for opportunistic infections in the HIV-infected individual, through behavioural change, chemoprophylaxis and vaccination	mini-CEX, CbD, KBA	1,3
Application of communication skills that allow patients, carers and others, including those at HIV risk, to participate in management decisions	mini-CEX, CbD, KBA	1,3
Ability to provide information on HIV transmission and strategies for risk reduction	mini-CEX, CbD, KBA	1,3
Behaviours		
Demonstrate a consideration of the interaction of psychological and social well being on physical symptoms	mini-CEX, CbD	1
Demonstrate empathy and appreciation of patient anxieties	mini-CEX, MSF, CbD	1,3
Have an awareness of patient's rights (including confidentiality) and responsibilities.	mini-CEX, CbD	1,4
Have a non-judgemental attitude to risk activities of the patient	mini-CEX, CbD CbD, MSF	1
Demonstrate the ability to work as part of a multidisciplinary team for the benefit of the patient with colleagues in, for example, sexual health, oncology, hepatology		1,3

| Recognition of social, cultural, sexual and religious factors that may impact on HIV management | MSF | 1 |

Specific HIV Diagnostics

Competence in the use of specific HIV diagnostics.		
Knowledge	**Assessment Methods**	**GMP**
Understanding of current diagnostic techniques	KBA, mini-CEX, CbD	1,2
Skills		
Appropriate use of current diagnostic techniques	mini-CEX, CbD, KBA	1,3
Behaviours		
Recognition and appreciation of patient wishes and concerns	mini-CEX, CbD	1
Communicate effectively with regard to the infection and need for treatment	mini-CEX, CbD	3

Specific Therapies in HIV-infected Patients

Ability to institute and manage specific therapies in immune compromised patients.		
Knowledge	**Assessment Methods**	**GMP**
Knowledge of antiretroviral drugs including: • pharmacokinetics, modes of action, interactions, side effects of the commonly used agents • indications for and use of antiretroviral drugs in treating HIV infection • laboratory tests used in monitoring response and in informing use of certain drugs • mechanisms of resistance and cross resistance • awareness of current treatment guidelines • post-exposure prophylaxis of HIV • anti-retroviral agents in the prevention of mother-to-child transmission	CbD, mini-CEX	1,2
Skills		
Ability to apply guidelines and recommend appropriate treatment and interventions	CbD, mini-CEX	1,3
Monitoring and recognition of side effects and drug interactions	CbD, mini-CEX	1,2
Engaging patients to support adherence and facilitate treatment decisions	CbD, mini-CEX	1,3
Behaviours		
Appropriate application of knowledge to the clinical situation	CbD, mini-CEX, MSF	1

14. TRAVEL AND GEOGRAPHICAL HEALTH

Objectives:

- to be competent in the recognition and management of imported infection and the recognition of problems of non communicable disease in immigrants from resource poor settings
- to be competent in giving advice about pre travel precautions including vaccination

Recognition and treatment of imported Infections

Recognition and treatment of imported infections.		
Knowledge	**Assessment Methods**	**GMP**
Clinical and epidemiological features of imported diseases, including severe communicable diseases such as viral haemorrhagic fevers	mini-CEX, CbD	1,2
Availability and limitations of specialised diagnostic tests	CbD	1,2
Management of malaria and other imported infections	CbD	1
Familiarity with current guidelines and availability of tertiary care and advice lines	mini-CEX, CbD	1
Skills		
Ability to elicit and record appropriate travel history, and develop a differential diagnosis	mini-CEX, CbD	1,3
Ability to select and interpret appropriate diagnostic tests	mini-CEX, CbD	1
Ability to manage malaria and other common imported infection	mini-CEX, CBD	1
Ability to recognize when tertiary level care/advice is needed and to seek it	mini-CEX, CbD	1
Ability to deal with severe communicable diseases (e.g. viral haemorrhagic fevers) and their infection control issues	mini-CEX, CBD, KBA	1
Behaviours		
Works within limitations and knows when to seek advice from senior colleagues	mini-CEX, CbD	1

Provision of health advice to travellers

Provision of health advice for travellers		
Knowledge	**Assessment Methods**	**GMP**
The geographical patterns of disease, risk factors for their acquisition, and the availability of paper, electronic and other resources (e.g. vaccination guides, websites, NATHNAC)	KBA, mini-CEX, CbD	1,2
Use, availability, efficacy and safety of vaccine	KBA, mini-CEX, CbD	1,2
Use, efficacy and safety of antimalarial prevention measure	KBA, mini-CEX, CbD	1,2
Principles of organising a travel clinic, and the medico-legal issues involved	KBA CbD	1
Skills		

Ability to take and record accurately pre-travel medical and travel history	mini-CEX, CbD	1,3
Ability to perform risk assessment appropriate to the traveller, including consideration of specific groups (e.g. the elderly, immunosuppressed) and the hazards of specific types of travel	mini-CEX, CbD	1,4
Ability to formulate and communicate appropriate verbal and written advice for traveller, and to motivate them to apply the advice	mini-CEX, CBD	1,3,4
Ability to prescribe and administer immunisations as appropriate	mini-CEX, CbD, DOPS	1
Ability to prescribe antimalarials as appropriate	mini-CEX, CbD	1
Behaviours		
Commitment to maintaining up to date information	CbD	1
Insight to determine when to seek further advice	CbD, MSF	1

