JRCPTB

Joint Royal Colleges of Physicians Training Board

Curriculum for Tropical Medicine Training

DRAFT 09.01.20

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

Contents

1. Introduction

The Tropical Medicine (TM) curriculum prepares trainees to meet the challenges of health inequality, high consequence infectious diseases and antimicrobial resistance both in the UK and abroad. UK tropical centres link with Public Health England to provide a network of excellence in the diagnosis and management of imported infections; a small but important number of clinical tropical academics produce high impact research on a diverse range of subjects from neglected tropical diseases to migrant health and vaccine design; and tropical medicine physicians commonly advise the UK Government on international health partnerships.

The Tropical Medicine curriculum contains the same learning outcomes as Infectious Disease (ID) with an additional learning outcome for delivering equitable and high quality care in a resource limited setting. In order to meet this outcome, trainees will undertake the following:

- An indicative year of tropical medicine training in a UK approved tropical medicine setting
- An approved tropical medicine course, such as a Diploma in Tropical Medicine & Hygiene (DTM&H)
- An indicative year working as a clinician in a resource poor tropical setting.

The speciality of Tropical Medicine is distinct from Medical Microbiology (MM) and Medical Virology (MV) in that it prepares trainees to care directly for patients with infections in the emergency department, on the ward and in resource poor settings.

2. Purpose

2.1 Purpose of the curriculum

The purpose of the curriculum is to set the standards for attainment of the award of the CCT or CESR (CP) in Tropical Medicine and to ensure that trainees are fully prepared to lead an NHS infectious diseases/tropical medicine service. Trainees can dual train with Internal Medicine (IM) or alternatively can dual train with Medical Microbiology (MM) or Medical Virology (MV). This allows the speciality to train a broad range of infection specialists with scopes of practice suited to the needs of different employing organisations.

Recruitment into TM with IM (group 1) will be after completion of IMS1 training and full MRCP(UK). Recruitment into Tropical Medicine with Medical Microbiology or Virology programmes (group 2) will require an indicative 2 years of IMS1 training and completion of full MRCP(UK).

All infection specialist trainees will complete combined infection training (CIT) in the first two years of higher training. CIT includes experience in MM, MV and ID providing well rounded knowledge and skills and in laboratory processes, clinical liaison and the direct in- and outpatient management of patients with suspected or confirmed infection. This will include bedside reviews of patients with significant positive results. They will develop skills

in the multidisciplinary management of complex infections and advanced team working skills. They will be required to understand laboratory safety and quality and to develop skills and knowledge of laboratory test selection, limitations and interpretation. In addition, they will gain direct ward and outpatient based experience in the rapid assessment, infection control, diagnosis, and management of patients with suspected infectious diseases.

Toward the end or soon after CIT they will complete the RCPath Part 1/Combined Infection Certificate Examination (CICE), typically after 18-24 months of training.

After CIT, trainees will move into Higher Infection Training (HIT) during which time they will be given greater responsibility and acquire deeper knowledge and skills in infectious diseases and tropical medicine. They will acquire the skills required to run inpatient and outpatient infection services. They will be able to lead ward rounds, run outpatients, manage acutely unwell patients (e.g. with sepsis), integrate with other medical specialities as required and to lead multidisciplinary teams in infection prevention and control, outbreak management, antimicrobial stewardship and out-patient antimicrobial therapy (OPAT) programmes.

Tropical Medicine trainees will undertake an indicative year of HIT in a UK tropical centre (Hospital for Tropical Diseases in London, or Liverpool School of Tropical Medicine/Royal Liverpool Hospital) focussing on the diagnosis and management of imported infections. Trainees will also spend an additional indicative year working as a clinician in a resource poor setting approved by the SAC and will complete a full-time course in TM (such as a Diploma in Tropical Medicine and Hygiene - DTM&H). During the indicative five years of dual higher training in Tropical Medicine and Internal Medicine trainees will undertake an indicative year of further Internal Medicine training such that they can meet the requirements of the IM stage 2 (IMS2) curriculum. The higher training duration for dual Tropical Medicine and MM or MV will normally be six years.

The Tropical Medicine curriculum in the three combinations will deliver infection specialists who can integrate into the local structure and be flexible enough to complement other staff and cooperate in delivering the required service. The proportion of in-patient, consult-based and laboratory work will vary according to local need, but trainees will have the capability and readiness to deliver all these aspects of care.

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

2.2 High Level Curriculum Outcomes: Capabilities in Practice

The 13 capabilities in practice (CiPs) describe the professional tasks or work within the scope of Tropical Medicine. Each CiP has a set of descriptors associated with that activity or task. Descriptors are intended to help trainees and trainers recognise the minimum level of knowledge, skills and attitudes which should be demonstrated for an entrustment decision to be made. By the completion of training and award of CCT, the doctor must demonstrate that they are capable of unsupervised practice in all generic and specialty CiPs.

The six generic CiPs cover the universal requirements of all specialties as described in the GPC framework. Assessment of the generic CiPs will be underpinned by the GPC descriptors. Satisfactory sign off will indicate that there are no concerns before the trainee can progress to the next part of the assessment of clinical capabilities.

The seven specialty CiPs describe the laboratory and clinical tasks or activities which are essential to the practice of Tropical Medicine. The specialty CiPs have also been mapped to the GPC domains and subsections to reflect the professional generic capabilities required to undertake the clinical tasks. Satisfactory sign off requires demonstration that, for each of the CiPs, the trainee's performance meets or exceeds the minimum expected level of performance expected for completion of this stage of Tropical Medicine training, as defined in the curriculum.

Learning outcomes – capabilities in practice (CiPs)
Generic CiPs
1. Able to successfully function within NHS organisational and management systems 2. Able to deal with ethical and legal issues related to clinical practice 3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement 4. Is focussed on patient safety and delivers effective quality improvement in patient care 5. Carrying out research and managing data appropriately 6. Acting as a clinical teacher and clinical supervisor
Specialty CiPs
1. Able to provide clinical leadership and support to the laboratory. 2. Able to use the laboratory service effectively in the investigation, diagnosis and management of infection. 3. Able to advise on infection prevention, control and immunisation. 4. Able to manage and advise on important clinical syndromes where infection is in the differential diagnosis. 5. Able to lead and advise on treatment with and stewardship of antimicrobials. 6. Providing continuity of care to inpatients and outpatients with suspected or proven infection. 7. Able to lead an imported infection service 8. Able to deliver equitable and high quality care in resource poor settings

Learning outcomes for Internal Medicine

Trainees undertaking dual training in Tropical Medicine and Internal Medicine will need complete the clinical learning outcomes for internal medicine. These outcomes can be found in the IM stage 2 curriculum and in appendix A.

Trainees who are dual training in Tropical Medicine and Internal Medicine will not develop the ability to provide clinical leadership and support to the laboratory to the level of unsupervised practice (specialty CiP 1)).

2.2 Training pathway

Trainees in the specialty will initially spend two years in combined infection training (CIT) where they will develop knowledge of laboratory work, together with supervised clinical liaison and validation of results, and direct clinical care. Following completion of CIT and the CICE/ FRCPath Part 1 examination (typically after 18-24 months of training), Tropical Medicine trainees will move onto Higher Infection training. See figure 1 for structure and examinations where they will continue to develop their skills in direct patient care, with greater responsibility and less direct supervision.

Figure 1a. Structure of training in Tropical Medicine with Internal Medicine Stage 2 (IM2)

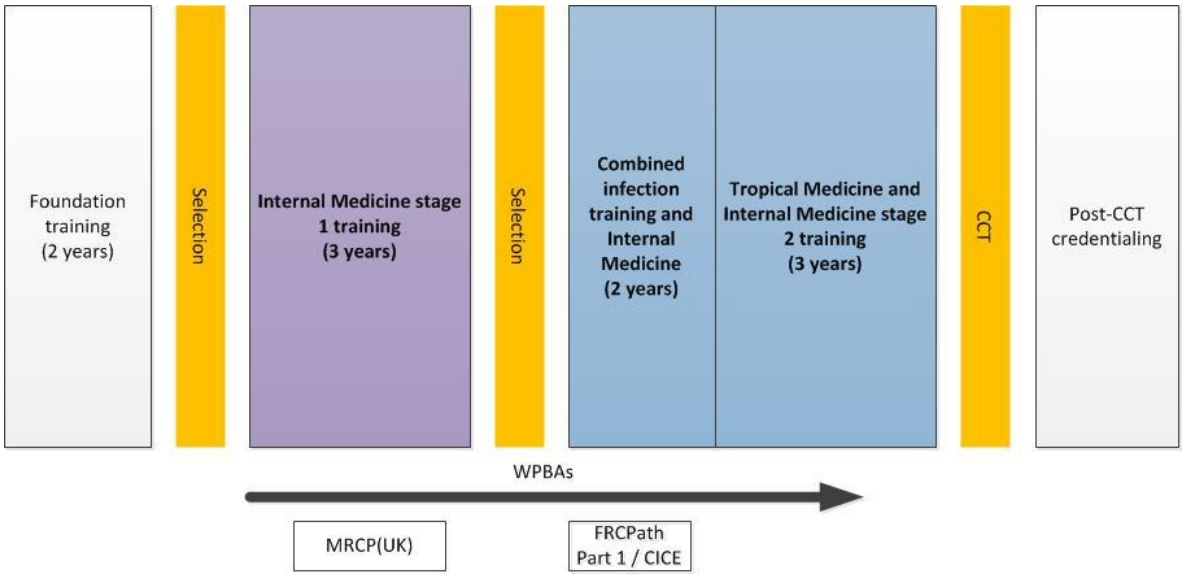
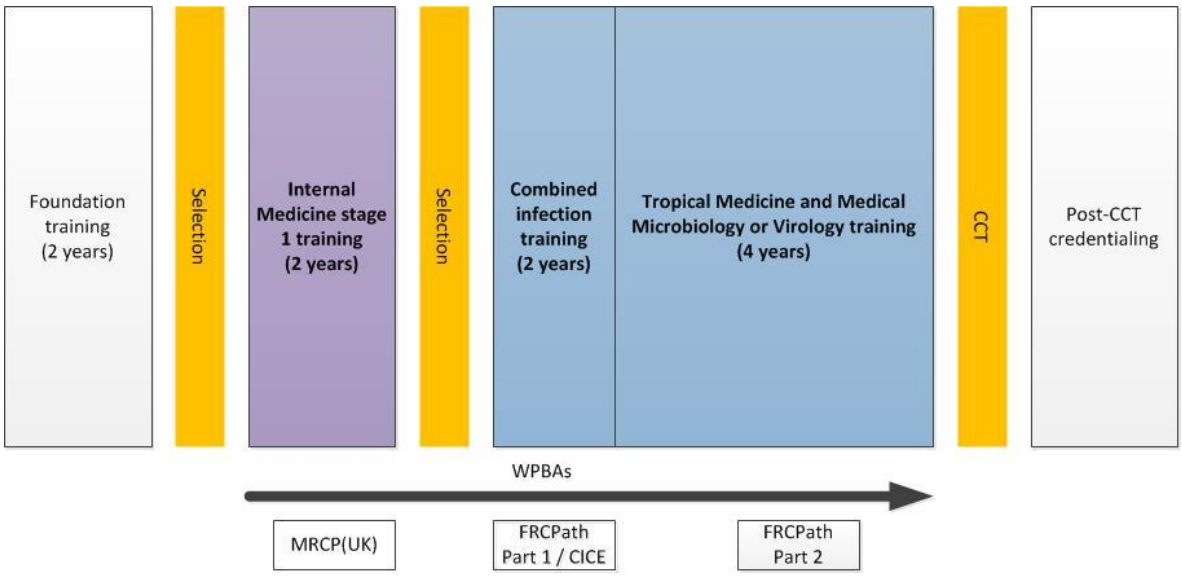


Figure 1b. Structure of training in Tropical Medicine with Medical Microbiology (MM) or Medical Virology (MV):



This curriculum will deliver a Tropical Medicine specialist who can integrate into the local structure and be flexible enough to complement other staff and cooperate to deliver the required service. Therefore, the proportion of clinical and laboratory work will vary widely according to local need, but trainees should have the capability and readiness for either.

