



**INSTITUTE
OF MEDICINE**

ROYAL COLLEGE OF
PHYSICIANS OF IRELAND

HIGHER SPECIALIST TRAINING IN

Infectious Diseases and General Internal Medicine

OUTCOME-BASED EDUCATION – OBE CURRICULUM



This curriculum of Higher Specialist Training in Infectious Diseases was developed in 2023 and undergoes an annual review by the Head of Education at RCPI, and the Infectious Diseases National Specialty Director and Specialty Training Committee. The curriculum is approved by the Institute of Medicine.

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1.0	July 2023	Stephen Capper	New OBE Curriculum

National Specialty Directors Foreword

This curriculum is intended to guide learning and provide a road map for trainees in Infectious Diseases and General Internal Medicine. The key change in the Infectious Diseases curriculum is to define both the learning outcomes and the assessment of those learning outcomes. We acknowledge that trainees will have different experiences and learn differently, however the underpinning of infectious diseases training is the ability to compile relevant clinical information from a variety of sources, synthesise that information and formulate a differential diagnosis and management plan.

This outcome-based curriculum is designed to both guide and assess trainees in their clinical skills as they progress through the five years of training, four of which are clinical. It is the first time in Infectious Diseases training that stage of training has been considered in the training experience and assessment.

In addition to clinical training and reflecting the diversity of the specialty and the role of the specialist, the curriculum includes management, education, quality improvement and research experience. It highlights the increasing importance of case discussions, multidisciplinary meetings, and communication, especially acknowledging diagnostic and clinical uncertainty and reflecting the increasing complexity of clinical infectious diseases.

We hope that this document will provide guidance, both for the trainees on this journey, and to trainers, to allow for meaningful dialogue, feedback, and support. The ultimate goal of this document is to enhance training and prepare future clinical leaders in infectious diseases. There were many people involved in the compilation of this document and we thank them all. We wish all our trainees good luck as they embark on their training and their clinical careers.

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1. INTRODUCTION

This section includes an overview of the training programme and of this curriculum document.

1.1. Purpose of training

This programme is designed to provide training in Infectious Diseases and General Internal Medicine (GIM) in approved training posts, under supervision and to fulfil agreed curricular requirements over the course of 5 years. Each post provides a trainee with a named trainer and the programme is under the direction of the National Specialty Director(s) in Infectious Diseases.

1.2. Purpose of the curriculum

The purpose of the curriculum is to define the relevant processes, contents, outcomes, and requirements to be achieved. The curriculum is structured to delineate the overarching goals, outcomes, expected learning experiences, instructional resources and assessments that comprise the Infectious Diseases/GIM Higher Specialist Training (HST) programme. It provides a feedback framework for successful completion of HST programme.

In keeping with developments in medical education and to ensure alignment with international best practice and standards, the Royal College of Physicians (RCPI) has implemented an Outcomes Based Education (OBE) approach. This curriculum design differs from traditional minimum time-based requirement designs in that the learning process and desired end-product of training (outcomes) are at the forefront of the design to provide the essential training opportunities and experiences to achieve those outcomes.

1.3. How to use the curriculum

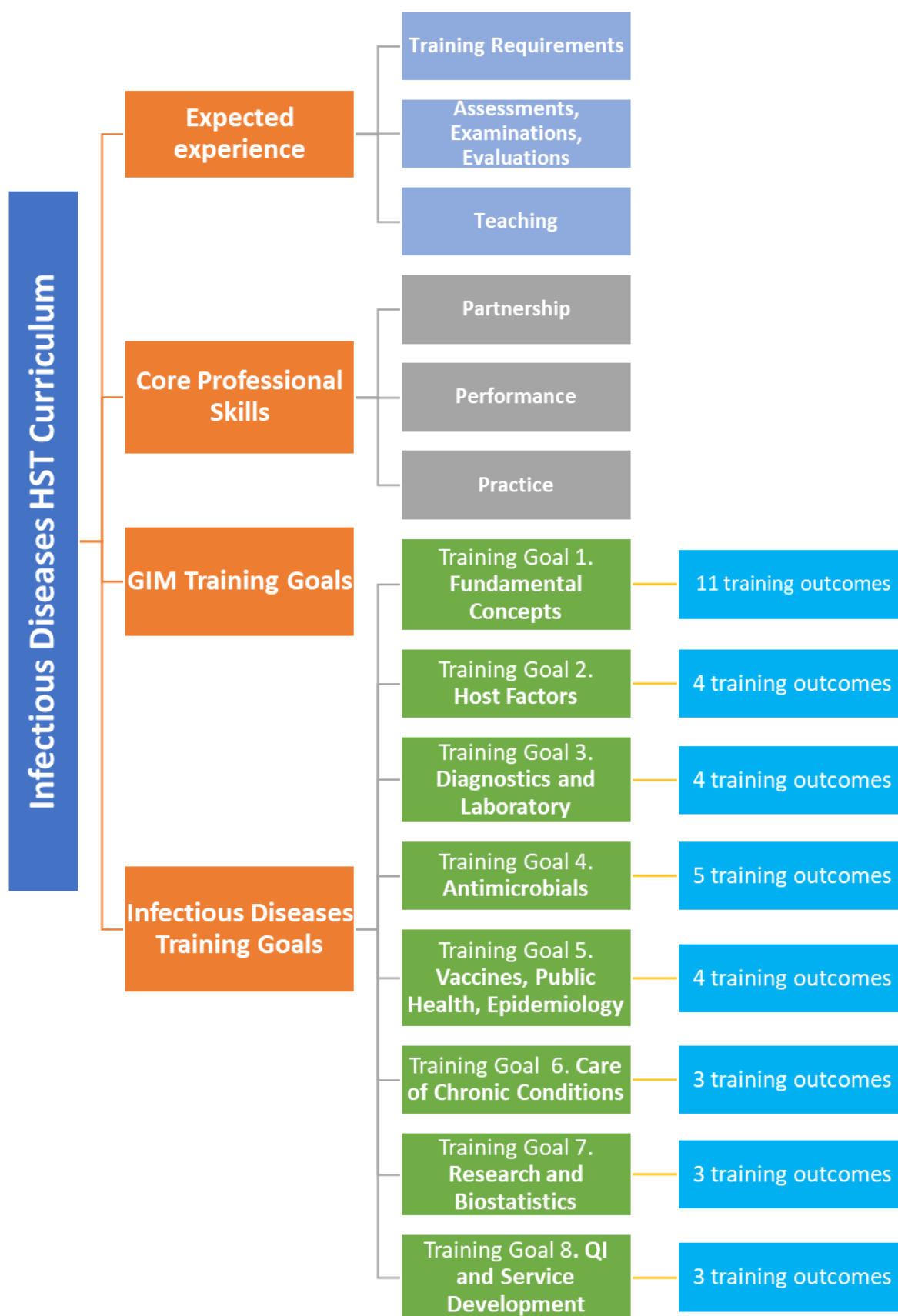
It is expected that both trainees and trainers have a good working knowledge of the curriculum and should use it as a guide for the training programme. Trainers are encouraged to use the curriculum as the foundation of their discussions with trainees, particularly during goals-setting, feedback, and appraisal processes, taking into account the experience to date and year of training of the trainee.