Infection related problems of immigrants

Infection related problems of immigrants		
Knowledge	**Assessment Methods**	**GMP**
Outline health needs of particular populations, e.g. ethnic minorities, and recognise the impact of health beliefs, culture and ethnicity in presentations of physical and psychological conditions	KBA, mini-CEX, CbD	1,2
Epidemiological and clinical features of imported infection in immigrant groups	KBA, mini-CEX, CbD	1
Skills		
Ability to work with interpreters and patient support groups	mini-CEX, CbD	1,3
Ability to recognise both acute and chronic infections, including those that are asymptomatic, in immigrants	KBA, mini-CEX, CbD	1
Behaviours		
Recognise the indications for use of a chaperone	mini-CEX , MSF, CbD	1
Recognise the duty of the medical professional to act as patient advocate	mini-CEX, MSF, CbD	1,4

SPECIALTY SPECIFIC COMPETENCIES FOR INFECTIOUS DISEASES

15. DIAGNOSIS AND MANAGEMENT OF COMMUNITY-ACQUIRED INFECTIONS

Ability to achieve an appropriate specific or differential diagnosis and initiate appropriate management in community-associated infection scenarios

Knowledge	Assessment Methods	GMP
Demonstrate a comprehensive and extensive knowledge of the clinical presentations of infectious diseases that affect the: • Nervous system • Cardiovascular system • Pulmonary system and airways (including ears and nose) • Skin, soft tissue, bone, joint and other musculoskeletal systems • Gastro-intestinal, hepatic, pancreatic and biliary systems • Urinary and genital systems Including rare, atypical and unusual infections/presentations	CbD, mini-CEX, ACAT	1
Demonstrate a comprehensive and extensive knowledge of syndromes and conditions in infectious diseases such as: • Pyrexia of unknown origin, • Fever in the returning traveller • Multi-system infections • Sepsis syndrome and shock • Infections in injecting and other drug users	CbD, mini-CEX, ACAT	1
Explain the features, investigations, treatments and prophylaxes for rarer but important syndromes and scenarios including: • Envenomation and bites • Bioterrorism and deliberate release of biological agents	CbD, Mini-CEX	1,2
Demonstrate a knowledge of optimum evidence-based management of infections	CbD	1,2
Explain how to access up-to-date information and guidelines including those produced by agencies such as the public health/health protection organisations, BHIVA, infection societies, NICE	CbD	1,2
Skills		
Ability to assimilate clinical, laboratory and epidemiological information and to use this to differentiate between infections and other conditions	CbD, mini-CEX, ACAT	1,3
Construct a problem list in scenarios where there are a number of issues that need to be considered	CbD, mini-CEX, ACAT	1
Demonstrate continuing competence in core diagnostic, therapeutic and monitoring procedures including arterial blood gases, central venous cannulation, lumbar puncture, joint, pleural and ascitic	DOPS	1,2

aspiration, basic airway management and advanced life support (ALS)		
Commence a comprehensive, rational and adaptable clinical management plan	KBA, CbD, Mini-CEX, ACAT	1
Behaviours		
Consideration of diagnostic issues in relation to fears of patient	CbD, PS	1,4
Willingness to review, adjust and rationalise plans in the light of new information, progress and investigations	CbD, MSF, ACAT	1,3,4

Management of Longer-Term Conditions

Obtain competence in the management of longer-term conditions - including tuberculosis (TB) and hepatitis B and C

Knowledge	Assessment Methods	GMP
Demonstrate extensive knowledge of the epidemiology, natural history and clinical management of chronic infections, including TB and hepatitis B and C (including drug-resistant strains)	CbD, mini-CEX	1,2
Outline the importance and advantages of multi-disciplinary working	CbD, mini-CEX	1,3
Explain the roles and support available from allied healthcare workers, patient-support groups and other agencies	CbD, mini-CEX	1,3
Understand the impact of chronic and longer-term conditions on the physical, mental, psychological and social health of the individual, their relatives, friends and carers	CbD, mini-CEX	1,4
Skills		
Ability to diagnose illness (including atypical presentations) using clinical and epidemiological skills	mini-CEX, CbD	1
Be able to select those patients suitable for treatment and those more suitable for monitoring	mini-CEX, CbD	1
Be able to safely monitor therapy and response, and to act accordingly in the event of adverse events or poor response	mini-CEX, CbD	1,2
Counsel and support patients on matters of infection risk, transmission and control	mini-CEX, CbD	1,3,4
Be able to support the patient and carers to encourage compliance, and to act appropriately when non-compliance suspected or recognised	mini-CEX, CbD	1,2,3,4
Develop and agree a holistic management plan with the patient and carers, ensuring awareness of alternative therapies and means of patient support.	mini-CEX, CbD	1,4
Behaviours		
Non-judgmental approach particularly regarding disease, race, gender, life style, sexuality and religion	PS, MSF, CbD	1,3,4
Participate in collaborative multidisciplinary team working	MSF	1,3
Work with patients, their family, friends and carers and use their expertise to manage their condition collaboratively	PS, MSF, CbD	1,3,4
Acknowledge the potential impact of long-term conditions on the patient, family and friends	PS, MSF, CbD	1,3,4

