

SPECIALTY TRAINING CURRICULUM

FOR

TROPICAL MEDICINE

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Joint Royal Colleges of Physicians Training Board

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Table of Contents

1	Introduction	3
2	Rationale.....	3
2.1	Purpose of the curriculum	3
2.2	Development	3
2.3	Training Pathway.....	4
2.4	Enrolment with JRCPTB	5
2.5	Duration of training.....	5
2.6	Less Than Full Time Training (LTFT).....	6
2.7	Dual CCT.....	7
3	Content of learning.....	7
3.1	Programme content and objectives.....	7
3.2	Good Medical Practice	8
3.3	Syllabus.....	8
4	Learning and Teaching	32
4.1	The training programme	32
4.2	Teaching and learning methods.....	32
4.3	Research	35
4.4	Academic Training.....	36
5	Assessment.....	37
5.1	The assessment system	37
5.2	Assessment Blueprint.....	37
5.3	Assessment methods.....	37
5.4	Decisions on progress (ARCP)	39
5.5	ARCP Decision Aid	40
5.6	Penultimate Year Assessment (PYA)	44
5.7	Complaints and Appeals	44
6	Supervision and Feedback	44
6.1	Supervision.....	44
6.2	Appraisal	45
7	Managing curriculum implementation	46
7.1	Intended use of curriculum by trainers and trainees	46
7.2	Recording progress.....	46
8	Curriculum review and updating	47
9	Equality and diversity	48

1 Introduction

The specialty of Tropical Medicine, 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 Tropical Medicine to combined training in Tropical Medicine and General Internal Medicine, Tropical Medicine and Medical Microbiology, and Tropical Medicine and Infectious Diseases. This curriculum is designed for trainees wishing to specialise in Tropical Medicine and outlines the specific requirements for training in Tropical Medicine.

The essential criteria in the curriculum are designed to train to competency in:

- Community acquired infection and its management
- Geographical medicine
- The management of immunocompromised patients including HIV/AIDS
- Antimicrobial therapy
- The management of Hospital acquired infection including Infection in the Intensive Care/ High dependency setting
- The understanding of the role of Microbiology in the management of infection
- Research methodology and its application to clinical practice
- A variety of optional subjects such as virology, clinical pharmacology, public health, epidemiology vaccinology, GU Medicine and overseas practice

The specific criteria for additional training in Tropical Medicine are as follows:

- Compulsory 12 months in an overseas resource poor setting that has been recognised for training
- At least 2 years of UK-based training in a UK recognise 'Tropical Centre' i.e. Liverpool, London (HTD) and Birmingham
- Attendance at a full-time DTM&H course (London, Liverpool or other equivalent with prior agreement of the SAC)

The challenge to rationalise antibiotic use in the light of increasing microbial resistance, to combat clinical problems of healthcare acquired infection and worldwide pandemics of HIV, TB, hepatitis and malaria and to respond to emerging infection problems such as SARS and pandemic influenza makes Tropical Medicine an exciting and contemporary specialty.

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 Tropical Medicine.

2.2 Development

This curriculum was developed by the Specialty Advisory Committee for Infectious Diseases and Tropical Medicine under the direction of the Joint Royal Colleges of Physicians Training Board (JRCPTB). It replaces the previous version of the curriculum dated May 2007, 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.

It has been progressively developed over more than ten years as a result of consensus between Royal Colleges, Specialist Societies and Deanery representation with experience in the specialty. It grew from an objective based curriculum agreed by the specialty and published in 2003, and has been adapted as a consequence of changes in training methodologies and as a response to changes in planned workforce and to the evolution of Tropical Medicine as a specialty.

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.

Major changes from the previous curriculum include the incorporation of generic, leadership and health inequalities competencies.

2.3 Training Pathway

Specialty training in Tropical Medicine 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 Tropical Medicine.

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 Tropical Medicine therefore consists of the curriculum for either CMT or ACCS plus this specialty training curriculum for Tropical Medicine.

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.

The approved curriculum for CMT is a sub-set of the Curriculum for General Internal Medicine (GIM). A "Framework for CMT" has been created for the convenience of trainees, supervisors, tutors and programme directors. The body of the Framework document has been extracted from the approved curriculum but only includes the syllabus requirements for CMT and not the further requirements for acquiring a CCT in GIM.

Completion of CMT or ACCS and acquisition of full MRCP (UK) will be required before entry into Specialty training at ST3 (2011 onwards).

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 from ST1 will usually be completed in seven years in full time training (2 years core plus 5 years specialty training).