Each trainee is expected to engage with the curriculum by maintaining an ePortfolio in which assessments and feedback opportunities must be recorded. The ePortfolio allows trainees to build up evidence to inform decisions on their progress at the annual reviews whilst also providing tools to support and identify further educational and development opportunities. It is imperative that the trainees keep an up-to-date ePortfolio throughout the duration of their programme.

1.4. Reference to rules and regulations

Please refer to the following sections within the Infectious Diseases HST Training Handbook for rules and regulations associated with this post. Policies, procedures, relevant documents, and Training Handbooks can be accessed on the RCPI website following [this link](#).

1.5. Overview of Curriculum Sections and Training Goals



2. EXPECTED EXPERIENCE

This section details the training experience that all Trainees are expected to complete over the course of the higher specialist training

2.1. Duration & Organisation of Training

The duration of Higher Specialist Training (HST) in Infectious Diseases and GIM is five years, four clinical years and one year of which should be gained from a period of full-time research or other academic endeavour during the Out of Clinical Programme Experience (OCPE).

Core Training: Trainees must spend the first two years of training in clinical posts in Ireland before undertaking any period of research or OCPE. The earlier years of training will usually be directed towards acquiring a broad general experience of Infectious Diseases and GIM under appropriate supervision. An increase in the content of hands-on experience follows naturally, and, as confidence is gained and abilities are acquired, the trainee will be expected to assume a greater degree of responsibility and independence.

Trainees on HST programme in Infectious Diseases are given a rotation of posts at the start of the programme which encompasses the first two years of training at a minimum. Each rotation will provide the trainee with experience in different hospitals so as to acquire the broad range of training required. A degree of flexibility to meet the individual training needs is possible especially towards the end of the training programme following discussion with the NSDs. Each post within the programme will have a named trainer/educational supervisor and programmes will be under the direction of the NSDs for Infectious Diseases or, in the case of GIM, the Regional Specialty Advisor. Programmes will be as flexible as possible consistent with curricular requirements, for example to allow the trainee to develop a sub-specialty interest. The experience gained through rotation around different departments is recognised as an essential part of HST. A Trainee may not remain in the same unit for longer than 2 years of clinical training; or with the same trainer for more than 1 year. At least one clinical year of Infectious Diseases or General Internal Medicine training must be outside of Dublin.

Out of Clinical Programme Experience: All trainees should do one a minimum of one OCPE year. OCPE provides trainees enrolled in a HST programme with the opportunity to take one, or more years out of their HST programme to pursue research, further clinical training, lecturing experience, or other relevant experiences. Up to one year of training credit may be gained from a period of full-time research in a relevant area. OCPE years (research or clinical) must be preapproved, and retrospective credit cannot be applied.

Training Principles: As they progress through training, trainees must take incrementally increasing responsibility for seeing and reviewing patients and making decisions. This includes undertaking ward rounds, Infectious Diseases consultations, and operating at a level of clinical responsibility which would prepare him/her for practice as an independent consultant. New patients should be seen throughout the training period under suitable supervision in outpatient settings and the consultant trainer should review ward consultations directly with the trainee. Supervision should be particularly close during the first two years. Experienced trainees may undertake the running of an outpatient clinic on their own without direct consultant supervision later in the programme. At the start of each post, the Trainee is expected to reflect on their training to date, appraise themselves of the clinical and other opportunities at the training site and based on this agree an appropriate Personal Goals form with their trainer. The form should be uploaded onto ePortfolio; the form should be agreed and signed by both Trainee & Trainer.

Generic Professional Skills: Generic knowledge, skills and attitudes support competencies that are common to good medical practice in all the medical and related specialties. It is intended that all

Trainees should re-affirm those competencies during HST. No timescale of acquisition is imposed, but failure to make progress towards meeting these important objectives at an early stage would cause concern about a Trainee's suitability and ability to become an independent specialist.

Dual Specialty Training: GIM training is expected to be completed in the first 3 years of the programme. One of these years is a GIM specific year. During the other two years trainees must complete their GIM training as per their expected experience, including general medicine on-call commitment for acute unscheduled/emergency care with attendance at relevant post-take rounds.

Acute Medicine: There must be evidence of direct supervision of the activity of the more junior members of the "on-take" team and a minimum of 10 (480 per year) new acute medical assessments and admissions during the 24-hour period are expected. In addition, the trainee will be expected to have ongoing care/responsibility for a proportion of the patients for the duration of the clinical inpatient journey as well as the follow up post discharge. In this capacity the trainee should develop skills in non-technical aspects of care including discharge planning and end of life care.

Inpatient Responsibilities: The trainee will have front line supervisory responsibilities for infectious diseases and general medical inpatients. This will require supervising and supporting the activities of the more junior members (SHO/Intern) of the clinical team. In addition to personal ward rounds, a minimum of two ward rounds with the consultant each week is expected for educational experience. Ongoing responsibility for shared care of the team's inpatients whilst in the ITU/HDU/CCU is also essential. If this is not possible in a particular hospital/training institution, opportunity to obtain this experience in other institutions or with a period of secondment is required.

Outpatient Responsibilities: The trainee is expected to have personal responsibilities for the assessment and review of infectious diseases and general medicine outpatients with a minimum of at least two consultant led clinics per week. The trainee should assess new patients; access to consultant opinion/supervision during the clinic is essential.

Procedures: The trainee should acquire the practical skills that are needed in the management of medical emergencies, particularly those occurring out of normal working hours. Some exposure to these skills may have occurred during the period of BST but experience must be consolidated, and competencies reviewed during HST.

Essential & Additional Experience: The trainee will be expected to have had experience of/be familiar with the management of a wide range of cases presenting to hospitals as part of an unselected acute medical emergency "take". Whilst trainees will not need to be expert in all these areas, they will be expected to be able to plan and interpret the results of immediate investigations, initiate emergency therapy and triage cases to the appropriate specialist care. These emergency situations have been considered under each specialty section and are indicative of what should be covered but are not prescriptive. It should form the basis of regular discussions between the trainee and trainers as training progresses. The various clinical situations listed for experience have been divided into those, which are considered "essential" and others, which are "additional".

Recording of Evidence of training: The target numbers for training items in the following sections represent the minimum recording requirement to document evidence of relevant and varied clinical experience; it is understood that actual number of training experiences is likely to be well in excess of these numbers.

2.2. Clinics list, Ward Rounds and Consultations, Training Activities

Attendance at Clinics, participation in Ward Rounds and Patient Consultations are required elements of all posts throughout the programme. The timetable and frequency of attendance should be agreed with the assigned trainer at the beginning of the post.

This table provides an overview of the expected experience a Trainee should gain regarding clinics attendance, ward rounds and consultations. All these activities should be recorded on ePortfolio using the respective form.

While it is recognised the opportunity to experience these training activities may not be available at every site, these activities can be captured at other sites over the course of the training programme, providing the expected experience number is met.