Healthcare-Associated and Nosocomial Infections

Extend ability to recognise and manage healthcare-associated infections (HcAI) and nosocomial infections (including intensive care unit (ICU)-related)

Knowledge	Assessment Methods	GMP
Demonstrate a broad and extensive understanding of the presentation, pathophysiology and management strategies for healthcare-associated and nosocomial infections (including ICU-related)	CbD, mini-CEX	1,2
Describe the utility and limitations of diagnostics and other investigations in HcAI and nosocomial infections	CbD	1,2
Outline the preventable and non-preventable predisposing factors for HcAI and nosocomial infections	CbD	1,2
Understand the regulatory requirements associated with HcAI	CbD	1
Appreciate confidentiality and consent issues in the unconscious patient.	CbD, mini-CEX	1,2
Skills		
Ability to acquire relevant information pertinent to the specific clinical scenario.	mini-CEX, CbD, SCE	1,3
Ability to determine origin of infection and develop a strategy for its containment and treatment	CbD, mini-CEX	1,2
Behaviours		
Sensitivity to patients, carers and relative's anxieties with counselling where appropriate.	MSF, PS	1
Recognition of the need to involve the patient regardless of the level of comprehension or consciousness	MSF, PS	1,3
Evidence-based approach to the management of such infections	MSF, CbD	1,2

Specific Infections Related to Post-Operative Sepsis

Broaden abilities to recognise, investigate and treat specific infections related to post-operative sepsis

Knowledge	Assessment Methods	GMP
Demonstrate and understanding of common infections associated with particular surgical procedures	CbD, mini-CEX	1,2
Describe local/national anti-microbial resistance patterns	CbD, mini-CEX	1
Skills		
Ability to differentiate between colonisation and infection	CbD	1,2,3
Behaviours		
Establish and maintain good working relationship with surgical colleagues	MSF	3,4

Multi-Resistant Organisms

Identification and management of infection and colonisation by multi-resistant organisms		
Knowledge	**Assessment Methods**	**GMP**
Local/ national/ international antibiotic resistance patterns, clinical standards, guidelines and protocols	CbD	1,2
Skills		
Discernment of situations giving rise to antibiotic resistance	mini-CEX, CbD	1,3
Awareness of the therapeutic options available for the treatment of multi-resistant organisms.	mini-CEX, CbD	1
Interventions to prevent the development and spread of multi-resistant organisms.	mini-CEX	1
Behaviours		
Multidisciplinary team working	MSF, CbD	1

Personal Protective Equipment for Infection Scenarios

Ability to advise on and choose appropriate personal protective equipment for infection scenarios		
Knowledge	**Assessment Methods**	**GMP**
Understand the specific categories of personal protective equipment	CbD, mini-CEX	1,2
Skills		
Ability to correctly don/remove, and instruct in the application of specific personal protective equipment, for differing infection scenarios	DOPS	1,3
Behaviours		
Demonstrate commitment and leadership in the application of principles of hospital infection control	CbD, MSF	1,2,3,4

16. HIV INFECTED AND OTHER IMMUNE-COMPROMISED PATIENTS

Immune Deficiency

Ability to understand the causes and risk factors leading to immune deficiency.		
Knowledge	**Assessment Methods**	**GMP**
Outline the biological and iatrogenic aetiologies of immune deficiency, and the resulting immune deficits and predispositions to infection	CbD	1,2
Skills		
Ability to advise regarding risk reduction for opportunistic infections relevant to the underlying condition	mini-CEX, CbD	1,2,3
Ability to recognise clinical and laboratory manifestations of immune deficiency	mini-CEX, CbD	1
Behaviours		
Demonstrate a non-judgemental attitude to risk activities	mini-CEX, MSF, PS	1
Close liaison with other relevant medical teams (e.g. haematology, oncology, renal, paediatrics, immunology)	CbD, MSF	1,3
Supportive and empathic approach to patients, carers and relatives	MSF, PS	1,3,4

Infection in the Immune-Compromised Patient

Ability to recognise infection in the immune-compromised patient		
Knowledge	**Assessment Methods**	**GMP**
Knowledge of pathophysiology and clinical features of infection in the immune-compromised host	mini-CEX, CbD	1,2
Relevance of specific aspects of history and specific physical signs (and their absence) in immune-compromised patients	mini-CEX, CbD	1
Understand the utility and limitations of laboratory investigations in immune-compromised patients	mini-CEX, CbD	1,2
Skills		
Ability to interpret test results and explain their relevance to patient	mini-CEX, PS	1,3
Ability to develop a rational, comprehensive and adaptable clinical management plan	CbD, mini-CEX, ACAT	1,2
Behaviours		
Consider interaction of psychological and social well-being on physical symptoms.	mini-CEX, CbD, PS	1,4
Demonstrate empathy and appreciation of patient and carer anxieties	mini-CEX, MSF, CbD, PS	1,3,4
Awareness of patient's rights and responsibilities.	mini-CEX, CbD	1,4