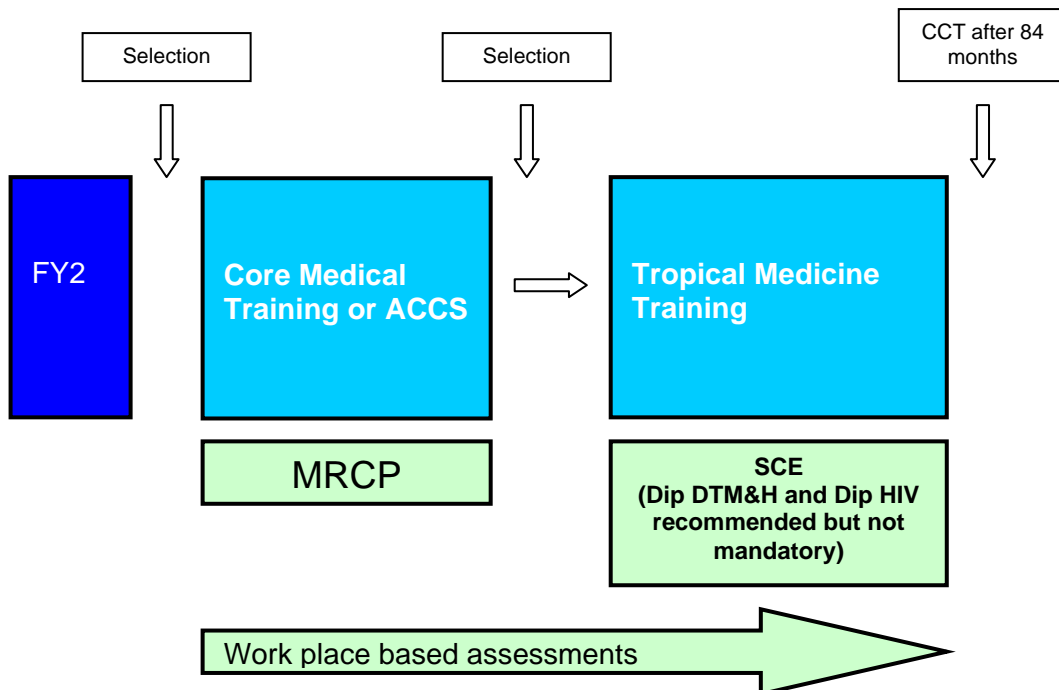


Diagram 1.0 Pathway for a Tropical Medicine Trainee

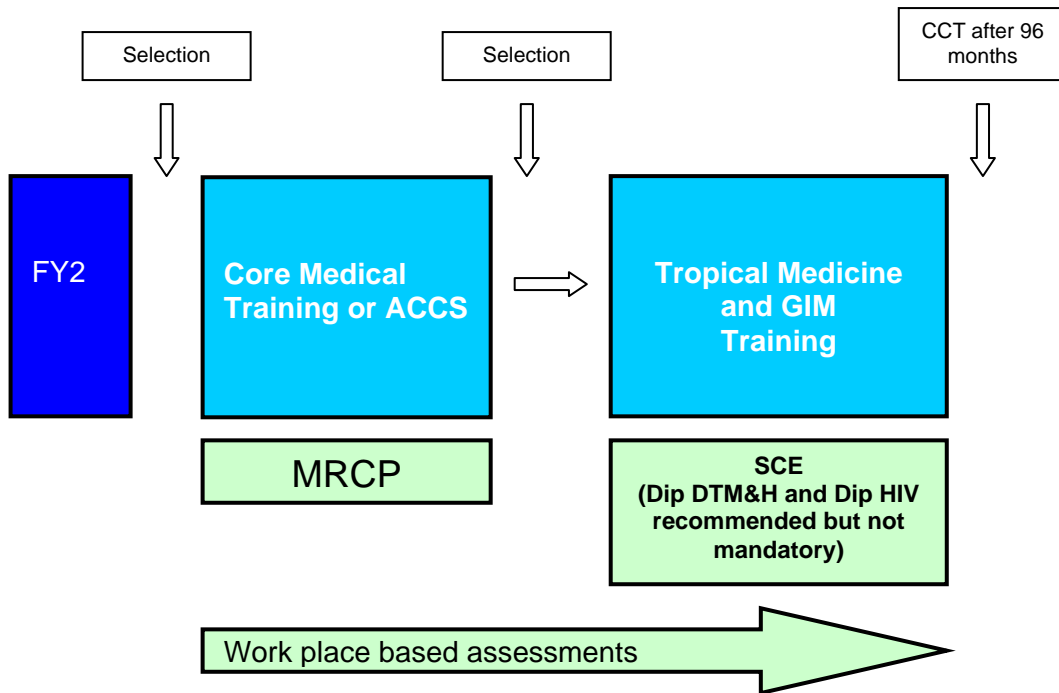


Diagram 2.0 Training Pathway for a Dual CCT Trainee with GIM

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 may wish to achieve a CCT in Tropical Medicine and another speciality. This will most commonly be General Internal Medicine (GIM). Such trainees 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 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 training committees.

3 Content of learning

3.1 Programme content and objectives

The Training Programme in Tropical Medicine 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 Tropical Medicine
- 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 Tropical Medicine
- can apply knowledge of the appropriate basic sciences relevant to Tropical Medicine
- 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 and Tropical Medicine
- 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, diagnosis and management of community acquired infection
- To obtain clinical competence at consultant level in the management of immunocompromised patients including those suffering from HIV/AIDS
- To acquire the skills necessary at consultant level to recognise and manage hospital acquired infection, and institute control systems, including postoperative and Intensive Care related illness

- 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 obtain an understanding of the role of the microbiologist and virologist and the importance of microbiological techniques and their interpretation in Tropical Medicine 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 research methodology and the practical implementation of research projects
- To have the opportunity for additional enhanced training in specific areas related to Tropical Medicine including Medical Virology, Clinical Pharmacology, Public Health and Epidemiology, GU Medicine, Vaccinology.
- A minimum period of 12 months of overseas practice in a recognised training centre is an essential component of training in Tropical Medicine
- 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.
- To obtain an understanding of prevention of spread of infection in both community and healthcare settings.

3.2 Good Medical Practice

In preparation for the introduction of licensing and revalidation, the General Medical Council has translated Good Medical Practice into a Framework for Appraisal and Assessment which provides a foundation for the development of the appraisal and assessment system for revalidation. The Framework can be accessed at http://www.gmc-uk.org/Framework_4_3.pdf [25396256.pdf](http://www.gmc-uk.org/Framework_4_3.pdf)

The Framework for Appraisal and Assessment covers the following domains:

Domain 1 – Knowledge, Skills and Performance

Domain 2 – Safety and Quality

Domain 3 – Communication, Partnership and Teamwork

Domain 4 – Maintaining Trust

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

3.3 Syllabus

In the tables below, the “Assessment Methods” shown are those that are appropriate as **possible** methods that could be used to assess each competency. It is not expected that all competencies will be assessed and that where they are assessed not every method will be used. See section 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 for Tropical Medicine Physician	10
Objective 1: To obtain clinical competence in the assessment, investigation, diagnosis and management of infection at consultant level	10
1.1 History Taking	10
1.2 Clinical Examination	10
1.3 Investigation and Specific Skills	11
1.4 Diagnosis and Management	11
1.5 Interaction with Other Healthcare Teams	12
1.6 Management of Longer-Term Conditions	13
1.7 Patient Safety	14
1.8 Communication	15
1.9 Teaching and Training	16
1.10 Personal Behaviour	17
1.11 Management and NHS Structure	18
Specific Competencies	19
Objective 2: To obtain competence at consultant level in the management of the HIV infected and other immune- compromised patients	19
2.1 Infection in the Immune-Compromised Patient	19
2.2 Immune Deficiency	19
2.3 Counselling	20
2.4 Specific HIV Diagnostics	20
2.5 Specific Therapies in Immune-Compromised Patients	20
2.6 Multi-Disciplinary Team Working in the Management of Patients Requiring Palliative and Terminal Care	21
Objective 3: To acquire the skills necessary at consultant level to recognise, manage and control hospital acquired infection (HAI), including intensive care (ICU) related illness	22
3.1 Healthcare-Acquired and Intensive Care-Related Infection	22
3.2 Specific Infections Related to Post-Operative Sepsis	22
3.3 Multi-Resistant Organisms	23
3.4 Infection Control Policies	23
3.5 Personal Protective Equipment for Infection Scenarios	23
Objective 4: To achieve competence at consultant level in the diagnosis, investigation and management of imported infection and the provision of pre-travel health advice	24
4.1 Imported Infections	24
4.2 Health Advice for Travellers	24
4.3 Infection Related Problems of Immigrants	25
Objective 5: To obtain an understanding of the role of the microbiologist and virologist and the importance of microbiological techniques in ID and to understand the process and constraints around the microbiological report	26
5.1 Basic Microbiological Benchwork	26
5.2 Microbiological Reporting	26
5.3 Tests in the Microbiology Laboratory	27
5.4 Management	27
Objective 6: To become competent in all aspects of the management of antibiotic use	28
6.1 Antimicrobial Prescribing	28
6.2 Antibiotic Control Policies	28
6.3 Antimicrobial Drug Prescribing	29
6.4 Pre-operative Antibiotic Prophylaxis	29
Objective 7: To obtain an understanding of research and audit methodology and the practical implementation of research and audit projects	30
7.1 Research	30

Common Competencies for Tropical Medicine Physician

Objective 1: To obtain clinical competence in the assessment, investigation, diagnosis and management of infection at consultant level

1.1 History Taking

Ability to take appropriate history		
Knowledge	Assessment Methods	GMP
To have knowledge of clinical presentations and features of infection	SCE, CbD	1,2
Skills		
Take relevant, succinct and logical histories even when language, physical or mental impairment pose difficulties or when the patient is confused, aggressive and non-compliant. Collateral history where appropriate and necessary and in challenging situations.	mini-CEX	1,3
Record risk factors for conditions relevant to mode of presentation	mini-CEX	1,3
Use an interpreter	mini-CEX	1,3
Behaviours		
Consider interaction of psychological and social well being on the physical symptoms to show empathy with the patient.	CbD, PS, mini-CEX	1
Respects patient confidentiality	CbD, PS, mini-CEX	1,4
Shows respect and behaves in accordance with Good Medical Practice	CbD, PS, mini-CEX	1,2,3,4