This curriculum supports a flexible approach to training with broad entry routes from post-Foundation core training programmes, whose clinical experience will closely mirror the range of clinical specialties supported by Tropical Medicine specialists and Tropical Medicine services:

- 3 years of Stage 1 Internal Medicine plus MRCP(UK) or 4 years of Acute Care Common Stem – Internal Medicine (ACCS-IM) plus MRCP(UK) for those training in TM/IM
- 2 years of Stage 1 Internal Medicine plus MRCP(UK) or 3 years of Acute Care Common Stem – Internal Medicine (ACCS-IM) plus MRCP(UK) for those training in TM/MM and TM/MV.

2.3 Duration of training

Training in Tropical Medicine will usually be completed in five years of full time higher specialist training if undertaken as dual CCT programme with Internal Medicine. Trainees will need to achieve the capabilities with assessment evidence as described in the IM stage 2 curriculum (see appendix A). It is anticipated that two years would normally be required to satisfactorily complete the Combined Infection Training (CIT) section of the curriculum and three years) to complete higher infection training in Tropical Medicine plus Internal Medicine.

Alternatively, Tropical Medicine trainees are able to apply for and undertake training leading to a second CCT in either Medical Microbiology or Medical Virology. Trainees will

also need to achieve the capabilities, with assessment evidence, as described in either the Medical Microbiology or Medical Virology curricula. Training in dual Tropical Medicine with Medical Microbiology or Virology is anticipated to require an indicative duration of two years Combined Infection Training, followed by four years of higher infection training.

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

2.5 Flexibility and accreditation of transferrable capabilities

The curriculum incorporates and emphasises the importance of the generic professional capabilities (GPCs) which will promote flexibility in postgraduate training, as common capabilities can be transferred from specialty to specialty. The high-level speciality learning outcomes (CiPs) will be shared between all four infection specialties. This will allow transferability between the different curricula and appropriate credit for levels already achieved. In addition, the generic CiPs will be shared across all physicianly curricula and for those training in Tropical Medicine and Internal Medicine, the Internal Medicine clinical CiPs will be shared across all group 1 specialities, supporting flexibility for trainees to move between these specialties without needing to repeat aspects of training.

2.6 Less than full time training

Trainees are entitled to opt for less than full time training programmes. Less than full time trainees should undertake a pro rata share of the out-of-hours duties (including on-call and other out-of-hours commitments) required of their full-time colleagues in the same programme and at the equivalent stage.

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

2.7 Generic Professional Capabilities and Good Medical Practice

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

The nine domains of the GMC's Generic Professional Capabilities

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

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

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

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

3 Content of Learning

The curriculum is spiral and topics and themes will be revisited to expand understanding and expertise. The level of entrustment for capabilities in practice (CiPs) will increase as an

individual progresses from needing direct supervision to able to entrusted to act unsupervised.

3.1 Capabilities in practice

CiPs describe the professional tasks or work within the scope of the specialty and internal medicine. CiPs are based on the concept of entrustable professional activities[1] which use the professional judgement of appropriately trained, expert assessors as a defensible way of forming global judgements of professional performance.

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

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

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

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

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

3.2 Generic capabilities in practice

The six generic CiPs cover the universal requirements of all specialties as described in GMP and the GPC framework. Assessment of the generic CiPs will be underpinned by the

[1] Nuts and bolts of entrustable professional activities

descriptors for the nine GPC domains and evidenced against the performance and behaviour expected at that stage of training. Satisfactory sign off will indicate that there are no concerns. It will not be necessary to assign a level of supervision for these non-clinical CiPs.

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

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

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

Tropical Medicine Generic capabilities in practice (CiPs)	
Category 1: Professional behaviour and trust	
1. Able to function successfully within NHS organisational and management systems.	
Descriptors	• Demonstrates awareness of and adherence to the GMC professional requirements • Demonstrates recognition of public health issues including population health, social detriments of health and global health perspectives • Demonstrates effective clinical leadership • Practices promotion of an open and transparent culture • Demonstrates up to date practice through learning and teaching • Demonstrates engagement in career planning • Demonstrates capabilities in dealing with complexity and uncertainty • Aware of the role of and processes for operational structures within the NHS • Aware of the need to use resources wisely
Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 3: Professional knowledge • Professional requirements • National legislative requirements • The health service and healthcare systems in the four countries Domain 9: Capabilities in research and scholarship

Evidence to inform decision	MCR MSF ECE Active role in governance structures Management course End of placement reports ES report
2. Able to deal with ethical and legal issues related to clinical practice.	
Descriptors	• Demonstrates awareness of national legislation and legal responsibilities, including safeguarding vulnerable groups • Demonstrates behaviour in accordance with ethical and legal requirements • Demonstrates ability to offer apology or explanation when appropriate • Demonstrates leadership of the clinical and laboratory team in ensuring that medical legal factors are considered openly and consistently • Demonstrates ability to advise clinicians and other health professionals on medico-legal issues related to pathology
Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 3: Professional knowledge • Professional requirements • National legislative requirements • The health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 7: Capabilities in safeguarding vulnerable groups Domain 8: Capabilities in education and training Domain 9: Capabilities in research and scholarship
Evidence to inform decision	MCR MSF CbD DOPS Mini-CEX ALS certificate End of life care and capacity assessment End of placement reports FRCPath ECE
Category 2: Communication, team-working and leadership	
3. Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement.	
Descriptors	• Demonstrates effective communication with clinical and other professional colleagues • Demonstrates clear communication with patients and carers in a variety of settings

	• Identifies and manages barriers to communication (e.g. cognitive impairment, speech and hearing problems, capacity issues, cultural issues) • Demonstrates effective consultation skills including effective verbal and nonverbal interpersonal skills • Practices effective decision making by informing the patient, prioritising the patient's wishes, and respecting the patient's beliefs, concerns and expectations • Practices effective decision making with children and young people • Demonstrates effective management and team working skills appropriately, including influencing, negotiating, re-assessing priorities and effectively managing complex, dynamic situations
Generic Professional Capabilities	Domain 2: Professional skills • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* • The health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and team working
Evidence to inform decision	MCR MSF PS CbD Mini- CEX Management course End of placement reports ES report
Category 3: Safety and quality	
4. Is focussed on patient safety and delivers effective quality improvement in patient care.	
Descriptors	• Identifies patient safety as a priority in clinical practice • Raises and escalates concerns where there is an issue with patient safety or quality of care • Demonstrates commitment to learning from patient safety investigations and complaints • Applies good practice appropriately • Contributes to and delivers quality improvement • Identifies basic Human Factors principles and practice at individual, team, organisational and system levels

	• Recognises the importance of non-technical skills and crisis resource management • Recognises and works within limit of personal competence
Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 2: Professional skills • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • Professional requirements • National legislative requirements • The health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and team working Domain 6: Capabilities in patient safety and quality improvement • Patient safety • Quality improvement
Evidence to inform decision	MCR MSF ECE FRCPath End of placement reports
Category 4: Wider professional practice	
5. Carrying out research and managing data appropriately.	
Descriptors	• Describes and explains principles of research and academic writing • Describes and explains legal and ethical frameworks underlying research in the UK • Describes and explains structures supporting health service research • Demonstrates awareness of sources of finance to support research • Demonstrates ability to manage clinical information/data appropriately • Demonstrates ability to carry out critical appraisal of the literature • Demonstrates ability to design and perform a research project • Demonstrates ability to follow guidelines on ethical conduct in research and consent for research

	• Identifies public health epidemiology and global health patterns
Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 3: Professional knowledge • Professional requirements • National legislative requirements • The health service and healthcare systems in the four countries Domain 7: Capabilities in safeguarding vulnerable groups Domain 9: Capabilities in research and scholarship
Evidence to inform decision	MCR MSF GCP certificate (if involved in clinical research) Evidence of literature search and critical appraisal of research Use of clinical guidelines Quality improvement and audit Evidence of research activity FRCPath End of placement reports
6. Acting as a teacher and clinical supervisor.	
Descriptors	• Demonstrates effective teaching and training to medical students, junior doctors, laboratory staff and other healthcare professionals • Demonstrates ability to deliver effective feedback to trainees, with appropriate action plan • Demonstrates ability to effectively supervise healthcare professionals, including medical staff, in earlier stages of training • Demonstrates ability to act as a clinical supervisor to healthcare professionals, including medical staff, in earlier stages of training
Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 8: Capabilities in education and training
Evidence to inform decision	MCR MSF TO ECE Relevant training course End of placement reports

3.3 Specialty capabilities in practice

The eight specialty CiPs describe the tasks or activities which are essential to the practice of Tropical Medicine. These CiPs have been mapped to the nine GPC domains to reflect the professional generic capabilities required to undertake these tasks.

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

Tropical Medicine Specialty capabilities in practice	
1. Able to provide clinical leadership and support to the laboratory	
Descriptors	• Demonstrates awareness of developments, both scientific and managerial, that may affect the delivery of diagnostic Microbiology (Bacteriology, Virology, Mycology and Parasitology) services. • Understands legislation relevant to diagnostic Microbiology laboratories including that related to Health and Safety. • Demonstrates knowledge and understanding of methods of microbiological investigation. • Demonstrates ability to select and advise on appropriate microbiological tests for clinical investigation and to oversee appropriate turnaround times. • Demonstrates knowledge and understanding of Microbiological (Bacteriology, Virology, Mycology and Parasitology) method validation and verification, and the concepts of sensitivity and specificity as applied to Microbiological tests. • Demonstrates ability to effectively use and oversee Internal Quality Control (IQC) and External Quality Assurance (EQA) data to assure the overall quality of microbiological diagnostics. • Demonstrates knowledge and understanding of Laboratory Information Management Systems (LIMS) and other Healthcare Information Technology systems, including understanding relevant information governance legislation. • Demonstrates ability to work effectively and provide clinical leadership in a multidisciplinary team within the diagnostic Microbiology laboratory. • Able to evaluate and oversee the introduction of novel laboratory tests

Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 2: Professional skills • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty Domain 3: Professional knowledge • Professional requirements • National legislative requirements • The health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and team working Domain 6: Capabilities in patient safety and quality improvement
Evidence to inform decision	CbD Mini-CEX ECE QIPAT TO MCR ES report FRCPath Part 1 DOPs
2. Able to use the laboratory service effectively in the investigation, diagnosis and management of infection.	
Descriptors	• Demonstrates understanding of the biology of micro-organisms that may cause diseases in humans and the principles of the host-pathogen interaction. • Demonstrates ability to effectively advise on appropriate Microbiological (Bacteriology, Virology, Mycology and Parasitology) investigations. • Demonstrates an understanding of the human microbiome, colonising organisms, and the features of pathological infection. • Demonstrates ability to effectively use microbiological and other data, to form an appropriate differential diagnosis. • Demonstrates knowledge and understanding of national and international microbiological guidelines. • Demonstrates ability to liaise effectively with other specialty diagnostic services. • Able to inform and develop local guidelines and standard operating practice (SOP's)
Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 2: Professional skills • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty Domain 3: Professional knowledge

	• Professional requirements • National legislative requirements • The health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and team-working Domain 6: Capabilities in patient safety and quality improvement
Evidence to inform decision	CbD Mini-CEX ECE QIPAT TO MCR ES report FRCPath Part 1
3. Able to advise on infection prevention, control and immunisation	
Descriptors	• Demonstrates knowledge and understanding of Standard Precautions in Infection Prevention and Control (IP&C) and ability to advise on the appropriate use of Personal Protective Equipment (PPE). • Demonstrates knowledge and understanding of Transmission-based Precautions in IP&C, including appropriate patient isolation and cohorting. • Demonstrates knowledge and understanding of microbiological surveillance including patient screening methods, organism typing and genome sequencing methodologies. • Applies knowledge and understanding of microbiological surveillance to prevention and control of Healthcare Associated Infection (HCAI). • Demonstrates ability to participate in managing outbreaks or significant cross-infection incidents in the healthcare setting. • Demonstrates knowledge and understanding of the healthcare environment and equipment as potential sources of infection. • Demonstrates knowledge and understanding of public health implications of specific communicable diseases and the importance of appropriate public health notification and intervention. • Demonstrates knowledge and understanding of the public-health aspects of vaccine-preventable infections and the benefits of vaccination. • Demonstrates ability to advise appropriately on the use of active and passive immunisation, including in immunocompromised patients and in outbreaks.

Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 2: Professional skills • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and team-working
Evidence to inform decision	CbD Mini-CEX ECE QIPAT TO MCR ES report FRCPath Part 1 DOPs ACAT
4. Able to manage and advise on important clinical syndromes where infection is in the differential diagnosis	
Descriptors	• Demonstrates ability to take a comprehensive patient history, including when appropriate, travel, occupational, contact drug, transfusion and sexual history, and ensures history is accurately recorded. • Demonstrates ability to perform an accurate clinical examination and to clearly record examination findings • Demonstrates ability to form an appropriate differential diagnosis based on patient history, clinical examination findings and investigations. • Demonstrates ability to formulate and advise on or implement a safe and appropriate management plan. • Demonstrates ability to assess, investigate, diagnose and advise on, or directly manage all aspects of suspected or proven community acquired infection. • Demonstrates ability to assess, investigate, diagnose and advise on, or manage all aspects of suspected or proven healthcare associated infection. • Demonstrates ability to assess, investigate, diagnose and advise on, or directly manage all aspects of suspected or proven infection in immunocompromised patients, including those infected with HIV.

Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 2: Professional skills • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • Professional requirements • National legislative requirements • The health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and team working Domain 6: Capabilities in patient safety and quality improvement Domain 7: Capabilities in safeguarding vulnerable groups
Evidence to inform decision	CbD Mini-CEX ECE QIPAT TO MCR ES report FRCPath Part 1 DOPs PS ACAT
5. Able to lead on and advise on treatment with and stewardship of antimicrobials	
Descriptors	• Demonstrates appropriate use and ability to advise on the appropriate use and stewardship of antimicrobials, including antibiotics, antivirals, antifungals, anti-protozoal and anti-parasitic agents • Demonstrates ability to provide leadership and education on the appropriate use and stewardship of antimicrobials, including use and implementation of evidence-based empiric and pathogen-specific antimicrobial guidelines. • Demonstrates understanding of the global problem of increasing antimicrobial resistance (AMR). • Demonstrates ability to advise and lead on the appropriate use of an outpatient parenteral antimicrobial therapy (OPAT) service.

Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 2: Professional skills • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • Professional requirements • National legislative requirements • The health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and team working Domain 6: Capabilities in patient safety and quality improvement
Evidence to inform decision	CbD Mini-CEX ECE QIPAT TO MCR ES report FRCPath Part 1 PS ACAT
6. Providing continuity of care to inpatients and outpatients with suspected or proven infection	
Descriptors	• Demonstrates ability to assess, investigate, diagnose, advise on, or directly manage patients with suspected or proven infection in the inpatient, ambulatory and outpatient settings. • Demonstrates ability to assess, investigate, diagnose, advise on, or directly manage chronic infections. • Demonstrates expertise in the management of Tuberculosis (TB), including drug-resistant TB, HIV, chronic hepatitis B and C and travel-related conditions. • When clinically appropriate, refers to alternative specialty inpatient or outpatient services. • Managing patient at all stages, including end of life care.
Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 2: Professional skills • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty

	• Clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • Professional requirements • National legislative requirements • The health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and team working Domain 6: Capabilities in patient safety and quality improvement Domain 7: Capabilities in safeguarding vulnerable groups
Evidence to inform decision	CbD Mini-CEX ECE QIPAT TO MCR ES report FRCPath Part 1 DOPs PS ACAT
7. Able to lead an imported infection service	
Descriptors	• Demonstrates the ability to assess, investigate, diagnose, advise on, and directly manage patients with imported infections. • Demonstrates the ability to provide leadership in clinical care, governance and service development for patients with imported infections. • Demonstrates comprehensive knowledge and skills in pre-travel health advice. • Demonstrates a knowledge and understanding of the epidemiology, lifecycle and clinical presentation of parasitic diseases • Demonstrates the ability to give advice on the diagnosis and management of parasitic infections, including the role of laboratory testing
Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 2: Professional skills • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing*

	medicines safely; using medical devices safely; infection control and communicable disease) Domain 3: Professional knowledge • Professional requirements • National legislative requirements • The health service and healthcare systems in the resource poor setting Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and team working Domain 6: Capabilities in patient safety and quality improvement Domain 7: Capabilities in safeguarding vulnerable groups Domain 9: Capabilities in research and scholarship
Evidence to inform decision	MCR MSF PS QIPAT ACAT CbD ECE DOPS TO Mini-CEX Tropical medicine course (e.g. DTM&H) Travel medicine course Publications Presentation at a meeting
8. Delivering equitable and high quality care in resource poor settings	
Descriptors	• Demonstrates ability to deliver high quality care in a resource limited setting with appropriate use of investigation and therapeutics according to patient need and available supplies • Demonstrates ability to practise with patient groups from different cultural backgrounds who do not have English as their first language • Demonstrates the ability to work with colleagues (medical and non-medical) from different cultural backgrounds who do not have English as their first language • Demonstrates flexibility and capacity to work in healthcare settings that differ from UK NHS practice • Demonstrates the ability to manage the non-communicable disease (NCD) issues seen in tropical resource poor settings • Demonstrates the ability to generate changes in clinical care which reduces health inequality • Demonstrates the ability to produce evidence to inform policy for international health partnerships

Generic Professional Capabilities	Domain 1: Professional values and behaviours Domain 2: Professional skills • Practical skills • Communication and interpersonal skills • Dealing with complexity and uncertainty • Clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • Professional requirements • National legislative requirements • The health service and healthcare systems in the resource poor setting Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and team working Domain 6: Capabilities in patient safety and quality improvement Domain 7: Capabilities in safeguarding vulnerable groups
Evidence to inform decision	MCR MSF PS QIPAT ACAT CbD ECE DOPS TO Mini-CEX Tropical medicine course (e.g. DTM&H) Travel medicine course Publications Presentation at a meeting

KEY

ACAT	Acute care assessment tool	ALS	Advanced Life Support
CbD	Case-based discussion	DOPS	Direct observation of procedural skills
DTM&H	Diploma of Tropical Medicine and Hygiene	ECE	Evaluation of clinical/management events
FRCPath	Fellowship examination of The Royal College of Pathologists	GCP	Good Clinical Practice
Mini-CEX	Mini-clinical evaluation exercise	MCR	Multiple consultant report
MSF	Multi source feedback	PS	Patient survey
QIPAT	Quality improvement project assessment tool	TO	Teaching observation

3.4 Syllabus

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

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

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

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

SECTION	COMBINED INFECTION TRAINING	
A	**Basic Biology of Bacteria, Viruses, Fungi & Parasites**	**CiPs: G3, S1, S2, S3**
B	**Laboratory Practice** **1. Pre Analytical Phase** **2. Analytical Phase** **3. Post Analytics Phase** **4. Laboratory Management & Quality Assurance** **5. Health and Safety**	**CiPs: G3, S1, S2** **CiPs: G3, G4, S1, S2** **CiPs: G3, G4, S1, S2** **CiPs: G1, G4, S1** **CiPs: G4, S1, S3**
C	**Principles of Public Health in relation to Infection**	**CiPs: G1, G3, S3**
D	**Infection Prevention and Control**	**CiPs: G1, G2, G3, G4, S2, S3, S5**
E	**Important Clinical Syndromes**	**CiPs: G3, S2, S3, S4**
F	**Use of Antimicrobial Agents**	**CiPs: G3, S3, S5**
G	**Vaccination**	**CiPs: G1, G2, S2**
H	**Management of HIV Infection**	**CiPs: G1, G2, G3, S3, S6**

I	**Travel and Geographical Health**	**CiPs: G1, G2, S1, S2, S3, S4**

Editing note: Specialty CiP 7 needs to be mapped to CIT topics

HIGHER INFECTION TRAINING IN TROPICAL MEDICINE	
Diagnosis and management of community and healthcare acquired infections	
Management of longer-term conditions	
Healthcare-associated and nosocomial infections	
Specific infections related to post-operative sepsis	
Multi-resistant organisms	
Personal protective equipment for infection scenarios	
Antimicrobial therapy	
HIV Infected and other immune-compromised patients	
Specific therapies in non-HIV immuno-compromised patients	
Specific therapies in HIV positive patients	
Clinical care in resource poor settings	
Imported infection and pre-travel health services	
Parasitic infections	
International health partnerships	

Editing note: HIT topics to be mapped to CiPs

4 Learning and Teaching

4.1 The training programme

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

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

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

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

Trainees will have an appropriate clinical supervisor and a named educational supervisor. The clinical supervisor and educational supervisor may be the same person.

Editing note: the follow section may be removed and provided in a separate guidance document

Combined infection training (CIT)

The aim of Combined Infection Training (CIT) is to produce a doctor who is familiar with laboratory practice in the diagnosis and management of infection as well as familiar with the clinical presentations and management of infections. Therefore to acquire the requisite capabilities, the indicative two year training period should be organised as follows:

- Indicative six months of clinical microbiology and virology training associated with a diagnostic laboratory to diagnose and manage infection. Two months of this period (whole time equivalent) should be spent under the clinical supervision of a consultant virologist, where possible working in a specialist virology centre or unit.

- Indicative six months of clinical infection consult duties

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

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

There is flexibility in how the above training experiences are organised and most programmes will seek to combine the outpatient and inpatient work or the consult and inpatient work to provide a 12 month module.