ON CALL ROTA		
Unselected Admissions for General Internal Medicine (Completed in first 3 years)		
Clinic	Expected Experience	ePortfolio Form
GIM Year	Record 480 over the course of HST	Clinical Activities
Dual Specialty Year	Record 480 over the course of HST	
OUTPATIENT CLINICS		
Type	Expected Experience	ePortfolio Form
Infectious Diseases Clinics	Attend at least 1 per week of training in Infectious Diseases, record attendance	Clinics
HIV Clinics	Attend at least 1 per month of training in Infectious Diseases, record attendance*	
Viral Hepatitis Clinics	Attend at least 3 per clinical year of training in Infectious Diseases, record attendance	
TB Clinics	Attend at least 3 per clinical year of training in Infectious Diseases, record attendance	
OPAT Clinics	Attend at least 1 per month of training in Infectious Diseases, record attendance	
STI Clinics / PrEP	Attend at least 6 per clinical year of training in Infectious Diseases, record attendance	
CONSULTATIONS		
Type	Expected Experience	ePortfolio Form
Consultant Led	Review at least 2 per week, record attendance	Clinical Activities
SpR Led	Review at least 2 per week, record attendance	
WARD ROUNDS		
Type	Expected Experience	ePortfolio Form
Participation in AMS Rounds	Attend at least 1 per month, record attendance, for 2 clinical years of training. (Total of 24 AMS rounds in 2 sites)	Clinical Activities
SpR Led Ward Rounds	Supervise at least 1 per week in clinical years 3 and 4.	
Consultant Led Ward Rounds	Attend at least 2 per week, record attendance	
ICU/CCU Cases		
Type	Expected Experience	ePortfolio Form
Intensive Care (Experience of Management of patients in an ITU is	Record at least 1 example of ICU / HDU / CCU patient per month of clinical training	

essential. A period spent in this environment should provide experience in the prevention and treatment of nosocomial infection and include participation in ward rounds)	Participate in micro/ICU/ID ward rounds where available	Cases
PROCEDURES/PRACTICAL SKILLS/SURGICAL SKILLS		
Type	Expected Experience	ePortfolio Form
Gram Stain Interpretation	Record at least 5 examples over the course of HST	Procedures, Skills & DOPS
Malaria Smear Interpretation	Record at least 1 example over the course of HST	
ADDITIONAL/SPECIAL EXPERIENCE GAINED		
Type	Expected Experience	ePortfolio Form
Epidemiology, Public Health (A period of interface is desirable to enable the trainee to become familiar with principles and practicalities of immunisation, vaccination, and the investigation and control of notifiable diseases and outbreaks in the community)	Record 1 case with interaction with public health per clinical year (Required)	Additional Special Experience
LABORATORY EXPERIENCE		
Type	Expected Experience	ePortfolio Form
Medical Microbiology - period of 2 months is essential (of which 1 month must be spent in microbiology and 1 month in virology including clinical virology / viral hepatitis, and up to 6 months at an appropriate level can be recognised)	Record 1 over the course of HST Minimum 2 weeks of dedicated laboratory time is required. The remaining time can be made up with bench time but other activities involving clinical microbiology including bench rounds, joint microbiology MDT, study days / conferences with medical microbiology focus can be included.	Laboratory Activities
MANAGEMENT / LEADERSHIP EXPERIENCE		
Type	Expected Experience	ePortfolio Form
QI Project	Record 1 over the course of HST	Management Experience
Lead a Family Meeting	Record 1 per clinical years 2, 3 and 4	
Report Writing (e.g., respond to a complaint, complex transfer letter)	Record 1 per clinical year 3 and 4	
Lead an MDT	Record 1 per clinical year 3 and 4	
Clinical Audit	Record 1 per clinical year	
Committee Membership	Record 3 over the course of HST, preferably one per clinical year	

*Where sites do not have HIV specific clinic attendance at a clinic where the predominant number of patients are living with HIV is recommended

2.3. In-house commitments

Trainees are expected to attend a series of in-house commitments as follows:

- Attend at least **26 Grand Rounds or Hospital wide case conference per year**, during clinical years over the course of HST
- Attend at least **1 Journal Club per Month** during clinical years over the course of HST
- Attend at least **2 MDT Meeting per month**, during clinical years over the course of HST
- Attend and participate in a variety of learning experiences including but not limited to seminars, lectures, case discussions, case conferences etc... (1 per month during clinical years over the course of HST)

2.4. Research, Audit and Teaching experiences

Trainees are expected to complete the following activities:

- Deliver **10 teaching sessions** (to include tutorials, lectures, bedside teaching, etc.) during clinical years per each year of HST
- Complete **1 Audit** per clinical year.
- Complete **1 Quality Improvement Project** over course of HST
- Deliver **1 Oral presentation or Poster presentation** (hospital wide forum, journal clubs, HIV club, inter hospital opportunities) per each year of HST
- Attend **1 National or International Meeting** (Can be recorded as study day), per each year of HST

In addition, it is recommended that trainees aim to

- Complete **1 research project**, over the course of HST
- Complete minimum **2 publications**, over the course of HST

2.5. RCPI Study Days

Trainees are expected to attend all the courses and study days as detailed in the [Teaching Appendix](#), at the end of this document.

Trainees should attend 60% of the formal teaching opportunities available within the ID/GIM HST.

2.6. Evaluations, Assessments, and Examinations

- Complete personal goals evaluation at the start of each clinical training year, targeting training opportunities that are available at each clinical site, and focusing on personal development and completion of ePortfolio.
- Complete **4 quarterly evaluations per training year with their designated trainer** (1 evaluation per quarter)

- Complete **1 end of post evaluation at the end of each post** (this can replace the quarterly evaluation in happening at the end of a post)
- Complete **1 end of year evaluation at the end of each training year**
- Complete **at least 3 Case Based Discussions (CBD) per each clinical training year**
- Complete **at least 2 Mini-CEX per each clinical training year**
- Complete all the **workplace-based assessments** as agreed with Trainer.
- Attempt the **FITE Exam on a minimum of 2 occasions (One early stage, and one later stage)** over the course of HST

For more information on evaluations, assessment, and examinations, please refer to the [Assessment Appendix](#) at the end of this document.

2.7. Summary of Expected Experience

Experience Type	Expected	ePortfolio form
Rotation Requirements	Complete all agreed requirements related to the post.	n/a
Personal Goals	At the start of each post complete a Personal Goals form on ePortfolio, agreed with your trainer and signed by both Trainee & Trainer.	Personal Goals
On-call Commitments	Partake in on-call commitments in Infectious Diseases for the full duration of the programme and GIM where appropriate and record attendance on ePortfolio.	Clinical Activities
Clinics	Attend Infectious Diseases Clinics and Subspecialty Clinics as agreed with your trainer and record attendance per each post on ePortfolio.	Clinics
Consultations	Gain experience and develop competence in all aspects of infectious diseases consults with increasing independence over the course of training and as agreed within each post, recording on ePortfolio.	Clinical Activities
Ward Rounds	Gain experience and competence in management of medical and infectious diseases inpatients, acknowledging the role of clinical handover and leading out on ward rounds as agreed with your trainer and record attendance per each post on ePortfolio.	Clinical Activities
Emergencies/Complicated Cases	Gain experience in clinical emergencies/complicated cases as indicated above and as agreed with Trainer. Record cases on ePortfolio	Cases
Procedures, Practical/Surgical Skills	Gain experience in procedural, practical, surgical skills as indicated above and as agreed with Trainer. Record experience on ePortfolio	Procedures, Skills & DOPS
Additional/Special Experience	Gain additional/special experience as indicated above and as agreed with Trainer. Record cases on ePortfolio	Additional Special Experience/Cases
Management Experience	Gain experience in clinical management and leadership functions as agreed with Trainer. Record attendance per each post on ePortfolio	Management Experience
Deliver Teaching	Deliver Tutorials, Lectures and Bedside teaching. Record a minimum of 10 examples per year of HST on ePortfolio	Delivery of Teaching