1.2 Clinical Examination

Ability to perform appropriate physical examination		
Knowledge	Assessment Methods	GMP
A knowledge of the patho-physiological basis of physical signs	SCE, mini-CEX , CbD	1,2
Skills		
Explain the procedure to the patient, gain appropriate consent and ensure that patient discomfort is minimised. Respect individual's dignity, cultural sensitivities, privacy and rights to refuse an examination.	mini-CEX, PS	1,3
Perform a valid examination in more challenging situations e.g. unconscious patient, distracting environment.	mini-CEX	1,2
Elicit appropriate physical signs, assess Cognitive Function and Mental State including recognition of possible deliberate harm	mini-CEX, CbD, ACAT	1
Can demonstrate and teach examination technique	TO, mini-CEX	1,3
Recognises the possibility of deliberate harm (both self harm and harm by others) in vulnerable patients and report to appropriate	CbD, ACAT, mini-	1,2,3,4

agencies	CEX	
Behaviours		
Be aware of patient dignity, confidentiality and ethnic issues, the relative's rights and responsibilities, the need for a chaperone.	mini-CEX, MSF, PS	1
Considers social, cultural and religious boundaries to clinical examination, appropriately communicates and make alternative arrangements where necessary	CbD, mini-CEX, MSF, PS	1,3,4

1.3 Investigation and Specific Skills

Ability to perform appropriate investigation and specific skills		
	Assessment Methods	GMP
Knowledge		
A knowledge of the pathophysiological basis of the test and knowledge of its relevance.	SCE, CbD	1,2
The cost and economy, and safety of the investigation.	SCE, CbD	1,2
Skills		
Ability to select appropriate tests and interpret results.	SCE, mini-CEX, CbD	1,3
Ability to perform specific diagnostic techniques, including lumbar puncture, chest and ascitic aspiration, joint aspiration and lymph node aspiration.	DOPS, mini-CEX, CbD	1,2
Behaviours		
Establishing close liaison and understanding with laboratory staff.	MSF	1,4
Recognising the need of a patient to understand procedures and results of tests	PS, MSF, CbD	1,2,4

1.4 Diagnosis and Management

Ability to achieve an appropriate specific or differential diagnosis and initiate appropriate management		
	Assessment Methods	GMP
Knowledge		
A broad knowledge of clinical presentation of Infectious Diseases including unusual infections	SCE, CbD	1,2
Extensive knowledge of common conditions and syndromes in Infectious Diseases including, <ul style="list-style-type: none"> • pyrexia of unknown origin, • fever in the returning traveller • blood borne virus infections (HIV, hepatitis B/C) • Tuberculosis, including MDRTB • infective endocarditis, • bone and joint infection, • severe skin and soft tissue infection, • community acquired pneumonia, • gastroenteritis, • infective hepatitis • sepsis syndrome, • uro-sepsis, • meningococcal meningitis 	SCE, CbD, mini-CEX, ACAT	1

A knowledge of optimum evidence based management of infections	SCE, CbD	1
A knowledge of how to access up to date information and guidelines including those produced by agencies such as Health Protection Agency, BHIVA, infection societies, NICE	SCE, CbD	1
A knowledge of the indications, contraindications, side effects, drug interactions and dosage of commonly used drugs and an understanding of the roles of regulatory agencies involved in drug use and monitoring, licensing and promotion. These include the National Institute for Health and Clinical Excellence (NICE), the Health Protection Agency, British HIV Association (BHIVA)	SCE, CbD, mini-CEX	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
Competent in core therapeutic and monitoring procedures including arterial blood gases, central venous cannulation, urinary catheterisation, intercostal drain insertion, basic airway management and advanced life support (ALS)	DOPS	1,2
Behaviours		
Consideration of diagnostic issues in relation to fears of patient	CbD	1,4
Participate in adverse drug event reporting mechanisms	CbD, mini-CEX	1,3

1.5 Interaction with Other Healthcare Teams

Interaction with other health care teams.		
	Assessment Methods	GMP
Knowledge		
Recognise and accept the responsibilities and role of the doctor in relation to other healthcare professionals.	SCE, CbD, mini-CEX, ACAT	1,2
Knowledge of the epidemiological consequences of different diseases and when necessary how to access other appropriate health care teams eg, health protection unit.	SCE, CbD, mini-CEX, ACAT	1,2
Awareness of diseases that are notifiable and systems for notification.	SCE, CbD, ACAT	1,2
Understand the availability and purpose of relevant screening and immunisation programmes	CbD, mini-CEX	1
Skills		
Develop skills in handling and resolving professional conflict	MSF, CbD	1,3,4
Ability to make accurate risk assessment and recognise when urgent epidemiological action is required	CbD, ACAT, mini-CEX	1,3
Communicates effectively and respectfully with other relevant professionals by means appropriate to the urgency of the situation	mini-CEX, MSF	1,3,4
To work with individuals and communities to reduce levels of ill health, remove inequalities and improve the general health of the community.	CbD, mini-CEX	1,3,4
To work with individuals and communities to reduce levels of ill	CbD, mini-CEX	1,3

health, remove inequalities in healthcare provision and improve the general health of a community

Behaviours

Cooperative working in multidisciplinary team, including recognition of the specialist skills and knowledge of team members and actively seeking correction/advice from such individuals.	MSF	1
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1.6 Management of Longer-Term Conditions

Obtain competence in management of longer term conditions including TB and hepatitis B and C

	Assessment Methods	GMP
Knowledge		
Have knowledge of: The epidemiology, natural history and clinical management of TB and hepatitis B and C including drug resistant strains	SCE, CbD, mini-CEX	1,2
The importance of multi-disciplinary working.	CbD, mini-CEX	1
Awareness of patient support groups	CbD, mini-CEX	1
Skills		
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		
Non judgmental approach particularly regarding disease, race, gender, life style, sexuality and religion	MSF, CbD, PS	1
Good at 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
Recognise the potential impact of long term conditions on the patient, family and friends	PS, MSF, CbD	1,3,4

1.7 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

1.8 Communication

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

Knowledge	Assessment Methods	GMP
Recognition of ones own values, principles, prejudices and emotions and how these may differ and impact upon those of colleagues and patients.	MSF	1,3
To recognise the fundamental importance of breaking bad news and use strategies for skilled delivery of bad news according to the needs of individual patients, their carers and relatives	ACAT, CbD, mini-CEX, PS	1,3,4
How to structure a consultation appropriately	ACAT, CbD, mini-CEX, PS	1
Understands that a post mortem examination may be required what this involves as well as the organ retrieval process	ACAT, CbD, mini-CEX, PS	1
The importance of the patient's background, culture, education and preconceptions (beliefs, ideas, concerns, expectations) to the process	ACAT, CbD, mini-CEX, PS	1
To recognise the causes of error and to learn from them, to realise the importance of honesty and effective apology	ACAT, CbD	1,2,3,4
Skills		
Establishes a rapport with the patient and any relevant others (e.g. carers)	ACAT, CbD, mini-CEX, PS	1, 3
Utilises open and closed questioning appropriately	ACAT, mini-CEX, PS	1,3
Listens actively and questions sensitively to guide the patient and to clarify information	ACAT, mini-CEX, PS	1, 3
Able to request a post mortem examination and explain what is involved	ACAT, CbD, mini-CEX, PS	1
Involves patients and carers in decisions regarding their future management	CbD, mini-CEX, PS	1,3
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
Manages follow-up effectively and safely, utilising a variety if methods (e.g. phone call, email, letter)	ACAT, CbD, mini-CEX	1
Behaviours		
Adopts respectful patient centred approach to decisions acknowledging diversity and values of others.	MSF, CbD	1,3,4
Takes leadership in breaking bad news	CbD, DOPS, MSF	1
Respects the different ways people react to bad news	CbD, DOPS, MSF	1,3
Contributes to a fair and transparent culture around complaints and errors	CbD, DOPS, MSF	1,2,3
Recognises the rights of patients, family members and carers to make a complaint	CbD, DOPS, MSF	1,3,4
Recognises the impact of a complaint upon self and seeks	CbD, DOPS, MSF	1,3

appropriate help and support

1.9 Teaching and Training

To develop the ability to teach to a variety of different audiences in a variety of different ways