Higher infection training (HIT) in Tropical Medicine

- Tropical Medicine trainees will undertake an indicative 12 months of HIT in a UK tropical centre (Hospital for Tropical Diseases in London, or Liverpool School of Tropical Medicine/Royal Liverpool Hospital) focussing on the diagnosis and management of imported infections.

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

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

- An indicative 12 months must be spent working as a clinician in a resource poor tropical medicine setting approved by the SAC. This experience will enable trainees to meet the learning outcome of delivering equitable and high quality care in a resource limited setting.

- Trainees will complete a full-time course in Tropical Medicine (such as a Diploma in Tropical Medicine and Hygiene - DTM&H) to ensure they have the knowledge to meet the learning outcome of delivering equitable and high quality care in a resource limited setting. The course should be approved by the SAC for Infectious Diseases and Tropical Medicine.

4.2 Teaching and learning methods

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

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

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

Medical clinics including specialty clinics
The educational objectives of attending clinics are:

- To understand the management of chronic diseases
- Be able to assess a patient in a defined timeframe
- To interpret and act on the referral letter to clinic
- To propose an investigation and management plan in a setting different from the acute medical situation
- To review and amend existing investigation plans
- To write an acceptable letter back to the referrer
- To communicate with the patient and where necessary relatives and other health care professionals.

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

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

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

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

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

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

Scientific meetings: research and the understanding of research are essential to the practice of Tropical Medicine. Trainees should be encouraged to attend and present their work at relevant meetings.

Discussion with Biomedical Scientists (BMS): BMS staff can provide excellent training, particularly in relation to laboratory methods, health and safety, service delivery, procurement and human resources.

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

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

Formal postgraduate teaching
The content of these sessions is 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.

Trainees in Tropical Medicine must complete a full-time course in tropical medicine and hygiene (such as the DTM&H course in London or Liverpool or other equivalent course prospectively approved by with prior agreement of the SAC).

Other suggested activities include:

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

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

Independent self-directed learning

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

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

Formal study courses

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

4.3 Academic training

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

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

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

4.4 Taking time out of programme

There are a number of circumstances when a trainee may seek to spend some time out of specialty training, such as undertaking a period of research or taking up a fellowship post. All such requests must be agreed by the postgraduate dean in advance and trainees are advised to discuss their proposals as early as possible. Full guidance on taking time out of programme can be found in the Gold Guide.

4.5 Acting up as a consultant

A trainee coming towards the end of their training may spend up to three months “acting-up” as a consultant, provided that a consultant supervisor is identified for the post and satisfactory progress is made. As long as the trainee remains within an approved training programme, the GMC does not need to approve this period of “acting up” and their original CCT date will not be affected. More information on acting up as a consultant can be found in the Gold Guide.

5 Programme of Assessment

5.1 Purpose of assessment

The purpose of the programme of assessment is to:

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

5.2 Programme of Assessment

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

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

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

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

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

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

5.3 Assessment of CiPs

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

Clinical supervisors and others contributing to assessment will provide formative feedback to the trainee on their performance throughout the training year. This feedback will include a global rating in order to indicate to the trainee and their educational supervisor how they are progressing at that stage of training. To support this, workplace based assessments and multiple consultant reports will include global assessment anchor statements.

Global assessment anchor statements

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

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

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

For **generic CiPs**, the ES will indicate whether the trainee is meeting expectations or not using the global anchor statements above. Trainees will need to be meeting expectations for

the stage of training as a minimum to be judged satisfactory to progress to the next training year.

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

Level descriptors for clinical and specialty CiPs

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

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

5.4 Critical progression points

There will be a key progression point on entry and on completion of specialty training.

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

The outline grids below set out the expected level of supervision and entrustment for the specialty CiPs and include the critical progression points across the whole training programme.

Table 1: Outline grid of levels expected for Tropical Medicine specialty capabilities in practice (CiPs)

Levels to be achieved by the end of each training year for specialty CiPs

Level descriptors

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

		Combined Infection Training		Tropical Medicine/ Internal Medicine			Tropical Medicine and MM/MV			
		CIT year 1	CIT year 2	HIT year 3	HIT year 4	HIT year 5	HIT year 3	HIT year 4	HIT year 5	HIT year 6
1.	Able to provide clinical leadership and support to the laboratory.	2	2	2	2	2	3	3	3	4
2.	Able to use the laboratory service effectively in the investigation, diagnosis and management of infection.	2	2	3	3	4	3	3	3	4
3.	Able to advise on infection prevention, control and immunisation.	2	2	3	3	4	3	3	3	4
4.	Able to manage and advise on important clinical syndromes where infection is in the differential diagnosis.	2	3	3	3	4	3	3	3	4
5.	Able to lead and advise on treatment with and stewardship of antimicrobials.	2	3	3	3	4	3	3	3	4
6.	Providing continuity of care to inpatients and outpatients with suspected or proven infection.	2	3	3	3	4	3	3	3	4
7.	Able to lead an imported infection service	2	2	2	3	4	2	2	3	4
8.	Able to deliver equitable and high quality care in resource poor settings					4				4

Editing note: levels expected for earlier years of training to be determined for CiP 8

5.5 Evidence of progress

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

Summative assessment

Examinations and certificates

- **FRCPath (CICE) examination**

The summative assessment for Tropical Medicine is the Combined Infection Certificate Examination (CICE). This is the same examination as the FRCPath Part 1 taken by Infectious Diseases (ID), Microbiology (MM) and Virology (MV) trainees.

It is recommended, for all infection trainees, that the CICE examination is attempted for the first time during Year 2 of Combined Infection training or at the beginning of the first year of Higher Infection training (HIT). For dual speciality trainees (MM/TM or MV/TM) CICE/FRCPath Part 1 should be obtained by the end of the third year of HIT in order to progress to the fourth year of training (and to allow time to obtain Part 2 FRCPath). For Tropical Medicine/Internal medicine trainees the CICE examination must be obtained by CCT date.

- **The Diploma of Tropical Medicine and Hygiene examination is recommended, but is not a mandatory requirement**

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. Attendance at a DTM&H course is mandatory so most trainees will take the associated examination, but it is not mandatory to have passed it.

- **The Diploma of HIV Medicine is strongly recommended, but is not a mandatory requirement**

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/

- **Advanced Life Support Certificate (ALS)**

Workplace-based assessment (WPBA)

- Direct Observation of Procedural Skills (DOPS) – summative

Formative assessment

Supervised Learning Events (SLEs)

- Acute Care Assessment Tool (ACAT)
- Case-Based Discussions (CbD)
- mini-Clinical Evaluation Exercise (mini-CEX)

WPBA

- Audit Assessment (AA)
- Direct Observation of Procedural Skills (DOPS) – formative
- Evaluation of clinical events (ECE)
- Multi-Source Feedback (MSF)
- Patient Survey (PS)
- Quality Improvement Project Assessment Tool (QIPAT)
- Teaching Observation (TO)

Supervisor reports

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

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

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

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. It is primarily for assessment of their ability to prioritise, to work efficiently, to work with and lead a team, and to interact effectively with nursing and other colleagues. It can also be used for assessment and feedback in relation to care of individual patients. Any doctor who has been responsible for the supervision of the acute medical take can be the assessor for an ACAT.

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.

Case-based Discussion (CbD)

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

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

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

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

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

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

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

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

Multiple Consultant Report (MCR)
The MCR captures the views of consultant supervisors based on observation on a trainee's performance in practice. The MCR feedback and comments received give valuable insight into how well the trainee is performing, highlighting areas of excellence and areas of support required. MCR feedback will be available to the trainee and contribute to the educational supervisor's report.

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

5.6 Decisions on progress (ARCP)

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

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

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

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

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

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

5.7 Assessment blueprint

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

KEY

ACAT	Acute care assessment tool	ALS	Advanced Life Support
CbD	Case-based discussion	DOPS	Direct observation of procedural skills
ECE	Evaluation of clinical/management events	FRCPath	Fellowship examination of The Royal College of Pathologists
GCP	Good Clinical Practice	Mini-CEX	Mini-clinical evaluation exercise
MCR	Multiple consultant report	MSF	Multi source feedback
PS	Patient survey	QIPAT	Quality improvement project assessment tool
TO	Teaching observation		

Capabilities in Practice (CiPs)	**ACAT**	**CbD**	**ECE**	**DOPS**	**MCR**	**Mini -CEX**	**MSF**	**PS**	**QIPAT**	**TO**	**FRCPath part 1/ CICE**
Generic CiPs											
Able to function successfully within NHS organisational and management systems			✓		✓		✓				
Able to deal with ethical and legal issues related to clinical practice		✓	✓	✓	✓	✓	✓				
Communicates effectively and is able to share decision making, while maintaining appropriate situational awareness, professional behaviour and professional judgement		✓			✓	✓	✓	✓			

Capabilities in Practice (CiPs)	ACAT	CbD	ECE	DOPS	MCR	Mini -CEX	MSF	PS	QIPAT	TO	FRCPath part 1/ CICE
Is focussed on patient safety and delivers effective quality improvement in patient care			✓		✓		✓				
Carrying out research and managing data appropriately					✓		✓		✓		
Acting as a clinical teacher and clinical supervisor			✓		✓		✓			✓	
Specialty CiPs											
Able to provide clinical leadership and support to the laboratory		✓	✓	✓	✓	✓			✓	✓	✓
Able to use the laboratory service effectively in the investigation, diagnosis and management of infection		✓	✓	✓	✓	✓			✓	✓	✓
Able to advise on infection prevention, control and immunisation	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Able to manage and advise on important clinical syndromes where infection is in the differential diagnosis	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Able to lead and advise on treatment with and stewardship of antimicrobials	✓	✓	✓		✓	✓		✓	✓	✓	✓
Providing continuity of care to inpatients and outpatients with suspected or proven infection.	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Able to lead an imported infection service	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Able to deliver equitable and high quality care in resource poor settings	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

6 Supervision and feedback

This section of the curriculum describes how trainees will be supervised, and how they will receive feedback on performance. For further information please refer to the AoMRC guidance on Improving feedback and reflection to improve learning[2].

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

[2] Improving feedback and reflection to improve learning. A practical guide for trainees and trainers

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

6.1 Supervision

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

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

The role and responsibilities of supervisors have been defined by the GMC in their standards for medical education and training[3].

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

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

[3] Promoting excellence: standards for medical education and training

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

Educational and clinical supervisors need to be formally recognised by the GMC to carry out their roles[4]. It is essential that training in assessment is provided for trainers and trainees in order to ensure that there is complete understanding of the assessment system, assessment methods, their purposes and use. Training will ensure a shared understanding and a consistency in the use of the WPBAs and the application of standards.

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

Trainees

Trainees should make the safety of patients their first priority and they should not be practising in clinical scenarios which are beyond their experiences and competencies without supervision. Trainees should actively devise individual learning goals in discussion with their trainers and should subsequently identify the appropriate opportunities to achieve said learning goals. Trainees would need to plan their WPBAs accordingly to enable their WPBAs to collectively provide a picture of their development during a training period. Trainees should actively seek guidance from their trainers in order to identify the appropriate learning opportunities and plan the appropriate frequencies and types of WPBAs according to their individual learning needs. It is the responsibility of trainees to seek feedback following learning opportunities and WPBAs. Trainees should self-reflect and self-evaluate regularly with the aid of feedback. Furthermore, trainees should formulate action plans with further learning goals in discussion with their trainers.