Research	Desirable Experience: actively participate in research, aim to complete 1 research project over the course of HST. Seek opportunities to publish papers and present research at conferences or national/international meetings.	Research Activities
Publication	Desirable Experience: complete a minimum of 2 publications over the course of HST.	Additional Professional Activities
Presentation	Deliver 1 oral or poster presentation per each year of HST.	Additional Professional Activities
Audit and QI	Complete 1 Audit per clinical year and 1 Quality Improvement Project over the course of HST.	Audit and QI
Attendance at Hospital Based Learning	Attend at least 26 Grand Rounds per clinical year of HST, attend at least 1 Journal Club per month per clinical year of HST. Attend at least 2 MDT Meetings per month per clinical year of HST. Attend and participate in a range of learning experiences including but not limited to seminars, lectures, case discussions/conferences (1 per month per clinical year of HST). Record attendance on ePortfolio.	Attendance at Hospital Based Learning
National/International Meetings	Attend 1 per year of HST (can be recorded as study day).	Additional Professional Activities
Teaching Attendance	Attend courses and Study Days as detailed in the Teaching Appendix. Trainees should attend at least 60% of the formal teaching opportunities available within Infectious Diseases and GIM HST.	Teaching Attendance
Workplace-based Assessment	Complete all the workplace-based assessment as agreed with your trainer and complete the respective form.	CBD/DOPS/Mini-CEX
Examinations	Attempt FITE exam a minimum of 2 occasions over the course of HST. One early stage and one later stage.	Examinations
Evaluations and Assessments	Complete a Quarterly Assessment/End of post assessment with your trainer 4 times in each year. Discuss your progress and complete the form.	Quarterly Assessments/End-of-Post Assessments
End of Year Evaluation	Prepare for your End of Year Evaluation by ensuring your portfolio is up to date and your End of Year Evaluation form is initiated with your trainer.	End of Year Evaluation

3. CORE PROFESSIONAL SKILLS

This section includes the Medical Council guidelines for medical professional conduct, regarding Partnership, Performance and Practice.

These principles are woven within training practice and feedback is formally provided in the Quarterly Evaluations, End of Post, End of Year Evaluation.

Partnership

Communication and interpersonal skills

- Facilitate the exchange of information, be considerate of the interpersonal and group dynamics, and have a respectful and honest approach
- Engage with patients and colleagues in a respectful manner
- Actively listen to the thoughts, concerns, and opinions of others
- Consider data protection, duty of care and appropriate modes of communication when exchanging information with others

Collaboration

- Collaborate with patients, their families, and your colleagues to work in the best interest of the patient, for improved services and to create a positive working environment
- Work cooperatively with colleagues and team members to deliver an excellent standard of care
- Seek to build trust and mutual respect with patients
- Appropriately share knowledge and information, in compliance with GDPR guidelines
- Take on-board available, relevant feedback

Health Promotion

- Communicate and facilitate discussion around the effect of lifestyle factors on health and promote the ethical practice of evidence-based medicine
- Seek up-to-date evidence on lifestyle factors that:
 - negatively impact health outcomes
 - increase risk of illness
 - positively impact health and decrease risk factors
- Actively promote good health practices with patients individually and collectively

Caring for patients

- Take into consideration patient's individuality, personal preferences, goals, and the need to provide compassionate and dignified care
- Be familiar with
 - Ethical guidelines
 - Local and national clinical care guidelines
- Act in the patient's best interest
- Engage in shared decision-making and discuss consent

Performance

Patient safety and ethical practice

- Put the interest of the patient first in decisions and actions
- React in a timely manner to issues identified that may negatively impact the patient's outcome
- Follow safe working practices that impact patient's safety
- Understand ethical practice and the medical council guidelines
- Support a culture of open disclosure and risk reporting
- Be aware of the risk of abuse, social, physical, financial, and otherwise, to vulnerable persons

Organisational behaviour and leadership

- The activities, personnel and resources that impact the functioning of the team, hospital, and health care system
- Understand and work within management systems
- Know the impacts of resources and necessary management
- Demonstrate proficient self-management

Wellbeing

- Be responsible for own well-being and health and its potential impact on the provision of clinical care and patient outcomes
- Be aware of signs of poor health and well-being
- Be cognisant of the risk to patient safety related to poor health and well-being of self and colleagues
- Manage and sustain your own physical and mental well-being

Practice

Continuing competence and lifelong learning

- Continually seek to learn, improve clinical skills and understand established and emerging theories in the practice of medicine
- Meet career requirements including those of the medical council, your employer, and your training body
- Be able to identify and optimise teaching opportunities in the workplace and other professional environments
- Develop and deliver teaching using appropriate methods for the environment and target audience

Reflective practice and self-awareness

- Bring awareness to your actions and decisions and engage in critical appraisal of your own work to drive lifelong learning and improve practice
- Pay critical attention to the practical values and theories which inform everyday practice
- Be aware of your own level of practice and your learning needs
- Evaluate and appraise your decisions and actions with consideration as to what you would change in the future
- Seek to role model good professional practice within the health service

Quality assurance and improvement

- Seek opportunities to promote excellence and improvements in clinical care through the audit of practice, active engagement in and the application of clinical research and the dissemination of knowledge at all levels and across teams
- Gain knowledge of quality improvement methodology
- Follow best practices in patient safety
- Conduct ethical and reproducible research

4. GENERAL INTERNAL MEDICINE SECTION

This section includes the General Internal Medicine requirements that the Trainee should demonstrate proficiency in by the end of the higher specialist training.

In order to demonstrate proficiency, it is recommended to agree the most appropriate training and assessment methods with the assigned Trainer.

By the end of Higher Specialist Training the Trainee will be able to identify and treat immediate life-threatening causes of common medical presentations, form a differential diagnosis for non-life-threatening cases and effectively manage the patient including further investigation and appropriate referral. They will have acquired a broad range of procedural and clinical skills to manage diverse presentations.

Assessment and Learning Methods

Learning opportunities during HST are through:

- Self-Directed Learning
- Attendance at Study days and other educational supports within the training program
- Participation in In-house activities
- Unselected acute on call
- General Medicine outpatient clinics
- Department education sessions (black box, journal club, tutorials)
- Completion of Required courses
- Attendance at additional learning events such as recommended courses and masterclasses

Progress is assessed through:

- Case Based Discussion (CBD)
- ePortfolio
- Quarterly trainer assessment
- Annual assessment
- Direct Observation of Procedural Skills (DOPS)
- Mini Clinical Examination Exercise (MiniCEX)

In the Acute Setting

During the course of HST the trainee will encounter common acute presentations and will be expected to demonstrate the following competencies:

- Recognising and assessing urgency
- Stabilising the patient
- Prioritising
 - Tasks
 - Investigations
- Managing co-existing morbidities
- Making appropriate referrals
- Decision making and appropriate delegation

The presentations listed in this section represent the most common acute presentations and conditions currently seen in Irish hospitals, accounting for over 95% of admissions. It is expected that

HST trainees in general internal medicine will have a comprehensive knowledge of, and be able to provide a differential diagnosis for, these conditions.