Knowledge	Assessment Methods	GMP
Describes relevant educational theories and principles, and has the ability to identify learning methods and effective learning objectives and outcomes	CbD	1
Outlines the role of workplace-based assessments, the assessment tools in use, their relationship to course learning outcomes, the factors that influence their selection and the need for monitoring evaluation	CbD	1
Outlines the appropriate local course of action to assist a trainee experiencing difficulty in making progress within their training programme	CbD	1
Skills		
Varies teaching format and stimulus, as appropriate to situation and subject, and demonstrates effective lecture, presentation, small group and bedside teaching sessions	CbD, TO	1
Conducts developmental conversations as appropriate, for example, appraisal, supervision, mentoring	CbD, MSF	1,3
Is able to identify and plan learning activities in the workplace	CbD, TO	1,3
Is able to lead departmental teaching programmes, including journal clubs	CbD, TO	1,3
Recognises the trainee in difficulty and takes appropriate action, including where relevant referral to other services	CbD	1,3,4
Behaviour		
In discharging educational duties acts to maintain the dignity and safety of patients at all times	CbD, MSF	1, 4
Recognises the importance of the role of the physician as an educator within the multi-professional healthcare team and uses medical education to enhance the care of patients	CbD, MSF, TO	1
Demonstrates willingness to teach trainees and others in a variety of settings to maximise effective communication and practical skills and to improve patient care	CbD, MSF, TO	1
Encourages discussions with colleagues in clinical settings to share knowledge and understanding	CbD, MSF	1, 3
Shows willingness to participate in workplace-based assessments and demonstrates a clear understanding of their purpose	CbD, MSF	1
Demonstrates a willingness to advance own educational capability through continuous learning	CbD, MSF	1

1.10 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

Work effectively with many teams and put the quality and safety of patient care as a prime objective

Become trusted and known to act fairly in all situations

Knowledge	Assessment Methods	GMP
Respects the rights of children, elderly, people with physical, mental, learning or communication difficulties	CbD, mini-CEX, MSF, PS	3,4
Adopts an approach to eliminate discrimination against patients from diverse backgrounds including age, gender, race, culture, disability and sexuality	CbD, mini-CEX, MSF, PS	3,4
Places needs of patients above own convenience	CbD, mini-CEX, MSF, PS	2,4
Behaves with honesty and probity	CbD, mini-CEX, MSF, PS	1,2,4
Is aware of the ethical issues and conflicts in medical practice	CbD, mini-CEX, MSF, PS	1,2,4
Skills		
Practises with professionalism including: <ul style="list-style-type: none"> • Integrity • Compassion • Altruism • Continuous improvement • Aspiration to excellence • Respect of cultural and ethnic diversity • Regard to the principles of equity 	ACAT, CbD, mini-CEX, MSF, PS	1, 2, 3, 4
Works in partnership with patients and members of the wider healthcare team	ACAT, CbD, mini-CEX, MSF	3
Recognises and responds appropriately to unprofessional behaviour in others	ACAT, CbD, MSF	1
Behaviour		
Recognises personal beliefs and biases and understands their impact on the delivery of health services	CbD, mini-CEX, MSF	1
Recognises the need to use all healthcare resources prudently and appropriately	ACAT, CbD, mini-CEX	1, 2
Recognises situations when it is appropriate to involve professional and regulatory bodies	ACAT, CbD, mini-CEX	1
Participates in professional regulation and professional development	CbD, MSF	1
Recognises the right for equity of access to healthcare	ACAT, CbD, mini-CEX, MSF, PS	1
Changes behaviour in the light of feedback and reflection	MSF	1,3

1.11 Management and NHS Structure

To understand the structure of the NHS and the management of local healthcare systems

Knowledge	Assessment Methods	GMP
Understands the guidance given on management and doctors by the GMC	CbD	1
Understand, the structure and function of healthcare systems as they apply to Infectious Diseases and the broader NHS	CbD	1
Understands the principles of: <ul style="list-style-type: none"> • Clinical coding • 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 • Patient and public involvement processes and role 	CbD	1
Skills		
Development of improved and/or new strategies for the delivery of a clinical service – and effective implementation of such changes, acting as positive role model for innovation. Monitoring and learning from the outcome of changes.	CbD	1,3,4
Has participated in managerial meetings	CbD	1,3
Takes an active role in promoting the best use of healthcare resources	ACAT, CbD, mini-CEX	1,3
Behaviour		
Recognises the roles of doctors, patients and carers as active participants in healthcare systems	CbD, MSF, PS	1, 2
Shows willingness to improve managerial skills (e.g. management courses) and engage in management of the service	CbD, MSF	1,3,4

Specific Competencies

Objective 2: To obtain competence at consultant level in the management of the HIV infected and other immune-compromised patients

2.1 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	SCE, mini-CEX, CbD	1,2
Relevance of specific aspects of history and specific physical signs (and their absence)	SCE, mini-CEX, CbD	1
Understand the utility of laboratory investigations.	SCE, mini-CEX, CbD	1
Skills		
Ability to interpret test results and explain their relevance to patient	mini-CEX, PS	1,3
Behaviours		
Consider interaction of psychological and social well being on physical symptoms.	mini-CEX, CbD, PS	1
Demonstrate empathy and appreciation of patient anxieties	mini-CEX, MSF, CbD, PS	1,3
Awareness of patient's rights and responsibilities.	mini-CEX, CbD	1,4

2.2 Immune Deficiency

Ability to understand the causes and risk factors leading to immune deficiency.		
Knowledge	Assessment Methods	GMP
Biological and iatrogenic aetiology of immune deficiency	SCE, CbD	1,2
Skills		
Ability to advise regarding risk reduction for opportunistic infections relevant to the underlying condition.	mini-CEX, CbD, SCE	1,3
Ability to recognize clinical and laboratory manifestations of immune deficiency.	mini-CEX, SCE, CbD	1
Behaviours		
Non judgemental attitude to risk activities.	mini-CEX, PS	1
Close liaison with other relevant medical teams (e.g. haematology, oncology, renal)	CbD, MSF	1,3

2.3 Counselling

Ability to provide relevant counselling to patients, carers and relatives.		
Knowledge	Assessment Methods	GMP
General epidemiology and therapeutic options.	SCE, CbD, mini-CEX	1,2
Prognostic assessment	CbD, SCE, mini-CEX	1
Risk/benefit analysis of therapies	SCE, CbD, mini-CEX	1
Skills		
Communication skills that allow patients, carers and other to participate in management decisions	mini-CEX, MSF, PS	1,3
Provision of information regarding HIV transmission and strategies for its reduction.	mini-CEX, SCE, CbD	1
Behaviours		
Recognition of significant social, cultural, sexual and religious factors.	MSF, PS	1