Counselling

Ability to provide relevant counselling to patients, carers and relatives.		
Knowledge	**Assessment Methods**	**GMP**
Awareness of relevant epidemiology, natural history and therapeutic options for immune-compromising conditions	CbD, mini-CEX	1,2
Understanding of data that informs prognosis and sources of such information	CbD, mini-CEX	1
Knowledge of rates of transmission of HIV via sexual and non-sexual routes and guidance on post-exposure prophylaxis provision, counselling and follow-up	CbD, mini-CEX	1
Skills		
Communication skills that allow patients, carers and other to participate in management decisions	mini-CEX, MSF, PS	1,3,4
Ability to relay information and answer questions on risk, prognosis and options in an understandable manner	mini-CEX, MSF, PS	1,3,4
Provision of information regarding HIV transmission and strategies for its reduction for patient and partner(s).	mini-CEX, SCE, CbD	1,2,3
Behaviours		
Recognition of significant interplay of psychological, social, cultural, sexual and religious factors	MSF, PS	1
Ability to be non-judgemental, empathic and supportive	MSF, PS	1,3,4
Ability to utilise optimal communication skills	mini-CEX, MSF, PS	1,3,4

Specific Therapies in Non-HIV Immune-Compromised Patients

Ability to institute and manage specific therapies in non-HIV immune-compromised patients.		
Knowledge	**Assessment Methods**	**GMP**
Awareness of therapies and other interventions in non-HIV immunocompromised individuals - including prophylactic antimicrobials, vaccinations and, where available, ameliorative or definitive therapies	CbD, mini-CEX	1
Knowledge of guidelines and protocols, and where to source them	CbD	1,2
Skills		
Ability to apply guidelines and recommend appropriate interventions	CbD, mini-CEX	1,3
Capable of engaging patients to support adherence and facilitate treatment decisions.	CbD, PS, mini-CEX	1,3,4
Behaviours		
Sympathetic and appropriate application of knowledge to the clinical situation.	CbD, mini-CEX, MSF, PS	1,4

Specific Therapies in HIV-Positive Patients

Ability to institute and manage specific therapies in HIV-infected patients.		
Knowledge	**Assessment Methods**	**GMP**
Define the indications for therapies and other interventions including prophylactic antimicrobials and vaccinations	CbD, mini-CEX	1
Demonstrate an extensive knowledge of the data supporting and the uses of anti-retroviral therapy in HIV infection including: • indications, contraindications and relative merits • pharmacokinetics, modes of action, interactions and mechanisms and relevance of resistance and cross resistance • detailed awareness of current guidelines and other available resources • evidence supporting, and indications for, post-exposure and pre-exposure prophylaxis, anti-retroviral therapy for the prevention of mother-to-child transmission, and treatment as prevention.	CbD, mini-CEX	1,2
Skills		
Ability to apply guidelines and recommend appropriate interventions, drug regimens and strategies	CbD, mini-CEX	1,3
Ability to recognise and act on side effects, drug interactions and potential lack of efficacy	CbD, mini-CEX	1,2
Capable of engaging patients to support adherence and facilitate treatment decisions	CbD, PS, mini-CEX	1,3,4
Behaviours		
Demonstrate a sympathetic and appropriate application of knowledge to the clinical situation.	CbD, mini-CEX, MSF, PS	1,3
Ability to utilise optimal communication skills	MSF, PS, mini-CEX	1,3

17. DIAGNOSIS, INVESTIGATION AND MANAGEMENT OF IMPORTED INFECTION AND THE PROVISION OF PRE-TRAVEL HEALTH ADVICE

Imported Infections

Recognition and treatment of imported infections.		
Knowledge	**Assessment Methods**	**GMP**
Understand the detailed clinical and epidemiological features of imported diseases, including severe communicable diseases such as viral haemorrhagic fevers	mini-CEX, CbD	1,2
Appreciate the availability and limitations of specialised diagnostic tests	CbD	1,2
Demonstrate a detailed understanding of the management of malaria – including severe, potentially drug-resistant and complicated disease	CbD	1
Demonstrate a detailed understanding of the investigation and management of other imported infections	mini-CEX, CbD	1,2
Describe those infections acquired abroad that may be asymptomatic but lead to pathology, and the protocols behind screening for these infections	mini-CEX, CbD	1,2
Skills		
Ability to elicit and record detailed travel history, and develop a concise but comprehensive differential diagnosis	mini-CEX, CbD	1,3
Ability to select and interpret appropriate diagnostic tests, include those available through the reference laboratories.	mini-CEX, CbD	1
Ability to manage severe and complicated malaria and other imported infections	mini-CEX, CBD	1,2
Ability to rationalise and organise screening for relevant infections in those that have spent time in the tropics	mini-CEX, CbD	1,2
Ability to triage and manage those with potential severe communicable diseases (e.g. viral haemorrhagic fevers) including infection control issues	mini-CEX, CBD, KBA	1,2
Behaviours		
Demonstrate flexibility of thinking to allow review and revision of the differential diagnosis	mini-CEX, CbD	1,4