6.2 Appraisal

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

Induction Appraisal

The trainee and educational supervisor should have an appraisal meeting at the beginning of each post to review the trainee's progress so far, agree learning objectives for the post ahead and identify the learning opportunities presented by the post. Reviewing progress through the curriculum will help trainees to compile an effective Personal Development Plan

[4] Recognition and approval of trainers

(PDP) of objectives for the upcoming post. This PDP should be agreed during the Induction Appraisal. The trainee and supervisor should also both sign the educational agreement in the e-portfolio at this time, recording their commitment to the training process.

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

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

7 Quality Management

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

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

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

Development, implementation, monitoring and review of the curriculum are the responsibility of the JRCPTB and the SAC. The committee will be formally constituted with representatives from each health region in England, from the devolved nations and with

trainee and lay representation. It will be the responsibility of the JRCPTB to ensure that curriculum developments are communicated to heads of school, regional specialty training committees and TPDs.

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

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

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

8 Intended use of curriculum by trainers and trainees

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

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

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

Recording progress in the eportfolio

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

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

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

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

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

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

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

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

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

9 Equality and diversity

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

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

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

Compliance with anti-discriminatory practice will be assured through:

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

Appendix A

Internal Medicine clinical capabilities in practice (CiPs)

Trainees undertaking dual training in Tropical Medicine and Internal Medicine will have eight additional IM clinical CiPs as set out in the IM stage 2 curriculum. The clinical CiPs describe the clinical tasks or activities which are essential to the practice of Internal Medicine. The clinical CiPs have been mapped to the nine GPC domains to reflect the professional generic capabilities required to undertake the clinical tasks.

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

Clinical CiPs – Internal Medicine	
1. Managing an acute unselected take	
Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making • Takes a relevant patient history including patient symptoms, concerns, priorities and preferences • Performs accurate clinical examinations • Shows appropriate clinical reasoning by analysing physical and psychological findings • Formulates an appropriate differential diagnosis • Formulates an appropriate diagnostic and management plan, taking into account patient preferences, and the urgency required • Explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues • Appropriately selects, manages and interprets investigations • Recognises need to liaise with specialty services and refers where appropriate
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement

	• patient safety • quality improvement
Evidence to inform decision	MCR MSF CbD ACAT MRCP(UK) Logbook of cases Simulation training with assessment
2. Managing an acute specialty–related take	
Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making • Takes a relevant patient history including patient symptoms, concerns, priorities and preferences • Performs accurate clinical examinations • Shows appropriate clinical reasoning by analysing physical and psychological findings • Formulates an appropriate differential diagnosis • Formulates an appropriate diagnostic and management plan, taking into account patient preferences, and the urgency required • Explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues • Appropriately selects, manages and interprets investigations • Demonstrates appropriate continuing management of acute medical illness inpatients admitted to hospital on an acute unselected take or selected take
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills: • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement
Evidence to inform decision	MCR MSF CbD ACAT MRCP(UK) Logbook of cases

	Simulation training with assessment
3. Providing continuity of care to medical inpatients, including management of comorbidities and cognitive impairment	
Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making • Demonstrates effective consultation skills • Formulates an appropriate diagnostic and management plan, taking into account patient preferences, and the urgency required • Explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues • Demonstrates appropriate continuing management of acute medical illness inpatients admitted to hospital on an acute unselected take or selected take • Recognises need to liaise with specialty services and refers where appropriate Appropriately manages comorbidities in medial inpatients (unselected take, selected acute take or specialty admissions) • Demonstrates awareness of the quality of patient experience
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 4: Capabilities in health promotion and illness prevention Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement
Evidence to inform decision	MCR MSF ACAT Mini-CEX DOPS MRCP(UK)
4. Managing patients in an outpatient clinic, ambulatory or community setting (including management of long term conditions)	
Descriptors	• Demonstrates professional behaviour with regard to patients, carers, colleagues and others • Delivers patient centred care including shared decision making • Demonstrates effective consultation skills • Formulates an appropriate diagnostic and management plan, taking into account patient preferences • Explains clinical reasoning behind diagnostic and clinical management decisions to patients/carers/guardians and other colleagues

	• Appropriately manages comorbidities in outpatient clinic, ambulatory or community setting • Demonstrates awareness of the quality of patient experience
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and teamworking
Evidence to inform decision	MCR ACAT mini-CEX PS MRCP(UK) Letters generated at outpatient clinics
5. Managing medical problems in patients in other specialties and special cases	
Descriptors	• Demonstrates effective consultation skills (including when in challenging circumstances) • Demonstrates management of medical problems in inpatients under the care of other specialties • Demonstrates appropriate and timely liaison with other medical specialty services when required
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 7: Capabilities in safeguarding vulnerable groups
Evidence to inform decision	MCR ACAT CbD MRCP(UK)
6. Managing a multi-disciplinary team including effective discharge planning	
Descriptors	• Applies management and team working skills appropriately, including influencing, negotiating, continuously re-assessing priorities and effectively managing complex, dynamic situations • Ensures continuity and coordination of patient care through the appropriate transfer of information demonstrating safe and effective handover

	• Effectively estimates length of stay • Delivers patient centred care including shared decision making • Identifies appropriate discharge plan • Recognises the importance of prompt and accurate information sharing with primary care team following hospital discharge
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 5: Capabilities in leadership and teamworking
Evidence to inform decision	MCR MSF ACAT MRCP(UK) Discharge summaries
7. Delivering effective resuscitation and managing the acutely deteriorating patient	
Descriptors	• Demonstrates prompt assessment of the acutely deteriorating patient, including those who are shocked or unconscious • Demonstrates the professional requirements and legal processes associated with consent for resuscitation • Participates effectively in decision making with regard to resuscitation decisions, including decisions not to attempt CPR, and involves patients and their families • Demonstrates competence in carrying out resuscitation
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries Domain 5: Capabilities in leadership and teamworking Domain 6: Capabilities in patient safety and quality improvement • patient safety • quality improvement Domain 7: Capabilities in safeguarding vulnerable groups
Evidence to inform decision	MCR DOPS ACAT MSF

	MRCP(UK) ALS certificate Logbook of cases Reflection Simulation training with assessment
8. Managing end of life and applying palliative care skills	
Descriptors	• Identifies patients with limited reversibility of their medical condition and determines palliative and end of life care needs • Identifies the dying patient and develops an individualised care plan, including anticipatory prescribing at end of life • Demonstrates safe and effective use of syringe pumps in the palliative care population • Able to manage non complex symptom control including pain • Facilitates referrals to specialist palliative care across all settings • Demonstrates effective consultation skills in challenging circumstances • Demonstrates compassionate professional behaviour and clinical judgement
GPCs	Domain 1: Professional values and behaviours Domain 2: Professional skills: • practical skills • communication and interpersonal skills • dealing with complexity and uncertainty • clinical skills *(history taking, diagnosis and medical management; consent; humane interventions; prescribing medicines safely; using medical devices safely; infection control and communicable disease)* Domain 3: Professional knowledge • professional requirements • national legislation • the health service and healthcare systems in the four countries
Evidence to inform decision	MCR CbD Mini-CEX MSF MRCP(UK) Regional teaching Reflection

Table 1: Outline grid of levels expected for Internal Medicine clinical capabilities in practice (CiPs)

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

IM Clinical CiP	CRITICAL PROGRESSION POINT	ST4	ST5	ST6	ST7	CRITICAL PROGRESSION POINT
1. Managing an acute unselected take					4	
2. Managing an acute specialty-related take			3		4	
3. Providing continuity of care to medical inpatients					4	
4. Managing outpatients with long term conditions					4	
5. Managing medical problems in patients in other specialties and special cases					4	
6. Managing an MDT including discharge planning					4	
7. Delivering effective resuscitation and managing the deteriorating patient					4	
8. Managing end of life and applying palliative care skills					4	

Syllabus for Tropical Medicine

Editing note: The following syllabus will be a separate reference document and will not form part of the curriculum itself.

The tables below detail the key areas of Tropical Medicine. Each of these areas should be regarded as a context in which trainees should be able to demonstrate CiPs and GPCs. Trainees will need to become familiar with the relevant knowledge, skills and values/attitudes related to these areas.

	COMBINED INFECTION TRAINING (CIT)	
A. Basic Biology of Bacteria, Viruses, Fungi & Parasites		**CiPs: G3, S1, S2, S3**
Knowledge	**Skills**	**Values and behaviours**
Describe and explain basic biology, including structure, function, genetics, and pathogenesis, of major bacterial, viral, fungal and parasitic agents Explains the principles of microbiological and clinical classification of microorganisms Explains local and global epidemiology of major infectious agents and their disease associations Explains the principles of the immune response to infection and the role of innate and adaptive immunity Explains the basis of different types of host-parasite relationships, e.g. the importance and evolution of normal flora, viral latency and quasispecies evolution Explains the principles of active and passive immunisation	Demonstrates application of knowledge of basic biology and host-pathogen relationship to inform clinical management of infection	Demonstrates enthusiastic approach to learning Demonstrates ability to appropriately involve multi-disciplinary specialties, in the management of infection

B. **Laboratory Practice**		**CiPs: G3, G4, S1, S2, S3**
Knowledge	**Skills**	**Values and behaviours**
<u>Pre-analytical phase</u> Explains the range of investigation and diagnostics available in different clinical scenarios, the optimal samples to send and the conditions in which to send them Describes the repertoire of investigations available for a given clinical scenario, and understand their merits and limitations Demonstrates ability to refer to the local laboratory standard operating procedures (SOPs) for guidance on the nature of the sample and the tests performed Explains the correct sample type, volume (where relevant) and optimal conditions for storage and transport that are required for the individual test	Demonstrates ability to select the most appropriate investigations for the individual patient	Demonstrates ability to liaise closely with laboratory staff Demonstrates ability to efficiently communicate with, guide, inform and educate other clinicians
<u>Analytical Phase</u> Demonstrates ability to understand and appreciate the advantages, limitations and use of investigations and diagnostics, and the role and use of reference laboratories Describes health and safety aspects of laboratory diagnostic procedures and bio-safety level classification when dealing with pathogens Explains the principles, uses and limitations of laboratory diagnostic procedures (manual, automated and Point-of-Care) – including microscopy, culture,	Demonstrate the ability to follow an SOP/examination procedure and use time effectively and efficiently to achieve an optimal turnaround time	Demonstrate a close rapport and understanding with laboratory staff and reference centres Demonstrates observance of good laboratory practice Demonstrate willingness to learn from members of a multidisciplinary team and to accept constructive feedback

protein/nucleic acid-based, serological/other assays of host-response, and more novel diagnostics Explains the repertoire and use of reference laboratories when dealing with pathogens		
<u>Post-analytical Phase</u> Explains the importance of keeping concise, accurate, confidential, and legible records of laboratory investigations Demonstrates ability to interpret laboratory investigations and their results accurately Explains results comprehensively, and demonstrates ability to integrate with results from other specimens and other investigations such as radiology, biochemistry and haematology	Demonstrate producing a laboratory report containing correct results and appropriate interpretative comments using appropriate IT systems	Demonstrates effective and accurate communication with clinicians Demonstrates concern for patient confidentiality Demonstrates ability to place the patient and the clinical condition at the centre of all deliberations and interpret laboratory results accordingly
<u>Laboratory Management and Quality Assurance</u> Explains the principles of internal and external quality assurance, and laboratory accreditation Explains research methods relevant to service development	Demonstrates performing horizontal, vertical, and examination audits, as appropriate to level of training Explains the importance of good record keeping Explains the principles of validation/verification of new laboratory tests	Demonstrate commitment to maintaining high standards of laboratory practice Demonstrates a close rapport with and mutual respect for laboratory staff
<u>Health and Safety</u> Demonstrates an in-depth understanding of health and safety issues both locally and nationally in order to practise safely in a laboratory and in a clinical or other setting, and to advise on safe practice	Explains infection-prevention and control risk assessment procedures	Demonstrates awareness of the principles of Good Medical Practice