2.4 Specific HIV Diagnostics

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

2.5 Specific Therapies in Immune-Compromised Patients

Ability to institute and manage specific therapies in immune compromised patients.		
Knowledge	Assessment Methods	GMP
Knowledge of the indications and uses of anti-retroviral therapy in HIV infection including: <ul style="list-style-type: none"> • pharmacokinetics, modes of action, interactions, mechanisms of resistance and cross resistance • awareness of current guidelines. • post-exposure prophylaxis 	SCE, CbD, mini-CEX	1,2
Awareness of therapies and other interventions in non-HIV immunocompromised individuals including prophylactic antimicrobials and vaccinations.	SCE, CbD, mini-CEX	1
Skills		

Ability to apply guidelines and recommend appropriate drug regimens.	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, PS, mini-CEX	1,3
Behaviours		
Sympathetic and appropriate application of knowledge to the clinical situation.	CbD, mini-CEX, MSF, PS	1

2.6 Multi-Disciplinary Team Working in the Management of Patients Requiring Palliative and Terminal Care

Ability to work and liaise with a multi-disciplinary team in the management of patients requiring palliative and terminal care		
	Assessment Methods	GMP
Knowledge		
Spectrum of professional and complementary therapies available, e.g. palliative medicine, nutritional support, pain relief, psychology of dying.	CbD	1,2
Skills		
Discernment in balancing a scientific and caring approach to the problem.	MSF, CbD	1,3
Team working ability	MSF	1,3
Delivery of effective pain relief and psychological management.	MSF, CbD, mini-CEX	1
Behaviours		
Commitment to continuity of care through physical illness to death.	MSF, CbD, mini-CEX	1

Objective 3: To acquire the skills necessary at consultant level to recognise, manage and control hospital acquired infection (HAI), including intensive care (ICU) related illness

3.1 Healthcare-Acquired and Intensive Care-Related Infection

Ability to recognise and manage healthcare-acquired infection (HAI) and intensive care-related infection		
Knowledge	Assessment Methods	GMP
Presentation, pathophysiology and management strategies for common problems in HAI and ICU.	SCE, CbD, mini-CEX	1,2
Confidentiality and consent issues in the unconscious patient.	SCE, CbD, mini-CEX	1,2
Outcomes of HAI and ICU-related infection.	SCE, CbD, mini-CEX	1
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.	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.	CbD	1,2

3.2 Specific Infections Related to Post-Operative Sepsis

Recognition and treatment of specific infections related to post operative sepsis		
Knowledge	Assessment Methods	GMP
Common infections associated with particular surgical procedures	SCE, CbD, mini-CEX	1,2
Local / National resistance patterns	CbD, SCE, mini-CEX.	1
Skills		
Differentiation between colonisation and infection	SCE, CbD	1,3
Behaviours		
Good working relationship with surgical colleagues	MSF	3

3.3 Multi-Resistant Organisms

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

3.4 Infection Control Policies

The development of and execution of infection control policies in the hospital setting.		
Knowledge	Assessment Methods	GMP
Evidence base for effectiveness of infection control policies	SCE, CbD	1,2
Local/ national/ international clinical standards, guidelines and protocols	SCE, CbD	1,2
Skills		
Formulation of appropriate local advice for HAI reduction and containment.	mini-CEX, CbD	1,3
Behaviours		
Understands the importance of team working and clinical leadership.	CbD, MSF	1
Ability to motivate and encourage practice change.	MSF	1,3

3.5 Personal Protective Equipment for Infection Scenarios

Ability to both advise on and choose appropriate personal protective equipment for infection scenarios		
Knowledge	Assessment Methods	GMP
Specific categories of personal protective equipment	SCE, CbD	1,2
Skills		
Ability to don and instruct in the application of personal protective equipment for given infective scenarios	DOPS	1,3
Behaviours		
Commitment and leadership in the application of principles of hospital infection control	CbD, MSF	1

Objective 4: To achieve competence at consultant level in the diagnosis, investigation and management of imported infection and the provision of pre-travel health advice

4.1 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	SCE, mini-CEX, CbD	1,2
Availability and limitations of specialised diagnostic tests.	SCE, CbD	1,2
Management of malaria and other imported infections	SCE, CbD	1
Knowledge of location and availability of tertiary care and advice lines.	SCE, 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 infections.	mini-CEX, CBD	1
Ability to recognize when tertiary level care/advice is needed and to seek it.	mini-CEX, CbD	1
Awareness of the potential of severe communicable diseases (e.g. viral haemorrhagic fevers) and their infection control issues	mini-CEX, CBD, SCE	1
Behaviours		
Flexibility of thinking to allow review and revision of the differential diagnosis	mini-CEX, CbD	1

4.2 Health Advice for 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)	SCE, mini-CEX, CbD	1,2
Use, availability, efficacy and safety of vaccines.	SCE, mini-CEX, CbD	1,2
Use, efficacy and safety of antimalarial prevention measures.	SCE, mini-CEX, CbD	1,2
Principles of organising a travel clinic, and the medico-legal issues involved	SCE CbD	1
Skills		
Ability to take and record accurately pretravel 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,	mini-CEX, CbD	1,4

immunosuppressed) and the hazards of specific types of travel.		
Ability to formulate and communicate appropriate verbal and written advice for traveller, and to motivate them to apply the advice	mini-CEX, CBD, PS	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

4.3 Infection Related Problems of Immigrants

Infection related problems of immigrants		
	Assessment Methods	GMP
Knowledge		
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	SCE, mini-CEX, CbD	1,2
Epidemiological and clinical features of imported infection in immigrant groups	SCE, mini-CEX, CbD	1
Skills		
Ability to work with interpreters and patient support groups.	mini-CEX, CbD, PS	1,3
Ability to recognize both acute and chronic infections, including those that are asymptomatic, in immigrants	SCE, mini-CEX, CbD	1
Behaviours		
Recognise the indications for use of a chaperone.	mini-CEX, MSF, CbD, PS	1
Recognise the duty of the medical professional to act as patient advocate.	mini-CEX, MSF, CbD	1,4

Objective 5: To obtain an understanding of the role of the microbiologist and virologist and the importance of microbiological techniques in ID and to understand the process and constraints around the microbiological report

5.1 Basic Microbiological Benchwork

Basic microbiological benchwork including critical interpretation of laboratory procedures in relation to laboratory diagnosis		
Knowledge	Assessment Methods	GMP
Knowledge of the microbiological basis of disease	CbD, mini-CEX, SCE	1,2
Knowledge of the pathological basis of tests and the laboratory factors affecting their interpretation	CbD, mini-CEX, SCE	1,2
Skills		
Ability to perform laboratory tests identifying micro-organisms	mini-CEX, DOPS, CbD	1,3
Ability to interpret the findings of microbiological investigations and recognise their limitations	CbD, mini-CEX, SCE	1,3
Behaviours		
Establishing close rapport and understanding with laboratory staff.	MSF, CbD	1