Health Advice for Travellers

Provision of detailed health advice for travellers		
Knowledge	**Assessment Methods**	**GMP**
Exhibit an extensive knowledge of the geographical patterns of disease and risk factors for their acquisition, and explain the availability of paper, electronic and other resources (e.g. vaccination guides, websites, NaTHNaC)	mini-CEX, CbD	1,2

Explain the specific issues faced in travel by those with co-morbidities, the elderly, those with immunosuppression, and women who are pregnant, and when it is recommended to advise against travel in specific circumstances	mini-CEX, CbD	1,2
Demonstrate a detailed knowledge of antimalarials, their indications and contraindications, advantages and disadvantages	mini-CEX, CbD	1,2
Demonstrate a detailed understanding of the indications and contraindications, advantages and disadvantages, of vaccinations	CbD	1,2
Understand the international regulations and requirements related to travel, and the certification requirements necessary for specific travel	CbD	1
Skills		
Ability to take and record accurately pre-travel medical history and travel plans	mini-CEX, CbD	1,3
Ability to perform complex risk assessments appropriate to the traveller, including consideration of specific groups (e.g. the elderly, immunosuppressed) and the hazards of specific types of travel, and seek advice as required	mini-CEX, CbD	1,4
Ability to provide comprehensive, tailored advice on actions required in event of illness whilst abroad	mini-CEX, CbD	1,3,4
Ability to formulate and communicate appropriate verbal and written advice for the traveller, and to motivate them to apply the advice	mini-CEX, CBD, PS	1,3,4
Ability to prescribe and administer immunisations, and to prescribe antimalarials, as appropriate	mini-CEX, CbD, DOPS	1,2
Ability to consider alternative options in those unwilling to comply with standard advice	mini-CEX, CbD	1,4
Behaviours		
Exhibit a commitment to maintaining up to date knowledge and skills	MSF,CbD,	1,2
Demonstrate the ability to work with the individual to determine an effective regimen that they can comply with	MSF, PS	1,3,4
Insight to determine when to seek further advice	CbD, MSF	1

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 Infectious Diseases in each deanery is, therefore, the remit of the regional Infectious Diseases STC. Each STC has a Training Programme Director who coordinates the training programme in the specialty.

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.

It is recognised that different training programmes may allow trainees to acquire the appropriate competencies within different settings according to local availability of experiences and teaching.

The aim of Common Infection Training (CIT) is to produce a doctor who is familiar with laboratory practice in the diagnosis and management of infection as well as familiar with the clinical presentations and management of infections. Therefore it is suggested that in order to acquire the requisite competencies, the rough distribution of clinical and learning experiences over the 2 years of CIT should be as follows:

- 6 months of clinical microbiology and virology training associated with a diagnostic laboratory to diagnose and manage infection

- 6 months of clinical infection consult duties

- 6 months of appropriate infection related clinics where the major focus of the clinic is managing patients with infection. A combination of clinics could include:
  - HIV clinic
  - Viral hepatitis clinic
  - General Infectious Disease (ID) clinic
  - Travel clinic (pre-travel advice and/or returning traveller clinic)
  - TB clinic
  - GUM clinic
  - Chronic Fatigue Syndrome clinic

- 6 months of clinical inpatient care of patients with infection. During this period the trainee should have continuity of care of patients with infection and should be under the clinical supervision of an Infectious Disease consultant who is taking clinical responsibility for the patients (up to 2 months of this experience could be obtained at a specialised inpatient HIV unit).

It is appreciated that it would be very artificial to insist on any of these 6 months experience in isolation and clearly many programmes will seek to combine the

outpatient and inpatient work or the consult and inpatient work to provide a 12 month module and such innovative approaches will be managed locally by TPDs and approved by the SAC and GMC.

For Higher Infectious Diseases Training (HIDT) the same principles apply. It is suggested that:

- For at least 12 months of Higher Infectious Diseases Training the trainee should have continuity of care of patients with infection and should be under the clinical supervision of an Infectious Diseases consultant who is taking clinical responsibility for the patients (up to 4 months of this experience could be obtained at a specialised inpatient HIV unit)

- Clinical experience is expected to be obtained in a variety of outpatient settings. These clinics must be under the direct supervision of a specialist in the disease area, who therefore may not necessarily be an Infectious Diseases accredited physician. Examples include:

    - HIV clinic (may be supervised by Infectious Diseases or competent HIV/GUM physicians)
    - Viral hepatitis clinic (may be supervised by Infectious Diseases or Hepatology/Gastroenterology physicians)
    - General Infectious Diseases (ID) clinic
    - Travel clinic (pre-travel advice and returning traveller clinic)
    - TB clinic (may be supervised by Infectious Diseases or Respiratory physicians)
    - GUM clinic

4.2   Teaching and learning methods

Throughout training there is an essential link between the process of learning and the ongoing practice of medicine such that through this ongoing process of apprenticeship the trainee gains both practical skills and develops increasing skill in the art of medical practice as a specialist.