Demonstrates understanding of risk assessment for dealing with category 3 and 4 pathogens and be familiar with the requirements for handling of such pathogens and of patients potentially infected with them Demonstrates knowledge of current legislative framework underpinning Health & Safety (H&S) at work Explains basic laboratory hazards and precautions against them Explains principles of universal precautions, hazard groups and containment levels	Demonstrates ability to work safely in a laboratory at appropriate Advisory Committee on Dangerous Pathogens (ACDP) level, including the use of appropriate sterilisation, disinfection and waste disposal techniques	
C. Principles of Public Health in relation to Infection		**CiPs: G1, G3, S3**
Knowledge	**Skills**	**Values and behaviours**
Describes public health issues related to infectious diseases, including identifying and describing the key communicable disease threats: aetiology; how these diseases spread; how they are prevented Describes modes of transmission, incubation period, period of communicability of common agents with public health importance Describes basic epidemiological methods Describes the requirements for statutory and 'good practice' notification of infectious disease	Demonstrates ability to notify with infectious disease (statutory requirements and 'good practice' notifications) when required Demonstrates provision of appropriate vaccine advice	Demonstrates good working relationships with Consultants in Communicable Disease Control (CsCDC) and environmental health officers (or equivalents) and other colleagues who provide health protection functions

Explains the function of the health protection and environmental health officers (or their equivalents), and their relationship with key infection control personnel in the hospital and community Explains the role of the UK's health protection agencies and other NHS and governmental organisations at local, national and international levels in the control of, and emergency planning for, outbreaks of infection Explains the role of vaccination in vaccine-preventable communicable diseases.		
D. Infection Prevention and Control		**CiPs: G1, G2, G3, G4, S2, S3, S5**
Knowledge	**Skills**	**Values and behaviours**
<u>Legislative and Organisational Frameworks</u> Explains the responsibilities of healthcare institutions for IPC under relevant legislations and guidelines Describes the roles and responsibilities of individual members of healthcare institutions in monitoring, responding to, and resourcing IPC needs Explains the role of public health bodies as well as reference laboratories in relation to the management of healthcare associated infections (HCAIs) Demonstrates an understanding of the benefits of adhering to scientifically sound practices of IPC to patients and staff as well as the adverse outcomes resulting from failure to comply with them <u>Principles of Infection Prevention and Control</u>	Demonstrate complying with current national legislation and guidance on IPC Demonstrates awareness of and involvement in the complaints process	Demonstrate appreciation of the nature of the Multi-Disciplinary team working in infection prevention and control

Explains the basic biology of common agents implicated in HCAIs and their pathogenesis Explains the mode of spread and optimum prevention and control strategies of HCAIs Explains the concept of "The Chain of Infection": Pathogen or infectious agent; Reservoir (patient, healthcare worker, environment); Portal of exit; Portal of entry; Mode of transmission; Susceptible host risk factors Explains the concepts of colonisation, infection and disease Explains the mechanisms by which organisms acquire antimicrobial resistance and how to use this knowledge to inform appropriate antimicrobial prescribing Explains the concepts of: universal precautions; protecting Healthcare workers from infection in the work place, including prevention of sharps/splash incidents source and protective isolation antibiotic stewardship, aseptic non-touch technique (ANTT), single use items Describes specific control measures employed to prevent transmission of infection to include hand hygiene, Personal Protective Equipment (PPE) and Isolation and Cohorting Strategies	Demonstrates recognition of potential for transmission of infection in clinical settings Demonstrates counselling patients on matters of infection risk, transmission, and control Demonstrates following local infection prevention and control procedures Demonstrates performing practical clinical procedures using aseptic technique Demonstrates prescribing antibiotics according to local antibiotic guideline Demonstrates infection prevention and control practices Demonstrates critical evaluation of disinfectants, cleaning products and equipment as part of making an informed choice for an organisation	Demonstrate leading by example for all staff, patients, students and relatives to observe infection control principles Demonstrate leading by example prescribing in accordance with local and national guidelines wherever possible.

Explains the basic principles of environmental control measures to include cleaning, disinfection, sterilization of patient care equipment and environmental cleaning (housekeeping) Explains the basic principles of food hygiene in relation to catering, food production and distribution in the hospital setting, and associated aspects e.g. HACCP analysis Demonstrates understanding of the role of the hospital laundry service in the prevention and management of outbreaks Explains the role of the local authority in relation to infection control Explains the role of the Occupational Health department in managing staff screening during outbreaks, pre-employment screening, selection of PPE items and handwashing products, and in the RIDDOR process <u>Management and reporting HCAIS</u> Describes the important clinical syndromes of HCAIs, risk factors, organisms involved, clinical presentation, diagnosis, treatment, prevention and control Explains the principles of Root Cause Analysis (RCA) and reporting infection-related adverse events including 'serious untoward incidents' (SUI)		

Explains the principles of infection control audits and their importance to maintaining good medical practice <u>Outbreaks and Surveillance</u> Describes the role of the laboratory in investigating disease outbreaks Describes the key principles underpinning outbreak investigation, control, and reporting	Interprets and reports IPC surveillance data accurately Demonstrates undertaking an IPC related audit Able to advise on appropriate Personal protective equipment (PPE) and demonstrate effective donning and doffing of PPE	Demonstrates conforming with good infection control practice Demonstrates appreciation of the nature of the Multi-Disciplinary team working in infection prevention and control
	Demonstrates utilising laboratory resources appropriately when investigating an outbreak	Demonstrates effectively working within a team Demonstrates appreciation of roles of other health professionals Demonstrates an alert and vigilant mind
E. Important Clinical Syndromes		**CiPs: G3, S2, S3, S4**
Knowledge	**Skills**	**Values and behaviours**
Demonstrate a detailed knowledge (incorporating epidemiology, pre-disposition, presentation, clinical features, investigations, differential diagnosis, management and prognosis) of key clinical syndromes including community acquired and healthcare-associated infections such as: • sepsis and systemic inflammatory response syndrome (SIRS)	Demonstrates ability to take relevant clinical/infection history, perform clinical examination, and use relevant investigations (including imaging) to establish a differential diagnosis	Demonstrates ability to establish rapport with other clinical staff Explains and interprets results and treatments simply and effectively to both clinicians and patients

• pyrexia of unknown origin • multisystem infections • paediatric infections • pregnancy-associated infections • blood borne virus infections (e.g. HIV, viral hepatitis) • tuberculosis and other mycobacterial infections • cardiovascular infections • skin and soft tissue infections • bone and joint infections • device-associated infections • upper and lower respiratory tract infections • gastro-intestinal, hepatic, pancreatic and biliary infections • urinary tract and genital infections including Sexually Transmitted Infections (STIs) • neurological infections • ocular infections • zoonotic infections • exanthemata Explain how to assess infection risk and recommend appropriate prophylactic or pre-emptive therapy Explain the nature of infection in special populations including the complexities associated with their management e.g. excessive alcohol and drug users, the elderly, pregnant and postpartum women, children, neonates, primary and secondary immunodeficiency	Interprets and recommends appropriate investigations and subsequently interpret the results to guide the management of infection Demonstrates ability to use relevant local, regional, national guidelines especially those from specialty societies to manage infection Demonstrates ability to adjust management plan in light of progress and developments	Shows awareness of the importance of being adaptable and open in the face of new or changing information Demonstrates a commitment to confidentiality Recognises the importance of maintaining a non-judgmental attitude to disease and its acquisition

Explain the types of immunodeficiency, including primary immunodeficiencies, HIV, haematology/oncology patients and solid organ transplants. Understand how the immunodeficiency affects susceptibility to infectious agents. Prevention and control of infections in immunodeficiency		
F. Use of Antimicrobial Agents		**CiPs: G3, S3, S5**
Knowledge	**Skills**	**Values and behaviours**
<u>Properties of Antimicrobial Agents</u> Explains the concept of broad and narrow spectrum antibiotics Explains the key properties of the classes of antimicrobial agents active against bacteria, fungi, parasites and viruses, including: mechanism of action spectrum of activity route of administration dosing regimen penetration side-effects resistance patterns cost Explains mechanisms of resistance to antimicrobial agents Explains the mechanism of action and role of monoclonal antibodies, antitoxins, and immunoglobulins in prophylaxis and treatment of infections	Demonstrates appropriate prescribing and/or advice on prescribing antimicrobial drugs Demonstrates adherence to evidence based guidance Participation in hospital anti-microbial stewardship rounds and Antimicrobial advice committee.	Demonstrates seeking expert advice when necessary Demonstrates awareness of new developments and knowledge and applies this to clinical practice

Describes the pharmacodynamic and pharmokinetics of antimicrobials, and how these affect choice and dosing of antimicrobials. Understand the differences in some patient groups including in children, pregnancy and burns patients. Explains in vitro methods used to detect antimicrobial resistance and their limitations <u>Use of antimicrobial agents in Clinical Management</u> Explains: • the principles of empirical use of antimicrobials for common infections and syndromic presentations, before laboratory results are available • the selection of optimal antimicrobials, including combination therapy, for treatment of infection based on susceptibility report, the clinical scenario, hypersensitivities, and potential interactions • the optimal duration of appropriate therapy and when to escalate/ de-escalate • the importance of measuring blood levels of certain antimicrobial agents to ensure clinical efficacy and reduce toxicity • contraindications to antimicrobial use <u>Safe use of antimicrobial agents</u> Explains:	Demonstrates appropriate use of antimicrobial drugs Demonstrates appropriate use of local antibiotic polices and national guidelines Audits use of anti-microbial agents and adherence to local and national guidance	Demonstrates establishing a rapport and understanding with both laboratory and clinical staff Recognises the importance of keeping accurate and legible records Demonstrates ability to apply theoretical knowledge to practical situations

• the importance of the safe use of antimicrobial agents in adults and children • symptoms and signs of antimicrobial toxicity • the adverse consequences of antimicrobials, including effects on normal microbial flora, toxicity and interactions with other drugs • Describes the importance of measuring blood levels of certain antimicrobial agents to avoid toxicity <u>Antimicrobial stewardship and control</u> Describes and explains Department of Health and other regulatory bodies' requirements for antimicrobial stewardship Explains: • the importance of antimicrobial formularies, and prescribing control policies and processes • how local antimicrobial resistance patterns should be used to direct antimicrobial usage • the role of the Medicines Management Committees (or equivalent) and antimicrobial pharmacist	Demonstrates the use of the most effective and non-toxic antimicrobial regimes Demonstrates caution for potential side effects and monitor appropriately Demonstrates prescribing inpatients particularly in relation to allergy, in pregnancy, in children and in individuals with deranged liver or kidney function Demonstrate communicating effectively on antibiotic policy and stewardship with antimicrobial pharmacist	Demonstrate ability to seek expert advice when necessary Demonstrates appreciation of roles of other healthcare professionals especially the antimicrobial pharmacist or equivalent Demonstrates theoretical knowledge to practical situations
G. Vaccination		**CiPs: G1, G2, S2**
Knowledge	**Skills**	**Values and behaviours**
Explains: • the use of licensed vaccines in prevention of disease caused by viral infection, bacterial infection and bacterial toxins	Demonstrate ability to: select and interpret laboratory tests for immunity	Demonstrates enthusiastic approach to learning