Presentations

1. Shortness of breath
2. Cough
3. Chest Pain
4. Blackout/ Collapse/ Dizziness
5. The frail older patient in the acute setting
6. Abdominal Pain
7. Fever
8. Alcohol and substance dependence or withdrawal
9. Falls and Decreased mobility
10. Weakness and Paralysis
11. Headache
12. Limb Pain and/or Swelling
13. Nausea and Vomiting
14. Seizure
15. Diarrhoea
16. Delirium/Acute confusion
17. Acute Psychological illness
18. Palpitations
19. Hepatitis or Jaundice
20. Gastrointestinal Bleeding
21. Haemoptysis
22. Rash
23. Acute Back Pain
24. Poisoning and Drug Overdose
25. Hyper-glycaemia

Emergency Management

Recognising and managing emergency cases including:

- Acute Coronary Syndrome
- Acute Kidney Injury
- Acute Respiratory Failure
- Acute Seizure
- Anaphylaxis / Angioedema
- Cardio-respiratory arrest
- Critical electrolyte abnormalities (calcium, sodium, potassium)
- Hypo- or Hyperglycaemia
- Sepsis and septic shock
- Stroke/ TIA
- The unconscious patient
- Unstable hypotensive patient

Skills and Knowledge in General Medicine Setting

By the end of Higher Specialist Training, the Trainee should know life threatening causes, clinical feature, classifications, investigations, and management, including indications for urgent referral, for common general medicine presentations. The following outlines commonly associated features, causes and/or routes of investigation for these presentations, both acutely and for ongoing case management, the trainee is expected to know and the competencies they are expected to demonstrate.

When a patient presents with a general medicine complaint the trainee is expected to demonstrate an ability to:

- Assess their signs and symptoms, formulating a differential diagnosis
 - Take history as part of an investigation
 - Undertake primary assessment
 - Recognise and assess urgency
 - Undertake secondary assessment
- Initiate appropriate investigations
 - Interpret results for common investigations
- Initiate appropriate treatment, including stabilising the patient where necessary
- Manage co-existing morbidities
- Manage on-going cases including
 - confirming a diagnosis for those not requiring urgent referral
 - assessing response to initial treatment
 - recognising signs to escalate management when needed
- Appropriately refer based on:
 - Response to treatment
 - Local guidelines
 - Culture
 - Self-awareness of their own knowledge and ability
 - Services available
- Provide ongoing management of the case

Shortness of breath

When a patient presents with shortness of breath a trainee is expected to demonstrate knowledge of the clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for common causes.

- Life threatening causes of breathlessness
 - Airway Obstruction
 - Acute severe asthma
 - Acute exacerbation of COPD
 - Pulmonary oedema
 - Tension pneumothorax
 - Acute presentations of Ischaemic heart disease
 - Acute severe left ventricular failure
 - Dysrhythmia
 - Pulmonary embolus
 - Cardiac tamponade
 - Metabolic acidosis

Cough

When a patient presents a cough a trainee is expected to demonstrate knowledge of the clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Common causes of acute cough
 - Viral and Pertussis type cough
 - Acute bronchitis
 - Pneumonia
 - Tuberculosis
 - Lung cancer
 - Understand the relevance of subacute and chronic cough
 - Common causes (Asthma, Upper airway, GORD)
 - When to refer for assessment of lung cancer
 - Consideration of Interstitial lung disease

Chest Pain

When a patient presents with chest pain a trainee is expected to demonstrate knowledge of the clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for common causes.

- Life threatening causes of chest pain
 - Myocardial infarction
 - Dissecting aortic aneurysm
 - Pulmonary emboli
 - Tension pneumothorax
 - Oesophageal rupture
- Clinical features of:
 - Cardiac chest pain
 - Chest pain caused by respiratory disease and oesophageal rupture
 - Chest pain caused by gastrointestinal disease
 - Chest wall pain
 - Functional chest pain

Blackout / Collapse / Dizziness

When a patient blacks out, collapses or presents with dizziness a trainee is expected to demonstrate that they know the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Stroke
 - Cerebral infarction
 - Primary intracerebral haemorrhage
 - Subarachnoid haemorrhage
- Syncope
 - Cardiac causes (arrhythmia, cardiogenic shock)
 - Vasovagal syncope
 - Postural hypotension (e.g., drugs, neurocardiac, autonomic)
 - Localised vascular disease (posterior circulation)
 - Metabolic causes (e.g., hypoglycaemia)
- Seizures and epilepsy

Management of the frail older patient in the acute setting

When a frail older patient presents a trainee is expected to demonstrate knowledge of the appropriate approach to assessment, risk factors, appropriate investigations and necessary management, including indications for urgent referral, for this population.

- Understand the broad differential diagnosis and management of complex multi-morbid illness in older patients
- Approach to investigation and management of recurrent Falls
- Non-pharmacological and pharmacological management of behavioural complications of dementia
- Investigation of causes, non-pharmacological and pharmacological management of Delirium
- Polypharmacy and inappropriate prescribing in older patients (e.g. renal dose adjustment)
- Medical management of nursing home residents- identifying aspiration risk
- Palliative care and pain management in the acute setting
- Acute stroke thrombolysis delivery and criteria for referral for intravascular intervention
- Completion of NIHSS stroke scale

Abdominal Pain

When a patient presents with abdominal pain a trainee is expected to demonstrate knowledge of the life threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Initial assessment of abdominal pain
- Differential Diagnosis:
 - Intra-abdominal
 - Gastrointestinal
 - Vascular (aneurysm, ischemia)
 - Urological
 - Gynaecological
 - Extraabdominal causes of pain
- Ability to identify and initiate management of life-threatening conditions causes of abdominal pain
- Indications for surgical consultation and urgent referral
- Identifying constipation and urinary retention in older patients

Fever

When a patient presents with fever a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Recognize the symptoms and signs of sepsis
- Identify common causes of fever
 - Infection
 - Non-infectious including PE, Drugs, vasculitis,
- Delivery of initial management of septic patient
- Knowledge of the choice of empiric and infection targeted antibiotics

Alcohol and substance dependence or withdrawal

When a patient presents with dependence or withdrawal a trainee is expected to demonstrate that they know the classifications and necessary management, including indications for referral.

- Recognition
- Psychosocial dysfunction
- Autonomic disturbances
- Stress and panic disorders
- Insomnia and sleep disturbance
- Understand the role of psychiatrist and referral to rehabilitation services

Falls and Decreased mobility

When a patient falls or presents with decreased mobility a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations, and necessary management, including indications for urgent referral, for the common causes.