The "learning experiences" recommended for the optimum achievement of the curriculum objectives are detailed below and comprise a balance of self directed and peer related learning coupled with both general and specialised periods of attachment to experts in different aspects of the specialty. There are in addition recommendations for participation in educational multidisciplinary activities. The curriculum objectives will be both delivered and achieved predominantly by clinical apprenticeship but this can only occur in accredited programmes consisting of designated approved posts.

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. Local postgraduate teaching opportunities allow trainees of varied levels of experience to come together for small group sessions. Examination preparation encourages the formation of self-help groups and learning sets.

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

- Secondments to specialist unit/specialist clinics e.g. travel clinics. After initial induction, trainees will review patients in outpatient clinics, under direct supervision. The degree of responsibility taken by the trainee will increase as competency increases. As experience and clinical competence increase trainees will assess 'new' and 'review' patients and present their findings to their clinical supervisor.
- Specialty-specific takes: Trainees will have the opportunity to contribute to specialty-specific take. Their degree of responsibility will increase as competency increases. Out-of-hours experiences provide trainees with excellent opportunities to enhance their clinical leadership skills.
- Post-take consultant ward-rounds present trainees with excellent learning opportunities and give them a chance to receive constructive feedback on their performance while managing an acute specialty-specific take.
- Involvement with the hospital antibiotic policy process
- Personal ward rounds and provision of ongoing clinical care on specialist medical ward attachments. Every patient seen, on the ward or in out-patients, provides a learning opportunity, which will be enhanced by following the patient through the course of their illness: the experience of the evolution of patients' problems over time is a critical part both of the diagnostic process as well as management. Patients seen should provide the basis for critical reading and reflection of clinical problems.
- Consultant-led ward rounds. Every time a trainee observes another doctor, consultant or fellow trainee, seeing a patient or their relatives there is an opportunity for learning. Ward rounds, including those post-take, should be led by a consultant and include feedback on clinical and decision-making skills.
- Multi-disciplinary team meetings. There are many situations where clinical problems are discussed with clinicians in other disciplines. These provide excellent opportunities for observation of clinical reasoning.
- Laboratory practice: Following initial induction, trainees will be able to observe scientific and medical staff and learn to select diagnostic procedures appropriate to specific clinical scenarios. In addition, they will be able to appreciate the utility and limitations of diagnostic procedures and learn how to use laboratory resources in an optimal manner.

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 Hospital / District Infection Control Meetings or attachment to Infection Control Officer
- Opportunistic attendance at outbreak control meetings
- Involvement in specialist consultation services e.g. for surgical infection, bone and joint infection, infection in the ITU, haematology/oncology rounds
- 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 depending upon their stage of learning. 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

Formal Study Courses - Time to be made available for formal courses is encouraged, subject to local conditions of service. Attendance is encouraged at approved courses and Regional/National specialist meetings (includes courses approved for postgraduate training by the deanery and regional, national or international specialist societies - these would usually require postgraduate approval prior to attending.) Examples include:
- British Infection Association meetings and trainee days
- Federation of Infection Societies' annual meeting
- British HIV Association Meetings
- Viral Resistance Workshop
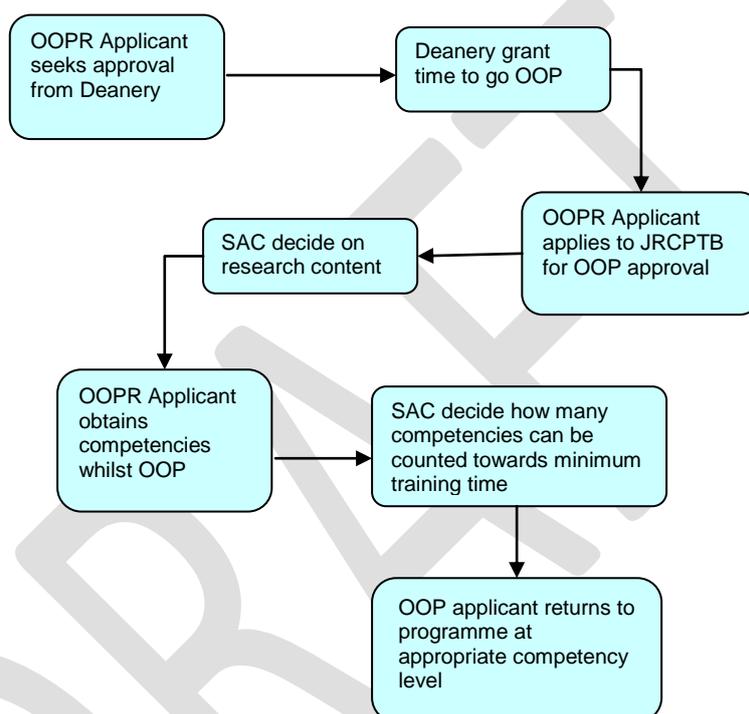- Updates in TB, viral hepatitis and tropical medicine/travel medicine