5.2 Microbiological Reporting

Ability to be aware of the process and constraints around microbiological reporting		
Knowledge	Assessment Methods	GMP
Knowledge of the pathways of microbiological reporting	CbD, mini-CEX, SCE	1,2
Knowledge of the boundaries of use of microbiological information in the context of clinical information	CbD, mini-CEX, SCE	1,2
Skills		
Ability to communicate with colleagues and other doctors in different disciplines and enable them to appreciate the relevance of the data	CbD, mini-CEX, MSF	1,3
Ability to interpret laboratory data in the context of clinical information	CbD, mini-CEX, MSF	1,3
Behaviours		
Establishing good rapport with other medical colleagues. Cooperative working in multidisciplinary teams.	MSF	1

5.3 Tests in the Microbiology Laboratory

Ability to give advice on the repertoire, the appropriate use and the limitation of tests in the microbiology laboratory		
Knowledge	Assessment Methods	GMP
Knowledge of the diagnostic tests available in the routine laboratory with understanding of further tests available at specialised centres	SCE, CbD	1,2
Understanding of the mechanisms of antibiotic/antiviral resistance and the principles of antimicrobial resistance assays	SCE, CbD	1,2
Skills		
Ability to interpret results, advise at the bedside and over the telephone	CbD, mini-CEX	1,3
Ability to consider data in context of clinical information and when to obtain further clinical data	CbD, mini-CEX	1,3
Ability to provide appropriate antibiotic and other management advice at the bedside and over the telephone	CbD, mini-CEX	1,3
Behaviours		
Establishing close rapport with other medical colleagues	MSF, CbD	1
Clear oral and written communication	CbD	1

5.4 Management

Management including health and safety procedures		
Knowledge	Assessment Methods	GMP
Knowledge of the main health and safety procedures in the diagnostic laboratory and in category 3 isolation facilities	SCE, CbD	1,2
Knowledge of regulations for handling of pathogens		1
Skills		
Performing laboratory work in a safe manner consistent with local rules and national guidelines.	CbD, DOPS, mini-CEX	1,3
Behaviours		
Understanding and being sympathetic to the safety concerns of other laboratory staff	MSF	1

Objective 6: To become competent in all aspects of the management of antibiotic use

6.1 Antimicrobial Prescribing

Competence in antimicrobial prescribing		
	Assessment Methods	GMP
Knowledge		
Knowledge of antimicrobial agents, their spectrum of activity, mode of action, toxicity/side effects and appropriate use (e.g. combination therapy).	SCE, CbD	1,2
Skills		
Selection of appropriate antimicrobial in the clinical setting. Liaison with microbiologists and laboratory	mini-CEX, CbD	1,3
Behaviours		
Establishing rapport and understanding with clinical and laboratory staff.	mini-CEX, MSF, CbD	1
Flexibility to change the choice of antimicrobial in the context of a change in clinical situation or laboratory data.	CbD	1

6.2 Antibiotic Control Policies

Ability to develop antibiotic control policies		
	Assessment Methods	GMP
Knowledge		
Understanding of the aims and objectives of an antibiotic policy.	SCE, mini-CEX, CbD	1,2
Knowledge of the national and local epidemiology of resistance or where to locate it.	CbD	1,2
Knowledge of cost of antimicrobials and understanding of the principles of resource utilisation.	CbD, SCE	1,2
Recognition of importance of regular review of policy.	CbD	1,2
Skills		
Work as part of a multidisciplinary team to provide the necessary information to write a policy.	MSF, CbD	1,3
Establish systems to ensure regular review of policy, creative strategies (e.g. electronic prescribing) to encourage adherence to guidelines and antibiotic stewardship.	SCE, CbD	1,3
Behaviours		
Work with colleagues from different disciplines, and recognition of skills brought by different disciplines	MSF, CbD	1

6.3 Antimicrobial Drug Prescribing

Competence in the economics of antimicrobial drug prescribing		
Knowledge	Assessment Methods	GMP
Understanding of the importance of resource utilisation in relation to antimicrobials.	SCE, CbD	1,2
Knowledge of the relative costs of different agents.	SCE, CbD	1,2
Skills		
Appropriate selection of suitable agents to fit the individual clinical situation, taking account of all factors including economics.	mini-CEX	1,3
Behaviours		
Ensuring that patient care is optimum.	mini-CEX, MSF, CbD	1
Recognition that there is often more than one antimicrobial for a clinical situation, that choices are not usually right or wrong.	mini-CEX, MSF, CbD	1

6.4 Pre-operative Antibiotic Prophylaxis

Competence in the use of pre-operative antibiotic prophylaxis		
Knowledge	Assessment Methods	GMP
Knowledge of the microbial agents likely to cause infection in different settings, antimicrobial susceptibilities and good understanding the principles underlying pre-operative prophylaxis.	SCE, CbD	1,2
Skills		
Use of the knowledge to apply prophylaxis in the light of local epidemiological and individual clinical issues e.g. allergy	mini-CEX	1,3
Behaviours		
Understand the needs and problems of the doctors managing the patient.	mini-CEX, CbD	1

Objective 7: To obtain an understanding of research and audit methodology and the practical implementation of research and audit projects

7.1 Research

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

Knowledge	Assessment Methods	GMP
Understands the principles of research governance	SCE, AA, CbD, mini-CEX	1
Outlines the differences between audit and research	CbD, SCE	1
Demonstrates a knowledge of research principles	CbD, mini-CEX	1
Outlines the principles of formulating a research question and designing a project	CbD, mini-CEX	1
Comprehends principal qualitative, quantitative, bio-statistical and epidemiological research methods	CbD, SCE	1
Outlines sources of research funding	CbD	1
Understands the difference between population-based assessment and unit-based studies and is able to evaluate outcomes for epidemiological work	CbD	1
Know the advantages and disadvantages of different study methodologies	SCE, CbD	1
Understand the principles of critical appraisal	CbD	1
Understand the processes that result in nationally applicable guidelines	CbD	1
Understands the different methods of obtaining data for audit, including patient feedback questionnaires, hospital sources and national reference data	AA, CbD	1
Understands the role of audit (improving patient care and services, risk management etc)	AA, CbD	1
Understands the steps involved in completing the audit cycle	AA, CbD	1
Understands the working and uses of national and local databases used for audit, such as specialty data collection systems etc;	AA, CbD	1
Understands the working and uses of local and national systems available for reporting and learning from clinical incidents and near misses in the UK	AA, CbD	1
Skills		
Uses critical appraisal skills and applies these when reading literature	CbD	1
Applies for appropriate ethical research approval	CbD	1
Demonstrates the use of literature databases	CbD	1
Understand the difference between population-based assessment and unit-based studies and be able to evaluate outcomes	CbD	1
Ability to search the medical literature including use of PubMed,	CbD	1

Medline, Cochrane reviews and the internet		
Appraises retrieved evidence to address a clinical question and apply conclusions	CbD	1
Contributes to the construction, review and updating of local (and national) guidelines using the principles of evidence based medicine	CbD	1
Designs, implements and completes audit cycles	AA, CbD	1, 2
Contributes to local and national audit projects as appropriate	AA, CbD	1, 2
Supports audit by junior medical trainees and within the multi-disciplinary team	AA, CbD	1, 2
Behaviours		
Follows guidelines on ethical conduct in research and consent for research	CbD	1
Shows willingness to the promotion in research	CbD	1
Recognises the need for audit in clinical practice to promote standard setting and quality assurance	AA, CbD	1, 2

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 Tropical Medicine in each deanery is, therefore, the remit of the regional Tropical Medicine 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.