- Common medical and social causes of falls in medical patients
- Complications of falls
 - Fractures including the neck of the femur
 - Intracranial injury
 - Rib fracture and pneumothorax
 - Loss of mobility and independence

Weakness and Paralysis

When a patient presents with weakness or paralysis a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Stroke/ space occupying lesion
- Spinal cord injury
- Underlying neurological causes: e.g. multiple sclerosis, Guillain-Barre syndrome
- Infections and diseases causing weakness

Headache

When a patient presents with headache a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Clinical classifications of headache
- Headache with altered neurological and focal signs
- Headache with features suggestive of raised intracranial pressure
- Headache with papilloedema
- Headache with fever
- Headache with extracranial signs
- Headache with no abnormal signs
- Drugs and toxins

Limb Pain and/or Swelling

When a patient presents with limb pain or swelling a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- As a result of injury
- As a result of an underlying medical condition
 - Undifferentiated inflammatory arthritis

Nausea and Vomiting

When a patient with nausea and vomiting a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Understanding of common causes
 - Abdominal
 - Acute Gastroenteritis
 - PUD
 - Pancreatitis
 - Acute hepatitis
 - Bowel obstruction
 - Central Causes (CNS)
 - Poisoning and Medications
- Management
 - Identification of underlying cause
 - Control of symptoms
 - Treating dehydration

Seizure

When a patient presents with seizures a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Causes
 - Unprovoked seizures/epilepsy
 - Seizures associated with metabolic, toxic and system illness
 - Cerebral hypoxia
 - Seizures associated with drugs and toxic substances
- Management
 - Emergency supportive treatment
 - Anticonvulsant treatment
 - Work up of first presentation with seizure
 - Understand driving implications for patients with seizures

Diarrhoea

When a patient presents with diarrhoea a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Classification
 - Osmotic
 - Secretary
 - Exudative
- Causes
 - Infectious
 - Inflammatory
 - Ischemic
 - Malignant
- Complications
- Management
 - Acute management
 - Knowledge of appropriate investigations
 - Recognition of associated complications
 - Role of antibiotics
 - When to refer to gastroenterology.

Delirium/Acute confusion

When a patient presents with delirium or acute confusion a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Clinical features of acute confused state- differentiating delirium, dementia, depression and psychosis
- Causes of delirium
- Use of screening instruments for delirium and/or cognitive impairment
- Clinical features of acute delirium
- Clinical features of acute functional psychosis
- Causes of confused state associated with alcohol abuse- delirium tremens, Wernicke's encephalopathy
- Drug induced/related confusion/delirium
- Bacterial meningitis, Viral encephalitis
- Subarachnoid haemorrhage/ subdural haematoma

Social issues

When a patient presents with social issues a trainee is expected to demonstrate knowledge of the appropriate approach to assessment, risk factors, appropriate investigations and necessary management, including indications for urgent referral, for this population.

- Managing medical conditions with an uncooperative patient
- Identifying potential elder abuse
- Recognising substance abuse
- Basic principles of psychiatry
- Recognising an at risk patient

Palpitations

When a patient presents with palpitations a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Anxiety
- Exercise induced
- In relation to pre-existing conditions including
 - Thyroid disease
 - Anaemia
 - Fever
 - Dehydration
 - Low blood sugar
 - Low blood pressure
- Resulting from medications or toxins
- Hormonal changes
- After prior myocardial infarct
- Coronary artery disease
- Other heart problems including congestive heart failure, heart valve or heart muscle problems

Hepatitis or Jaundice

When a patient presents with hepatitis or jaundice a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Incubation and prodromal phase
- Virus-specific
- Toxic hepatitis
- Autoimmune
- Acute liver failure

Gastrointestinal Bleeding

When a patient presents with gastrointestinal bleeding a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Understanding of the initial assessment and stabilization of patients with GI bleeding
- Understanding of haemovigilance and blood transfusion protocols
- Upper gastrointestinal bleeding including
 - Peptic ulcer Disease
 - Gastritis
 - Esophageal varices
 - Mallory-Weiss tears
 - Gastrointestinal cancers
 - Inflammation of the gastrointestinal lining from ingested material
- Lower gastrointestinal bleeding including
 - Diverticular disease
 - Gastrointestinal cancers
 - Inflammatory bowel disease (IBD)
 - Infectious diarrhoea
 - Angiodysplasia
 - Polyps
 - Haemorrhoids and anal fissures

Haemoptysis

When a patient presents with haemoptysis a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Recognition and Management of massive Haemoptysis
- Common causes of haemoptysis
 - Acute and chronic bronchitis
 - Tuberculosis
 - Lung cancer
 - Pneumonia
 - Bronchiectasis
 - Pulmonary Embolus
 - Alveolar Haemorrhage (vasculitis)

Rash

When a patient presents with a rash a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Urticaria
- Anaphylaxis and Angio Oedema
- Erythroderma and exfoliation
- Psoriasis and seborrhoeic/contact dermatitis
- Purpura and vasculitis
- Blistering eruptions
- Infections and the skin

Acute Back Pain

When a patient presents with acute back pain a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations and necessary management, including indications for urgent referral, for the common causes.

- Non-specific acute back pain
- Causes of chronic low back pain
- Neurologic findings in back pain
- Identifying serious aetiologies of back pain e.g.,
 - Cancer
 - Fracture
 - Infection

- Cauda equina syndrome

Poisoning and Drug Overdose

When a patient presents with poisoning or overdose a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations, and necessary management, including indications for urgent referral, for the common causes.

- Diagnostic clues in the assessment of overdoses
- Identification of toxic agent (paracetamol, SSRI, benzodiazepines, opiates, amphetamines, TCAD)
- Immediate management
- Mental health assessment and definitive care

Hyper-glycaemia

When a patient presents with hyper-glycaemia a trainee is expected to demonstrate knowledge of the life-threatening causes, clinical feature, classifications, appropriate investigations, and necessary management, including indications for urgent referral, for the common causes.

- Symptoms of acute hyper-glycaemia
 - Recognition and Management of diabetic ketoacidosis
 - Recognition and management of Hyperosmolar non-ketotic hyperglycaemic states
-

Procedures

By the end of Higher Specialist Training the Trainee will be expected to develop proficiency in common procedures required for general internal medicine.

Abdominal paracentesis under ultrasound

ECG Interpretation

Emergency DC cardioversion

- Up to date ACLS training to cover:
 - Necessity of Synchronised Shock
 - Starting voltage
 - Safe use of Defibrillator

Emergency care of tracheostomy

- In cases of:
 - Cardiac arrest
 - Dealing with a compromised airway

Femoral venous lines with ultrasound guidance

- Ultrasound guided femoral venous line placement
- Anatomical markers for femoral veins
- Safe cannulation of vein
- Secure line in place/review position on X-ray

Intercostal drain under ultrasound

- Anatomical markings
- Insertion of intercostal tube (small bore seldinger)
- Connection to underwater seal and secure in place
- Assessment and management of drain
- Safe removal of the tube

Joint aspiration

- Sterile field
- Fluid analysis
- Injectable compounds

Lumbar puncture

- Anatomical markers
- Cannula selection
- Safe puncture including appropriate preparation
- Measurement of CSF pressure
- Removal of samples and interpretation of results
- Management of post lumbar puncture headache

Non-invasive Ventilation

- Principles of BIPAP and CPAP
- Monitoring and limitations
- Mask fitting
- Understanding of pressures

Pleural and ascitic fluid aspiration under ultrasound

- Safe approach and role of ultrasound guidance
- Puncture pleural / peritoneal space
- Withdrawal of fluid

General Internal Medicine Procedures Requirements Map

Trainees are expected to complete and record a minimum number of certain procedures which are essential in general internal medicine.