• the advantages and disadvantages of live attenuated, inactivated and recombinant vaccines and conjugate vaccines • the UK and the WHO schedules for immunisation against infectious diseases • recommendations for immunisation of healthcare workers • the immunisation protocols for patients with reduced splenic function • the use of vaccines in postexposure prophylaxis e.g. rabies, hepatitis A, hepatitis B, tetanus • the use of vaccines to boost pre-existing immunity e.g. VZ • the safety of vaccines and their adverse effects • testing for immunity pre- and post-vaccination, the methods available for measuring this and their limitations • the effects of vaccination on a population e.g. herd immunity, age shifts in natural infection • how diseases can be eradicated by vaccination	explain clearly the advantages and disadvantages of vaccination including assessment of safety profiles advise appropriately on the use of active and passive immunisation in prevention of infection, including in the management of outbreaks apply national guidance on vaccination relevant to common clinical scenarios	Demonstrates enthusiasm in promoting increased uptake of vaccination Demonstrates respect for and ability to work with immunisation coordinators, nursing staff, public health colleagues and others responsible for vaccine policy and delivery
H. Management of HIV infection		**CiPs: G1, G2, G3, S3, S6**
Knowledge	**Skills**	**Values and behaviours**
Explains: • the function of the intact immune system • pathophysiology of HIV infection • epidemiology and natural history of HIV • Demonstrates providing relevant counselling to patients, carers and relatives, and to individuals potentially exposed to HIV	Demonstrates recognising clinical and laboratory manifestations of immune deficiency Demonstrates interpreting test results relating to the direct management of HIV infection and explain their significance to the patient	Demonstrates a consideration of the interaction of psychological and social well being on physical symptoms Recognises the need for empathy and appreciation of patient anxieties

• Demonstrates knowledge of therapeutic options in HIV management • Explains risk/benefit analysis of therapies for HIV and for prophylaxis against HIV and opportunistic infections • Recognises the clinical features of infections and other disease processes in the HIV infected host • Recognises the relevance of specific aspects of history and specific physical signs (and their absence) • Explains the utility of appropriate laboratory investigations <u>Specific HIV Diagnostics and Therapies</u> Explains current diagnostic techniques Explains antiretroviral drugs including: • pharmacokinetics, modes of action, interactions, side effects of the commonly used agents • indications for and use of antiretroviral drugs in treating HIV infection • laboratory tests used in monitoring response and in informing use of certain drugs • mechanisms of resistance and cross resistance • awareness of current treatment guidelines	Demonstrates advising regarding risk reduction for opportunistic infections in the HIV-infected individual, through behavioural change, chemoprophylaxis and vaccination Demonstrates communication skills that allow patients, relatives/carers and others, including those at HIV risk, to participate in management decisions Demonstrates providing information on HIV transmission and strategies for risk reduction Demonstrates appropriate use of current diagnostic techniques Demonstrates applying guidelines and recommend appropriate treatment and interventions	Demonstrates awareness of patient's rights (including confidentiality) and responsibilities Demonstrates non-judgemental attitude to risk activities of the patient Demonstrates the ability to work as part of a multidisciplinary team for the benefit of the patient with colleagues in, for example, sexual health, oncology, hepatology Recognises social, cultural, sexual and religious factors that may impact on HIV management

• post-exposure prophylaxis of HIV • anti-retroviral agents in the prevention of mother-to-child transmission • Indications for and use of pre-exposure prophylaxis (PrEP)	Recognises and monitor side effects and drug interactions Demonstrates engaging patients to support adherence and facilitate treatment decisions Participates in HIV MDT discussions	Recognises and appreciate patient wishes and concerns Demonstrates communicating effectively with regard to the infection and need for treatment Demonstrates appropriate application of knowledge to the clinical situation
I. Travel and Geographical Health		**CiPs: G1, G2, S1, S2, S3, S4**
Knowledge	**Skills**	**Values and behaviours**
<u>Recognition and treatment of imported infections</u> Explains clinical and epidemiological features of imported diseases, including viral haemorrhagic fevers and other high consequence infections Describes availability and limitations of specialised diagnostic tests Demonstrates familiarity with current guidelines and availability of tertiary care and information resources Describes management of malaria and other imported infections	Demonstrates ability to record appropriate travel history, and develop a differential diagnosis Interprets and selects appropriate diagnostic tests Demonstrates managing malaria and other common imported infection Recognises when tertiary level care/advice is needed and to seek it Demonstrates dealing with suspected and confirmed high-consequence infections (e.g. viral	Demonstrates limitations and knows when to seek advice from senior colleagues

<u>Provision of health advice for travellers</u> Describes and explains 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, Imported Fever Service) Describes and explains the use, availability, efficacy and safety of vaccines Described and explains the use, efficacy and safety of antimalarial prevention measures Explains principles of organising a travel clinic, and the medicolegal issues involved <u>Infection related problems of immigrants</u> Outlines 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 Explains epidemiological and clinical features of imported infection in immigrant groups	haemorrhagic fevers) and their infection control issues Demonstrates recording accurate pre-travel medical and travel history Demonstrates performing risk assessment appropriate to the traveller, including consideration of specific groups (e.g. the elderly, immunosuppressed) and the hazards of specific types of travel Demonstrates formulating and communicating appropriately verbal and written advice for traveller, and to motivate them to apply the advice Demonstrates prescribing and administering immunisations as appropriate Demonstrates ability to prescribe antimalarials as appropriate Recognise barriers to effective communication	Demonstrates commitment to maintaining up to date information Demonstrates insight to determine when to seek further advice

	Recognise both acute and chronic infections, including those that are asymptomatic, in immigrants Demonstrates knowledge of New Entrant Screening programmes for TB and blood-borne virus infections.	Recognise the indications for use of a chaperone Recognise the duty of the medical professional to act as patient advocate

	HIGHER INFECTION TRAINING IN TROPICAL MEDICINE	
Diagnosis and management of community and healthcare acquired infections		**CiPs: 1,2,3,4,8,9,10,11,12,14**
Knowledge	**Skills**	**Values and behaviours**

• Demonstrates a comprehensive and extensive knowledge of the clinical presentations of Tropical Medicine that affect the:
  • Nervous system
  • Cardiovascular system
  • Pulmonary system and airways (including ears and nose)
  • Skin, soft tissue, bone, joint and other musculoskeletal systems
  • Gastro-intestinal, hepatic, pancreatic and biliary systems
  • Urinary and genital systems Including rare, atypical and unusual infections/presentations
 	
• Demonstrates a comprehensive and extensive knowledge of syndromes and conditions in Tropical Medicine such as:
  • Pyrexia of unknown origin,
  • Fever in the returning traveller
  • Multi-system infections
  • Sepsis syndrome and shock
  • Infections in injecting and other drug users
 	
• Explains the features, investigations, treatments and prophylaxes for rarer but important syndromes and scenarios including:
  • Envenomation and bites
	• Demonstrates ability to assimilate clinical, laboratory and epidemiological information and to use this to differentiate between infections and other conditions
	
	• Constructs a problem list in scenarios where there are a number of issues that need to be considered
	
	• Demonstrates continuing competence in core diagnostic, therapeutic and monitoring procedures including arterial blood gases, central venous cannulation, lumbar puncture, joint, pleural and ascitic aspiration, basic airway management and advanced life support (ALS)
	• Demonstrates ability to commence a comprehensive, rational and adaptable clinical management plan
		• Demonstrates consideration of diagnostic issues in relation to fears of patient
		
		• Demonstrates willingness to review, adjust and rationalise plans in the light of new information, progress and investigations
		
		• Ability to seek help and advice and specialist opinions to guide management and treatment decisions.

• Bioterrorism and deliberate release of biological agents • Demonstrates a knowledge of optimum evidence-based management of infections • Explains how to access up-to-date information and guidelines including those produced by agencies such as the public health/health protection organisations, BHIVA, infection societies, NICE		
Management of Longer-Term Conditions		CiPs: **1,2,3,4,8,9,10,11,12,13,14**
Knowledge	**Skills**	**Values and behaviours**
• Demonstrates extensive knowledge of the epidemiology, natural history and clinical management of chronic infections, including HIV, TB and hepatitis B and C (including drug-resistant strains) • Outlines the importance and advantages of multi-disciplinary working • Explains the roles and support available from allied healthcare workers, patient-support groups and other agencies • Demonstrates understanding of the impact of chronic and longer-term conditions on the physical, mental, psychological and social health of the individual, their relatives, friends and carers	• Demonstrates ability to diagnose illness (including atypical presentations) using clinical and epidemiological skills • Demonstrates ability to select those patients suitable for treatment and those more suitable for monitoring • Demonstrates ability to safely monitor therapy and response, and to act accordingly in the event of adverse events or poor response • Demonstrates ability to counsel and support patients on matters of infection risk, transmission and control • Demonstrates ability to support the patient and carers to encourage compliance, and to	• Demonstrates non-judgmental approach particularly regarding disease, race, gender, life style, sexuality and religion • Demonstrates participation in collaborative multidisciplinary team working • Recognises the importance of working with patients, their family, friends and carers and use their expertise to manage their condition collaboratively • Recognises the potential impact of long-term conditions on the patient, family and friends

	act appropriately when non-compliance suspected or recognised mini-CEX, CbD • Develops and agrees a holistic management plan with the patient and carers, ensuring awareness of alternative therapies and means of patient support	
Healthcare-associated and Nosocomial Infections		CiPs: **1,2,3,4,8,9,10,11,12,13,14**
Knowledge	**Skills**	**Values and behaviours**
• Demonstrates a broad and extensive understanding of the presentation, pathophysiology and management strategies for healthcare-associated and nosocomial infections (including ICUrelated) • Describes the utility and limitations of diagnostics and other investigations in HcAI and nosocomial infections • Outlines the preventable and non-preventable predisposing factors for HcAI and nosocomial infections • Demonstrates understanding of the regulatory requirements associated with HcAI	• Demonstrates ability to acquire relevant information pertinent to the specific clinical scenario. • Demonstrates ability to determine origin of infection and develop a strategy for its containment and treatment • Experience of and participation in infection prevention and control meetings and outbreak meetings. • Liaison with hospital management and communications teams	• Demonstrates sensitivity to patients, carers and relative's anxieties with counselling where appropriate. • Recognises the need to involve the patient regardless of the level of comprehension or consciousness • Demonstrates evidence-based approach to the management of such infections • Involvement of colleagues and team working