The SAC for Infectious Diseases and Tropical Medicine does not wish to be prescriptive about the structure of the training programme, provided the core competencies are met. The training may be predominantly in one large centre, provided sufficient clinical experience is gained, or may be via a rotation between several centres on a training programme. The following experiences are considered to be essential components of training.

- A period of six months in Medical Microbiology/Virology, gaining experience in diagnostic microbiology, rational use of antimicrobials, and infection control strategies.
- ITU experience, either through a specific attachment or regular liaison
- HIV Medicine
- Unselected patients with acute community acquired Infectious Diseases
- Travel-related medicine including pre-travel advice and illness in the returning traveller
- Infection in the immunocompromised host
- Management of chronic viral hepatitis (hepatitis B/C)
- Management of tuberculosis
- Hospital acquired infection including MRSA, C.difficile and experience of infection control and antimicrobial stewardship.

It is strongly recommend, but not compulsory, for a trainee to have the opportunity for additional enhanced training in specific areas related to Infectious Diseases including clinical virology, clinical pharmacology, public health and epidemiology, GU Medicine, vaccinology, overseas practice and global response to outbreak / disaster situations.

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:

- Secondment 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
- Compulsory year in an overseas resource poor setting that has been recognised for training
- At least 2 years of UK-based training in a UK recognise ‘Tropical Centre’ i.e. Liverpool, London (HTD) and Birmingham
- Specialty-specific takes
- Post-take consultant ward-rounds
- Interaction with clinical microbiologist (+ virologist)
- Involvement with 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.

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 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:

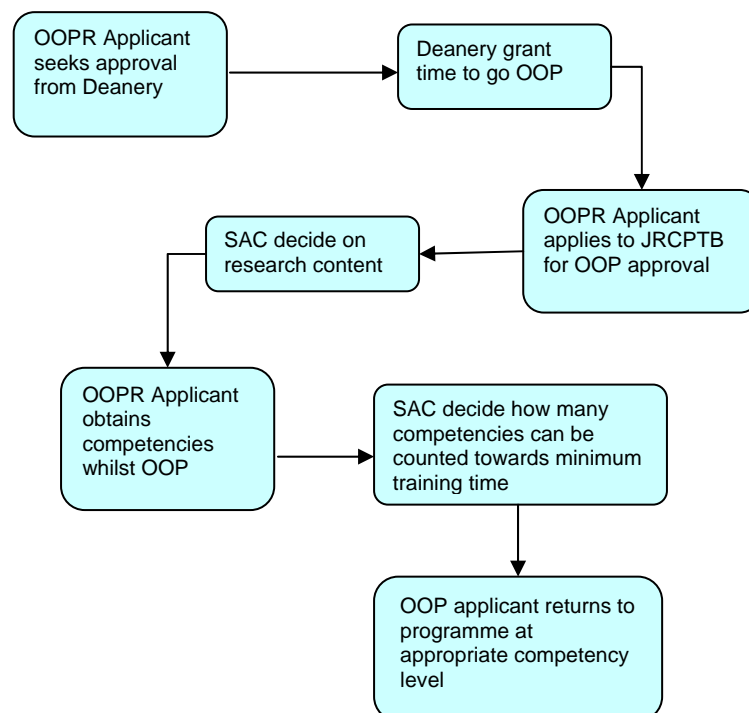
- British Infection Society Meetings and Trainee days
- Federation of Infection Societies' annual meeting
- British HIV Association Meetings
- Viral Resistance Workshop
- Updates in TB, viral hepatitis and tropical medicine/travel medicine
- Attendance at a full-time DTM&H course (London, Liverpool or other equivalent with prior agreement of the SAC)

4.3 Research

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

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

This process is shown in the diagram below:



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

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

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

4.4 Academic Training

Academic Training plays a significant role in the development of Tropical Medicine in England. 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 time set for the CCT is the time set for 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) see the guidelines for monitoring training and progress <http://www.academicmedicine.ac.uk/careersacademicmedicine.aspx>. Extension of a CCT date will be in proportion depending upon the nature of the research and will ensure full capture of the specialty outcomes set down by the Royal College and approved by GMC.

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 consider 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, summative evidence that trainees are meeting the curriculum standards during the training programme;
- ensure trainees are acquiring competencies within the domains of Good Medical Practice;
- assess trainees' actual performance in the workplace;
- ensure that trainees possess the essential underlying knowledge required for their specialty;
- inform the Annual Review of Competence Progression (ARCP), identifying any requirements for targeted or additional training where necessary and facilitating decisions regarding progression through the training programme;
- identify trainees who should be advised to consider changes of career direction.

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

Workplace-based assessments will take place throughout the training programme to allow trainees to continually gather evidence of learning and to provide trainees with formative feedback. They are not individually summative but overall outcomes from a number of such assessments provide evidence for summative decision making. The number and range of these will ensure a reliable assessment of the training relevant to their stage of training and achieve coverage of the curriculum.

5.2 Assessment Blueprint

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

5.3 Assessment methods

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

Examinations and certificates

- The Specialty Certificate Examination in Infectious Diseases (SCE)
- The Diploma of Infectious Diseases and Hygiene is strongly recommended, but is not a mandatory requirement of training.
- Attendance at a full-time DTM&H course (London, Liverpool or other equivalent with prior agreement of the SAC)
- The Diploma of HIV Medicine is strongly recommended, but is not a mandatory requirement of training.
- Advanced Life Support Certificate (ALS)

The Federation of Royal Colleges of Physicians of the UK, in association with the British Infection Society has developed a Specialty Certificate Examination. The aim of this national assessment is to assess a trainee's knowledge and understanding of the clinical sciences relevant to specialist medical practice and of common or important disorders to a level appropriate for a newly appointed consultant. The Specialty Certificate Examination is a prerequisite for attainment of the CCT.

Information about the SCE, including guidance for candidates, is available on the MRCP(UK) website www.mrcpuk.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)
- Patient Survey (PS)
- Acute Care Assessment Tool (ACAT)
- Audit Assessment (AA)
- Teaching Observation (TO)

These methods are described briefly below. More information about these methods including guidance for trainees and assessors is available in the ePortfolio and on the JRCPTB website www.jrcptb.org.uk. Workplace-based assessments should be recorded in the trainee's ePortfolio. The workplace-based assessment methods include feedback opportunities as an integral part of the assessment process, this is explained in the guidance notes provided for the techniques.

Multisource feedback (MSF)

This tool is a method of assessing generic skills such as communication, leadership, team working, reliability etc, across the domains of Good Medical Practice. This provides objective systematic collection and feedback of performance data on a trainee, derived from a number of colleagues. 'Raters' are individuals with whom the trainee works, and includes doctors, administration staff, and other allied professionals. The trainee will not see the individual responses by raters, feedback is given to the trainee by the Educational Supervisor.

Mini-Clinical Evaluation Exercise (mini-CEX)

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

Direct Observation of Procedural Skills (DOPS)

A DOPS is an assessment tool designed to assess the performance of a trainee in undertaking a practical procedure, against a structured checklist. The trainee receives immediate feedback to identify strengths and areas for development.

Case based Discussion (CbD)

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

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.