This table summarises the **minimum expected training per each procedure over the course of HST**, simply log the procedures on ePortfolio and complete the related DOPS Assessment as indicated:

Activity	Expected Experience & DOPS Assessments	ePortfolio form name
BIPAP/CPAP	Complete 10 procedures and 1 DOPS over the course of HST	Procedures, Skills and DOPS
Emergency DC cardioversion	Complete 10 procedures and 1 DOPS over the course of HST	
ECG interpretation	Complete 50 procedures and 1 DOPS over the course of HST	
Joint aspiration	Complete 4 procedures and 1 DOPS	
Lumbar puncture	Complete 20 procedures and 1 DOPS over the course of HST	
Abdominal paracentesis – under ultrasound	Complete 4 procedures and 1 DOPS over the course of HST (Desirable)	
Femoral venous line placement – under ultrasound	Complete 1 procedure and 1 DOPS over the course of HST (Desirable)	
Pleural aspiration – under ultrasound	Complete 4 procedures and 1 DOPS over the course of HST (Desirable)	
Intercostal drain Insertion – under ultrasound	Complete 1 procedure	

5. INFECTIOUS DISEASES SPECIALTY SECTION

This section includes the Infectious Diseases Training Goals that the Trainee should achieve by the end of the higher specialist training.

Each Training Goal is broken down into specific and measurable training outcomes.

*Under each outcome there is an indication of the **suggested** assessment/learning opportunities.*

In order to achieve the outcomes, it is recommended to agree the most appropriate assessment methods with the assigned Trainer.

Training Goal 1 – Fundamental Concepts in Clinical Infectious Diseases

By the end of Year 1 of ID Training, the Trainee is expected to demonstrate competence in the recognition, diagnosis, and management of a broad range of clinical syndromes (including those where infection may be in the differential).

By the end of Year 2 of ID Training, the Trainee is expected to demonstrate competence in the evaluation, assessment, diagnosis, and management of a broad range of clinical syndromes (including those where infection may be in the differential). These should include unusual presentations of common conditions and unusual or rare infections and conditions.

By the end of Year 3 of ID Training, the Trainee is expected to demonstrate proficiency in the management of syndromic infectious diseases including diagnosis and management of complex cases.

OUTCOME 1 – HISTORY TAKING

A trainee should be able to obtain and collate a comprehensive patient history including host factors, occupation, travel, drug or therapies exposure, sexual health, transfusion, zoonotic exposures, activities, and surgical history including a detailed timeline of the history and take immediate infection prevention control & public health actions if required (Year 1).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

OUTCOME 2 – PERFORM COMPREHENSIVE EXAMINATION

A trainee should be able to perform comprehensive physical exam based on history and host factors and differential diagnosis generated by history (Year 1).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

OUTCOME 3 – APPROPRIATE USE OF DIAGNOSTICS

A trainee should be able to request appropriate diagnostic tests and gather relevant results (including historical or prior results from other locations, sites) (Year 1).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

Laboratory time

Audit/QI Projects

Study days/conferences

OUTCOME 4 – DEVELOPING DIFFERENTIAL DIAGNOSIS

A trainee should be able to develop a differential diagnosis with respect of probability (Year 1-3).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 5 – INTERPRETATION OF DIAGNOSTIC TESTS

A trainee should be able to correctly interpret diagnostic tests to support differential diagnosis (Year 1).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Laboratory time

Case discussions/presentations

Study days/conferences

OUTCOME 6 – RECOGNISE SEVERITY OF INFECTION

A trainee should be able to recognise the severity of infection and need for escalation where appropriate (Year 1).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

OUTCOME 7 – FORMULATE MANAGEMENT PLAN

A trainee should be able to formulate and institute a management plan and when required take immediate infection prevention control & public health actions (Year 1-3).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 8 – COMMUNICATION OF DIAGNOSIS WITH PATIENT/FAMILY

A trainee should be able to communicate the working diagnoses, differential diagnoses, and management plan to patient/family (Year 1-2).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Lead MDT/Family meeting

OUTCOME 9 – COMMUNICATE DIAGNOSTIC UNCERTAINTY

A trainee should be able to manage and communicate complicated diagnoses and management plans including diagnostic uncertainty. Where needed this may require convening and leading interdisciplinary team/family meeting (Year 1-3).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

Study day – Communication course as required by RCPI

Lead MDT/Family meeting

OUTCOME 10 – COMMUNICATION WITH HEALTHCARE PROVIDERS

A trainee should be able to communicate to other/referring healthcare providers (Year 1).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Lead MDT

OUTCOME 11 – COMPLETE CARE EPISODE AND APPROPRIATE FOLLOW UP

A trainee should be able to complete care episode and organise appropriate follow up (Year 2-3).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

Training Goal 2 – Host factors

Trainees are expected to demonstrate an understanding of the complex and diverse range of host factors and therapeutics that impact on the host response to infection.

By the end of Year 1 of ID training, a Trainee is expected to achieve proficiency in recognising the range of host factors that determine infection risk and to assess a patient's individualised risk of infection. The trainee is expected to recognise the severity of the presentation and escalating care appropriately in an immunocompromised host.

By the end of Year 3 of ID training, a Trainee is expected to achieve proficiency in understanding and interpreting the range of different host factors that impact on risk and severity of infection. A trainee is expected to recognise atypical presentations of infection and be able to diagnose, assess severity, and manage appropriately in the setting of complicated host factors.

OUTCOME 1 – RECOGNISE HOST FACTORS

A trainee should be able to recognise host factors associated with increased risk of infection (Year 1).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 2 – RECOGNISE ROLE OF GEOGRAPHIC AND SOCIOECONOMIC FACTORS

A trainee should be able to recognise the role of geographic and socioeconomic factors on the risks and outcomes of infections (Year 1).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

Time with inclusion health services

MDT

Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 3 – DIAGNOSIS AND MANAGEMENT OF TYPICAL AND ATYPICAL INFECTIONS

A trainee should be able to diagnose and manage typical and atypical presentations of infection in the immunocompromised host (Year 2-3).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

Study days/National/International conferences

Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 4 – STRATEGIES FOR PREVENTION AND MITIGATION OF INFECTION

A trainee should be able to demonstrate proficiency in strategies for the prevention and mitigation of infection in immunocompromised host (Year 2-3).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

Committee membership IPC

Outbreak committee

Time with Public Health

SHEA Courses

Audit/QI Projects

Infectious Diseases Society of America Fellows In-Training Exam

Training Goal 3 – Interpretation of diagnostics and laboratory interface

Trainees are expected to demonstrate an understanding of the appropriate use, processes, and interpretation of diagnostic tests and an appreciation for the limitations of diagnostic tests in certain settings. The trainee, by the end of training must have an ability to liaise effectively with the appropriate diagnostic services.

By the end of Year 1 of ID training, a Trainee is expected to demonstrate a working knowledge of the principles of microbiology and laboratory interface and to understand the laboratory diagnostics and result reporting.

By the end of Year 3 of ID training, a Trainee is expected to achieve proficiency in the appropriate use, processes, and interpretation of diagnostic tests and an appreciation for the limitations of testing in certain settings as relates to each test. They must demonstrate an ability to liaise effectively with the appropriate diagnostic services including interventional radiology, surgical and other procedural specialties.