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 (e.g. entirely laboratory-based or strong clinical commitment), as well as duration (e.g. 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:

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┌──────────────────┐          ┌──────────────────┐
│ OOPR Applicant   │          │ Deanery grant    │
│ seeks approval   │ ───────► │ time to go OOP   │
│ from Deanery     │          │                  │
└──────────────────┘          └──────────────────┘
                                        │
                                        ▼
┌──────────────────┐          ┌──────────────────┐
│ SAC decide on    │ ◄─────── │ OOPR Applicant   │
│ research content │          │ applies to JRCPTB│
│                  │          │ for OOP approval │
└──────────────────┘          └──────────────────┘
        │
        ▼
┌──────────────────┐          ┌──────────────────────┐
│ OOPR Applicant   │          │ SAC decide how many  │
│ obtains          │ ───────► │ competencies can be  │
│ competencies     │          │ counted towards      │
│ whilst OOP       │          │ minimum training time│
└──────────────────┘          └──────────────────────┘
                                        │
                                        ▼
                              ┌──────────────────────┐
                              │ OOP applicant returns│
                              │ to programme at      │
                              │ appropriate competency│
                              │ level                │
                              └──────────────────────┘
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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 generally allowed and the SACs will recognise up to 12 months towards the minimum training times.

4.4   Academic Training

Academic Training plays a significant role in the development of Infectious Diseases in the UK. A vigorous and complete clinical training programme is an essential part of this process and it is essential that this standard is maintained for academic trainees. This must remain a core objective of clinical training.

The following points should be considered when considering academic training.

Recognition of the need for different structures to ensure parity of clinical training
There are clearly important differences between academic trainees and their non-academic colleagues. It is vital that both attain the same level of clinical competency.

However since the academic trainees must also fit in blocks of research time, grant applications and additional training modules for research it is important that academic trainees have the opportunity to acquire their clinical competencies using a variety of different models. This might allow some aspects of training to be designed individually to maximise the educational exposure. These programmes should be carefully drawn up by local educational supervisors in consultation with the regional Postgraduate Deans to ensure stringency but also the individual's needs.

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 for 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 PMETB.

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

Flexibility
It is acknowledged that some trainees may wish to enter academic tracks at stages outside the currently designated entry points, eg following experience gained abroad. It is also recognised that there needs to be the capacity for trainees to move both in and out of the academic and non-academic tracks. This would take account the variable rates of maturation of trainees and the variable intensity of academic or non-academic exposure they may have had during their formative training. Such movement would have to be considered on an individual case and only where openings are available in one or other track. They would occur if, after a period of reflection, trainees, their educational and/or research supervisors and the post-graduate dean considers this a suitable option.

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, 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 of workplace-based assessments and knowledge based 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.

5.3   Assessment methods

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

Examinations and certificates
For Combined Infection Training
- FRCPath part 1 examination

For Infectious Diseases
- The Diploma of Tropical Medicine and Hygiene is strongly recommended, but is not a mandatory requirement of training.
- The Diploma of HIV Medicine is strongly recommended, but is not a mandatory requirement of training.
- Advanced Life Support Certificate (ALS)

Information about FRCPath haematology, including guidance for candidates, is available on the Royal College of Pathologists' website **www.rcpath.org** .

The Diploma in Tropical Medicine and Hygiene is offered by the London School of Hygiene and Tropical Medicine and the Liverpool School of Tropical Medicine. Information about the Diploma, including guidance for candidates, is available on the following websites; www.lshtm.ac.uk and www.liv.ac.uk

The Diploma in HIV Medicine is offered by the Worshipful Society of Apothecaries of London. Information about Dip HIV including guidance for candidates, is available on the Worshipful Society of the Apothecaries website; http://www.apothecaries.org/

Workplace-based assessments (WPBAs)
- Multi-Source Feedback (MSF)
- mini-Clinical Evaluation Exercise (mini-CEX)

- Direct Observation of Procedural Skills (DOPS)
- Case-Based Discussion (CbD)
- Acute Care Assessment Tool (ACAT)
- Patient Survey (PS)
- Evaluation of Clinical Events (ECE)

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.

Acute Care Assessment Tool (ACAT)
The ACAT is designed to assess and facilitate feedback on a doctor's performance during their practice on the Acute Medical Take. Any doctor who has been responsible for the supervision of the Acute Medical Take can be the assessor for an ACAT.

Patient Survey (PS)
Patient Survey address issues, including behaviour of the doctor and effectiveness of the consultation, which are important to patients. It is intended to assess the trainee's performance in areas such as interpersonal skills, communication skills and

professionalism by concentrating solely on their performance during one consultation.

Evaluation of Clinical Events (ECE)
Provides a method of assessing the trainee in the performance of their duties in complex tasks, often involving teamwork or interacting with other professional staff. Examples include clinicopathological evaluation and reporting of diagnostic material, presentation of a case at a multidisciplinary team meeting, or contributing to quality assurance and audit processes in both clinical and laboratory settings.