Audit Assessment Tool (AA)

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

Teaching observation (TO)

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

5.4 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 Aid
Tropical Medicine Training**

	ARCP year 3 (End of ST3)	ARCP year 4 (End of ST4)	ARCP year 5 (End of ST5 = PYA)	ARCP year 6 (End of ST6 = CCT)
Expected competence	<p>Trainees should be competent in the initial assessment of patients with common presenting features of infection (objectives 1-4, see Syllabus section 3.3)</p> <p>(mini-CEX / CbD / ACAT documented in e-portfolio)</p>	<p>Trainees should be competent in the assessment and management of patients with common presenting features of infection including management of all common infectious emergencies (objectives 1-4, see Syllabus section 3.3)</p> <p>(mini-CEX / CbD / ACAT documented in e-portfolio)</p>	<p>Trainees should be autonomously competent in the assessment and management of patients presenting with all core conditions (objectives 1-4, see Syllabus section 3.3)</p> <p>Trainees should have an understanding of the role of the microbiologist and virologist and the importance of microbiological techniques in ID.</p> <p>Trainees should be competent in all aspects of the management of antibiotic use (objectives 5-6, see Syllabus section 3.3)</p> <p>(mini-CEX/CbD/ACAT documented in e-portfolio)</p>	<p>Trainees should be autonomously competent in the assessment and management of patients presenting with all core conditions. (objectives 1-4, see Syllabus section 3.3)</p> <p>Trainees should have an understanding of the role of the microbiologist and virologist and the importance of microbiological techniques in ID.</p> <p>Trainees should be autonomously competent in all aspects of the management of antibiotic use (objectives 5-6, see Syllabus section 3.3)</p> <p>(mini-CEX/CbD/ACAT documented in e-portfolio)</p>

	ARCP year 3 (End of ST3)	ARCP year 4 (End of ST4)	ARCP year 5 (End of ST5 = PYA)	ARCP year 6 (End of ST6 = CCT)
Specialty Certificate Examination		Attempt/Pass SCE	Attempt/Pass SCE	Pass SCE to obtain SCE
DTM&H		Attendance at a full-time DTM&H course (London, Liverpool or other equivalent with prior agreement of the SAC)		
MSF	Satisfactory* *1x MSF completed in ST3 or ST4	Satisfactory* *1x MSF completed in ST3 or ST4	Satisfactory* *1x MSF completed in ST5 or ST6	Satisfactory* *1x MSF completed in ST5 or ST6
DOPS	Have demonstrated competence by DOPS in 2 core techniques	Have demonstrated competence by DOPS in all core techniques	Have demonstrated competence by DOPS in all core techniques	Have demonstrated competence by DOPS in all core techniques May have demonstrated competence by DOPS in any further specialist techniques
PS	Satisfactory* *1x PSQ completed in ST3 or ST4	Satisfactory* *1x PSQ completed in ST3 or ST4	Satisfactory* *1x PSQ completed in ST5 or ST6	Satisfactory* *1x PSQ completed in ST5 or ST6
mini-CEX	3 mini-CEX in which the emphasis is on history/exam in common conditions.	4 mini-CEX where the emphasis is on the assessment and management of patients with common conditions	4 mini-CEX on the assessment and management of patients with core conditions, with the emphasis on complex infections	4 mini-CEX on the assessment and management of patients with core conditions, with the emphasis on complex infections
CbD	3 CbD in which the emphasis is on history/exam in common conditions.	4 CbD where the emphasis is on the assessment and management of patients with common conditions	4 CbD on the assessment and management of patients with core conditions, with the emphasis on complex infections	4 CbDs on the assessment and management of patients with core conditions, with the emphasis on complex infections

	ARCP year 3 (End of ST3)	ARCP year 4 (End of ST4)	ARCP year 5 (End of ST5 = PYA)	ARCP year 6 (End of ST6 = CCT)
ALS	Must have valid ALS	Must have valid ALS	Must have valid ALS	Must have valid ALS
Audit		Evidence of participation in an audit (Audit assessment documented in portfolio)	Evidence of completion of an audit – with major involvement in design, implementation, analysis and presentation of results and recommendations (at least 1x Audit assessment documented in portfolio in ST5 or ST6)	Satisfactory portfolio of audit involvement (at least two completed audit projects with evidence of change in practise) (at least 1x Audit assessment documented in portfolio in ST5 or ST6)
Research		Evidence of critical thinking around relevant clinical questions	Evidence of developing research awareness and competence – participation in research studies, critical reviews, presentation at relevant research meetings or participation in (assessed) courses. (objective 7, see Syllabus section 3.3)	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) or, in some cases a research degree (MD or PhD) (objective 7, see Syllabus section 3.3)
Teaching		Evidence of participation in teaching of medical students, junior doctors and other Health Professionals (Teaching observation assessment documented in portfolio)	Evidence of participation in teaching with results of students' evaluation of that teaching Evidence of understanding of the principles of adult education (at least 1x Teaching observation assessment documented in	Portfolio evidence of ongoing evaluated participation in teaching Evidence of implementation of the principles of adult education (at least 1x Teaching observation assessment documented in

	ARCP year 3 (End of ST3)	ARCP year 4 (End of ST4)	ARCP year 5 (End of ST5 = PYA)	ARCP year 6 (End of ST6 = CCT)
			portfolio in ST5 or ST6)	portfolio in ST5 or ST6)
Management		Evidence of participation in, and awareness of, some aspect of management – examples might include responsibility for organising rotas, teaching sessions or journal clubs	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 understanding of managerial structures e.g. by reflective portfolio entries around relevant NHS management activities.

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.

Core techniques for Tropical Medicine will include lumbar puncture, chest aspiration, ascitic tap, insertion of ascitic drain, intercostal chest drain, insertion of central venous catheter, insertion of urinary catheter in male and female, joint aspiration and lymph node aspiration.

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 MRCP(UK) office has complaints procedures and appeals regulations documented in its website which apply to all examinations run by the Royal Colleges of Physicians including the SCE.

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 Tropical Medicine. The ePortfolio allows evidence to be built up to inform decisions on a trainee's progress and provides tools to support trainees' education and development.

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

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

8 Curriculum review and updating

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

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

Evaluation will address:

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

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

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

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

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

9 Equality and diversity

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

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

The Federation of the Royal Colleges of Physicians believes that equality of opportunity is fundamental to the many and varied ways in which individuals become involved with the Colleges, either as members of staff and Officers; as advisers from the medical profession; as members of the Colleges' professional bodies or as doctors in training and examination candidates. Accordingly, it warmly welcomes contributors and applicants from as diverse a population as possible, and actively seeks to recruit people to all its activities regardless of race, religion, ethnic origin, disability, age, gender or sexual orientation.

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

Compliance with anti-discriminatory practice will be assured through:

- monitoring of recruitment processes;
- ensuring all College representatives and Programme Directors have attended appropriate training sessions prior to appointment or within 12 months of taking up post;
- Deaneries must ensure that educational supervisors have had equality and diversity training (at least as an e learning module) every 3 years
- Deaneries must ensure that any specialist participating in trainee interview/appointments committees or processes has had equality and diversity training (at least as an e module) every 3 years.
- ensuring trainees have an appropriate, confidential and supportive route to report examples of inappropriate behaviour of a discriminatory nature. Deaneries and Programme Directors must ensure that on appointment trainees are made aware of the route in which inappropriate or discriminatory behaviour can be reported and supplied with contact names and numbers. Deaneries must also ensure contingency mechanisms are in place if trainees feel unhappy with the response or uncomfortable with the contact individual.
- monitoring of College Examinations;
- ensuring all assessments discriminate on objective and appropriate criteria and do not unfairly disadvantage trainees because of gender, ethnicity, sexual orientation or disability (other than that which would make it impossible to practise safely as a physician). All efforts shall be made to ensure the participation of people with a disability in training.