• Demonstrates understanding of confidentiality and consent issues in the unconscious patient.		
Specific infections related to post-operative sepsis		CiPs: **1,2,3,4,8,9,10,11,12**
Knowledge	**Skills**	**Values and behaviours**
• Demonstrate and understanding of common infections associated with particular surgical procedures • Describe local/national anti-microbial resistance patterns	• Demonstrates ability to differentiate between colonisation and infection	• Demonstrates ability to establish and maintain good working relationship with surgical colleagues
Multi-resistant organisms		CiPs: **1,2,3,4,8,9,10,11,12,14**
Knowledge	**Skills**	**Values and behaviours**
• Demonstrates knowledge of local/ national/ international antibiotic resistance patterns, clinical standards, guidelines and protocols	• Demonstrates understanding of situations giving rise to antibiotic resistance • Demonstrates awareness of the therapeutic options available for the treatment of multi-resistant organisms	• Demonstrates multidisciplinary team working

	• Demonstrates interventions to prevent the development and spread of multi-resistant organisms.	
Personal Protective Equipment for Infection Scenarios		CiPs: **1,2,3,4,8,9**
Knowledge	**Skills**	**Values and behaviours**
• Demonstrates understanding of the specific categories of personal protective equipment	• Demonstrates ability to correctly don/remove, and instruct in the application of specific personal protective equipment, for differing infection scenarios	• Demonstrates commitment and leadership in the application of principles of hospital infection control
Antimicrobial Therapy		CiPs: **1,2,3,4,8,9,10,11,12**
Knowledge	**Skills**	**Values and behaviours**
• Describes second- and third-line antimicrobial options in patients with multi-resistant organisms or contraindications to more standard therapies (including new and unlicensed medications) • Demonstrates understanding of the appropriate use, advantages and potential complications of	• Demonstrates ability to correctly prescribe unusual or complex antimicrobial regimens, and to source information to aid safe and effective use • Demonstrates ability to optimally utilise OPAT – including assessment of patient suitability & parenteral access options; safe prescribing & monitoring; and subsequent escalation, de-escalation or discontinuation	• Demonstrates multidisciplinary team working • Demonstrates evidence-based approach

outpatient parenteral antimicrobial therapy (OPAT)		
HIV Infected and other immune-compromised patients		CiPs: **1,2,3,4,8,9,10,11,12,13**
Knowledge	**Skills**	**Values and behaviours**
<u>Immune Deficiency</u> • Outlines the biological and iatrogenic aetiologies of immune deficiency, and the resulting immune deficits and predispositions to infection <u>Infection in the Immune-Compromised Patient</u> • Demonstrates knowledge of pathophysiology and clinical features of infection in the immune-compromised host • Recognises relevance of specific aspects of history and specific physical signs (and their absence) in immune-compromised patients	• Demonstrates ability to advise regarding risk reduction for opportunistic infections relevant to the underlying condition • Demonstrates ability to recognise clinical and laboratory manifestations of immune deficiency • Demonstrates ability to interpret test results and explain their relevance to patient • Demonstrates ability to develop a rational, comprehensive and adaptable clinical management plan	• Demonstrates a non-judgemental attitude to risk activities • Recognises the importance of close liaison with other relevant medical teams (e.g. haematology, oncology, renal, paediatrics, immunology) • Demonstrates supportive and empathic approach to patients, carers and relatives • Demonstrates consideration of interaction of psychological and social well-being on physical symptoms. • Demonstrates empathy and appreciation of patient and carer anxieties • Demonstrates awareness of patient's rights and responsibilities

• Demonstrates understanding of the utility and limitations of laboratory investigations in immune-compromised patients <u>Counselling</u> • Demonstrates awareness of relevant epidemiology, natural history and therapeutic options for immune-compromising conditions • Demonstrates understanding of data that informs prognosis and sources of such information • Demonstrates knowledge of rates of transmission of HIV via sexual and non-sexual routes and guidance on post-exposure prophylaxis provision, counselling and follow-up	• Demonstrates communication skills that allow patients, carers and other to participate in management decisions • Demonstrates ability to relay information and answer questions on risk, prognosis and options in an understandable manner • Demonstrates provision of information regarding HIV transmission and strategies for its reduction for patient and partner(s)	• Recognises significant interplay of psychological, social, cultural, sexual and religious factors • Demonstrates ability to be non-judgemental, empathic and supportive • Demonstrates ability to utilise optimal communication skills
Specific Therapies in Non-HIV Immune-Compromised Patients		CiPs: **1,2,3,4,8,9,10,11,12,13**
Knowledge	**Skills**	**Values and behaviours**
• Demonstrates awareness of therapies and other interventions in non-HIV immunocompromised individuals - including prophylactic antimicrobials, vaccinations and, where available, ameliorative or definitive therapies	• Demonstrates ability to apply guidelines and recommend appropriate interventions • Demonstrates ability to engage patients in supporting adherence and facilitating treatment decisions.	• Demonstrates sympathetic and appropriate application of knowledge to the clinical situation.

• Demonstrates knowledge of guidelines and protocols, and where to source them		
Clinical care in resource poor settings		CiPs: **2,3,4,5,6,8,9,10,11,12,14**
Knowledge	**Skills**	**Values and behaviours**
• Demonstrates an awareness of how social and geographic contexts influence access and care in resource poor settings • Demonstrates an awareness of common syndromes and diagnoses in resource poor settings • Demonstrates an awareness of cost effective and available investigations in resource poor settings • Demonstrates awareness of cost effective and available treatments in resource poor settings	• Uses clinical skills to minimise the use of expensive investigations and treatments • Displays cultural awareness and communicates effectively with local colleagues and patients	• Prioritises cost-effective investigations and treatments according to available resources • Prioritises diagnostic and therapeutic interventions according to clinical need • Supports cost effective primary health and public health interventions • Pays attention to the need for basic hygiene and infection control • Develops sustainable and equitable services
Parasitic infections		**CiPs: 1,2,3,4,5,7,9,10,11,12,14**
Knowledge	Skills	Values and behaviours

• Demonstrates knowledge of the geographic distribution of parasitic infections • Demonstrates understanding of the clinical presentations and syndromes associated with parasitic infections • Demonstrates an awareness of individual and public health interventions for parasitic infections targeting vectors as well as parasites • Demonstrates knowledge of diagnostic methods, including those most appropriate to resource limited settings • Demonstrates knowledge of the biology and life cycles of parasites	• Demonstrates an ability to safely and accurately prescribe anti-parasitic drugs • Demonstrates an ability to manage patients with complicated malaria both in person and by liaison • Recognises the interaction of HIV and other immune-suppressive conditions with parasitic infections • Knows how to seek expert advice in the event of serious and/or rare parasitic infections • Demonstrates an ability to manage patients with delusional parasitosis • Demonstrates an ability to differentiate when parasites cause disease from when they are only asymptomatic infections	• Provides sound advice and follow-up of patients referred with possible parasitic infections • Makes appropriate referrals for complications of parasitic infections e.g. surgery for hydatid where appropriate or urology for cystoscopic follow up of moderate to heavy urinary schistosomiasis • Makes appropriate use of guidelines • Endorses public health interventions to interrupt transmission of parasitic infections
Imported infection and pre-travel health services		CiPs: **1,2,3,4,8,9,10,11,12,14**
Knowledge	**Skills**	**Values and behaviours**
<u>Imported Infections</u> • Demonstrates understanding of the detailed clinical and epidemiological features of imported diseases, including high consequence infections such as viral haemorrhagic fevers	• Demonstrates ability to elicit and record detailed travel history, and develop a concise but comprehensive differential diagnosis	• Demonstrates flexibility of thinking to allow review and revision of the differential diagnosis

• Demonstrates appreciation of the availability and limitations of specialised diagnostic tests • Demonstrates a detailed understanding of the management of malaria – including severe, potentially drug-resistant and complicated disease • Demonstrates a detailed understanding of the investigation and management of other imported infections • Describes those infections acquired abroad that may be asymptomatic but lead to pathology, and the protocols behind screening for these infections <u>Health Advice for Travellers</u> • Demonstrates an extensive knowledge of the geographical patterns of disease and risk factors for their acquisition, and explain the availability of paper, electronic and other resources (e.g. vaccination guides, websites, NaTHNaC)	• Demonstrates ability to select and interpret appropriate diagnostic tests, include those available through the reference laboratories. • Demonstrates ability to manage severe and complicated malaria and other imported infections • Demonstrates ability to rationalise and organise screening for relevant infections in those that have spent time in the tropics • Demonstrates ability to triage and manage those with potential severe communicable diseases (e.g. viral haemorrhagic fevers) including infection control issues • Demonstrates ability to take and record accurately pre-travel medical history and travel plans • Demonstrates ability to perform complex risk assessments appropriate to the traveller, including consideration of specific groups (e.g. the elderly, immunosuppressed) and the	• Demonstrates a commitment to maintaining up to date knowledge and skills • Demonstrates the ability to work with the individual to determine an effective regimen that they can comply with • Demonstrates insight to determine when to seek further advice

• Explains the specific issues faced in travel by those with comorbidities, the elderly, those with immunosuppression, and women who are pregnant, and when it is recommended to advise against travel in specific circumstances • Demonstrates a detailed knowledge of antimalarials, their indications and contraindications, advantages and disadvantages • Demonstrates a detailed understanding of the indications and contraindications, advantages and disadvantages, of vaccinations • Demonstrates understanding of the international regulations and requirements related to travel, and the certification requirements necessary for specific travel	hazards of specific types of travel, and seek advice as required • Demonstrates ability to provide comprehensive, tailored advice on actions required in event of illness whilst abroad • Demonstrates ability to formulate and communicate appropriate verbal and written advice for the traveller, and to motivate them to apply the advice • Demonstrates ability to prescribe and administer immunisations, and to prescribe antimalarials, as appropriate • Demonstrates ability to consider alternative options in those unwilling to comply with standard advice	
Specific Therapies in HIV-Positive Patients		CiPs: **1,2,3,4,5,8,9,10,11,12**
Knowledge	**Skills**	**Values and behaviours**

• Defines the indications for therapies and other interventions including prophylactic antimicrobials and vaccinations
• Demonstrates an extensive knowledge of the data supporting and the uses of anti-retroviral therapy in HIV infection including:
  • indications, contraindications and relative merits
  • pharmacokinetics, modes of action, interactions and mechanisms and relevance of resistance and cross resistance
  • detailed awareness of current guidelines and other available resources
  • evidence supporting, and indications for, post-exposure and pre-exposure prophylaxis, anti-retroviral therapy for the prevention of mother-to-child transmission, and treatment as prevention.
	• Demonstrates ability to apply guidelines and recommend appropriate interventions, drug regimens and strategies
	• Demonstrates ability to recognise and act on side effects, drug interactions and potential lack of efficacy
	• Demonstrates capability of engaging patients to support adherence and facilitate treatment decisions
		• Demonstrates a sympathetic and appropriate application of knowledge to the clinical situation.
		• Demonstrates ability to utilise optimal communication skills

International Health Partnerships		CiPs: **1,2,3,4,5,14**
Knowledge	**Skills**	**Values and behaviours**
• Demonstrates an understanding of the role of Governmental and Non-Governmental agencies in international health partnerships	• Demonstrates an ability to evaluate evidence on the role of international health partnerships in various contexts	• Demonstrates an understanding of the ethical dimensions of international

• Demonstrates familiarity with best practice guidelines on international health partnerships		health partnerships and acts in accordance with these principles

Editing note: CiP mapping to be updated