5.4   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.

5.5   ARCP Decision Aids

Combined Infection Training ARCP Decision Aid

	Combined Infection Training Year 1 (Usually end of ST3)	Combined Infection Training Year 2 (Usually end of ST4)
Expected competence for year of training	Satisfactory progress in the diagnosis, treatment , prevention and control of important infections	Trainees should be competent in the diagnosis, treatment, prevention and control of important infections
FRCPath Part 1	Attempt/pass FRCPath Part 1	Attempt/pass FRCPath Part 1
MSF	Satisfactory* *1x MSF completed in ST3 or ST4	Satisfactory* *1x MSF completed in ST3 or ST4
DOPS	Have demonstrated competence in6 laboratory based DOPS	
mini-CEX,CbD, ECE, ACAT	Total 6 per year using each tool at least once	Total 6 per year using each tool at least once
ALS	Must have valid ALS	Must have valid ALS
Audit	Evidence of participation in 2 audits as specified in the curriculum	
Educational Supervisor Report	Satisfactory (to include evidence of teaching, research and management)	Satisfactory (to include evidence of teaching, research and management)
Personal Development Plan	Evidence in place	Evidence in place

Higher Infectious Diseases Training ARCP Decision Aid

	Higher Infectious Diseases Training Year 1 (Usually end of ST5)	Higher Infectious Diseases Training Year 2 (Usually end of ST6)
Expected competence for year of training	Satisfactory progress in the diagnosis, treatment, prevention and control of infections	Trainees should be competent in the diagnosis, treatment, prevention and control of infections at consultant level
MSF	Satisfactory 1x MSF completed in ST5 or ST6	
mini-CEX, CbD, ACAT	Total 6 per year using each tool at least once	Total 6 per year using each tool at least once
ALS	Must have valid ALS	Must have valid ALS
Audit	Evidence of participation in 2 audits	
Patient Survey	Satisfactory 1x PS completed in ST5 or ST6	
Research	Evidence of developing research awareness and competence – may include participation in research studies, critical reviews, presentation at relevant research meetings or participation in (assessed) courses.	Satisfactory academic portfolio with evidence of research awareness and competence. Evidence might include a completed study with presentations /publication, a completed higher degree with research component (e.g. Masters), in some cases a research degree (MD or PhD), or evidence of significant competence in critical appraisal of evidence and guideline development
Teaching	Evidence of participation in teaching with results of students' evaluation of that teaching Evidence of understanding of the principles of adult education	Portfolio evidence of on-going evaluated participation in teaching Evidence of implementation of the principles of adult education

	Higher Infectious Diseases Training Year 1 (Usually end of ST5)	Higher Infectious Diseases Training Year 2 (Usually end of ST6)
Management	Evidence of awareness of managerial structures and functions within the NHS. Such evidence might include attendance at relevant courses, participation in relevant local management meetings with defined responsibilities	Evidence of experience in and understanding of management and leadership e.g. by reflective portfolio entries around relevant NHS management activities
Educational Supervisor Report	Satisfactory (to include evidence of teaching, research and management)	Satisfactory (to include evidence of teaching, research and management)
Personal Development Plan	Evidence in place	Evidence in place

Where trainees are dual training in GIM, supervisors will have to adjust the detail of requirements to allow for the extra training time, depending on the structure of individual programmes.

5.6   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.

5.7   Complaints and Appeals

The RCPath has complaints procedures and appeals regulations documented on its website which apply to all examinations run by the Royal College of Pathologists including the FRCPath part 1.

The Worshipful Society of Apothecaries has complaints procedures and appeals regulations documented on its website, http://www.apothecaries.org/index.php?page=22, which apply to the Diploma of HIV.

The London School of Tropical Medicine and Hygiene and the Liverpool School of Tropical Medicine have complaints' procedures and appeals' regulations documented on their respective websites, www.lshtm.ac.uk and www.liv.ac.uk

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. Local education providers (LEP's) through their directors of education /clinical tutors and associated specialty tutors have a responsibility to ensure that all trainees work under senior supervision by their clinical and educational supervisors. This will allow a review of the progression of their knowledge, skills and behaviours in particular professional conduct and there maintenance of patient safety will be of paramount importance.

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.

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 should have an appraisal meeting with the clinical and educational supervisor 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 supervisors 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 clinical and educational supervisors 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

Deaneries are responsible for quality management, GMC will quality assure the deaneries and educational providers are responsible for local quality control, to be managed by the deaneries. The role of the Colleges in quality management remains important and will be delivered in partnership with the deaneries. The College role is one of quality review of deanery processes and this will take place within the SACs on a regular basis.

The Head of Specialist Training (HoST) from each Region is represented at the Specialist Advisory Committee and will have responsibility for ensuring that local supervisors and assessors are familiar with the content of the curriculum and oversee its 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 Infectious Diseases. 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.

It is the trainee's responsibility 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 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 if requiredon 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. 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 PMETB.

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.