OUTCOME 1 – DEMONSTRATE KNOWLEDGE OF MICROBIOLOGY AND LABORATORY PRINCIPLES

A trainee should be able to demonstrate knowledge of laboratory principles and a working relationship with clinical microbiology colleagues and services (Year 1).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Case discussions/presentations
Laboratory time
MDT
Study days
Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 2 – APPLY AND INTERPRET MICROBIOLOGY RESULTS

A trainee should be able to apply and interpret microbiology results including an understanding of the limitations of the diagnostic test (Year 1-2).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Case discussions/presentations
Laboratory time
MDT
Study days
Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 3 – INTERACT IN MANAGEMENT OF COMPLEX CASES

A trainee should be able to constructively interact in the management of complex cases with the diagnostic laboratory and clinical microbiology colleagues where appropriate (Year 2-3).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations
Laboratory time
MDT – Lead in Year 2
Study days (if available)
Presentation of cases

OUTCOME 4 – COMMUNICATION WITH EXTERNAL EXPERTS

A trainee should be able to demonstrate the knowledge and ability to seek a second opinion in a complicated case when appropriate and be able to communicate effectively and in a timely manner with an external expert (Year 3).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Case discussions/presentations
HIV Club or other National/International forum
National/International MDT/Leading MDT

Training Goal 4 – Antimicrobials, Stewardship, Antibacterial resistance, and healthcare infection control

Trainees must have a comprehensive knowledge of all antibiotics in use including their mechanism of action, appropriate indications for use, and potential side effects including drug-drug interactions. Trainees must demonstrate that they understand the mechanisms of antimicrobial resistance in addition to the risk factors for, and clinical consequences of antimicrobial resistance. Trainees must demonstrate knowledge of strategies to avoid the development of drug resistant organisms and must understand the role of an Antimicrobial Stewardship (AMS) Team. Trainees must understand the principles of an Infection Control Programme and the concept of high consequence organisms in infection control.

By the end of Year 1 of ID training, a Trainee is expected to demonstrate in depth knowledge of antimicrobials, mechanisms of antimicrobial resistance, principles of antimicrobial stewardship and fundamentals of infection prevention and control and outbreak management.

By end of Year 3 of ID training, a Trainee is expected to be able to take the lead in the management of complex multidrug resistant infections using relevant guidelines and be equipped to enact a hospital-wide stewardship programme.

OUTCOME 1 – UNDERSTAND MECHANISMS OF ACTION, INDICATIONS AND APPROPRIATE USE OF ANTIMICROBIALS

A trainee should be able to demonstrate knowledge of the mechanisms of action, indications for, and appropriate use of antimicrobials. A trainee should be able to understand the complexities of appropriate dosing, drug interactions and adverse effects in different patient populations including renal and liver failure, obesity, and patients on multiple medications. (Year 1).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Case discussions/presentations
Study days where appropriate
AMS Committees
SHEA Course
Conferences (IDSI, ISCM)
Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 2 – MECHANISMS OF MICROBIAL RESISTANCE AND CLINICAL IMPLICATIONS

A trainee should be able to demonstrate knowledge of the mechanisms of antimicrobial resistance and the clinical implications of multidrug resistant organisms. They should have a working knowledge of the principles of treatment of infections due to multi drug resistant organisms and be able to access and interpret relevant treatment guidelines (Year 2).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Case discussions/presentations
SHEA course/Online resources

Study days
Conferences
Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 3 – INFECTION PREVENTION AND CONTROL

A trainee should be able to demonstrate knowledge of the principles and practices behind an effective infection prevention and control programme (Year 1).

A trainee should be able to demonstrate leadership in the practises of an infection prevention and control programme and actively participate in the management of outbreaks within a healthcare setting. The Trainee should have knowledge of high consequence infections and how these impact on infection prevention and control procedures (Year 2-3).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Case discussions/presentations
SHEA course/Online resources
IPC Committee membership
Conferences
Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 4 – DEMONSTRATE APPLIED KNOWLEDGE OF ANTIMICROBIALS STEWARDSHIP AND GOVERNANCE

A trainee should be able to demonstrate their applied knowledge of the fundamentals of antimicrobial stewardship and the governance of antimicrobial use in the healthcare setting. This includes an understanding of the framework of antimicrobial stewardship programme (Year 3).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Case discussions/presentations
Audit/QI Projects
AMS Committee
SHEA course/Online resources (e.g., John Hopkins)
Conferences (IDSI, ISCM)
Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 5 – ROLE MODEL AND LEADER IN ANTIMICROBIAL STEWARDSHIP AND INFECTION CONTROL

The Trainee should be a role model and leader in best practice as pertains to antimicrobial stewardship and infection prevention control (Year 2-3).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Teaching, formal/informal
Audit/QI Projects
AMS Rounds

Training Goal 5 - Vaccines, Public Health, and Epidemiology

Trainees must demonstrate an understanding of and proficiency in the principles of disease epidemiology, infection prevention, vaccinology, and public health interventions to reduce the burden of preventable infections.

By the end of Year 1 of ID training, the Trainee is expected to understand the principles of disease epidemiology, the principles of and the scheduling of vaccination. Trainees should demonstrate a working knowledge of notifiable infections. They should be aware of the interface with public health as pertains to notifiable infections and preventative strategies.

By end of Year 3 of ID training, the Trainee is expected to be proficient in advocating for and identifying opportunities for vaccination. Trainees should be able to apply the principles of public health to clinical practice and be role models among their peers. They should have a working knowledge of managing public health outbreaks and emergencies including preparedness planning.

OUTCOME 1 – PRINCIPLES OF VACCINATION

A trainee should be able to understand the principles of vaccination, common vaccine schedules and specific indications for individual vaccines (Year 1).

A trainee should be able to engage in education and advocacy about vaccination among patient groups and peers. (Year 3).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Case discussions/presentations
Audit/QI Projects
National/International meetings
Study days

OUTCOME 2 – DEMONSTRATE WORKING KNOWLEDGE OF NOTIFIABLE DISEASES

A trainee should be able to demonstrate a working knowledge of notifiable diseases and the rationale for their reporting and to understand the epidemiology of significant conditions on both local and global levels (Year 1).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Case discussions/presentations
Participation in Public Health MDT
Committee Membership
Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 3 – UNDERSTAND AND APPLY PREVENTATIVE STRATEGIES TO THE PRACTICE OF MEDICINE

A trainee should be able to understand infection transmission and use and advocate for preventative strategies as part of their clinical practice, e.g., HIV PrEP and vaccination (Year 3).

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 4 – ENGAGE WITH PUBLIC HEALTH AND WIDER MDT ON ISSUES SUCH AS OUTBREAKS

The trainee should have experience working with public health on overlapping issues including TB, HIV, sexual health, and outbreaks. Ideally, they should be involved in a MDT or committee representing the clinical perspective of these strategies. (Year 3)

Assessment and learning opportunities

Feedback Opportunity

Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer

Case discussions/presentations

Outbreak committee

MDT with Public Health involvement

Infectious Diseases Society of America Fellows In-Training Exam

Training Goal 6 – Care of chronic conditions

Trainees must demonstrate proficiency in the assessment, management, and continuity of care of people with chronic infections or diseases that have an interface with the infectious diseases service. Over the course of HST, the Trainee is expected to achieve proficiency in evaluation and management of patients with chronic conditions with increasing level of complexity and engagement by the year.

OUTCOME 1 – DEMONSTRATE KNOWLEDGE OF DISEASE PATHOGENESIS, EPIDEMIOLOGY, COMPLICATIONS, TREATMENTS AND LONG-TERM NEEDS OF CHRONIC CONDITIONS

A trainee should be able to demonstrate knowledge of the disease pathogenesis, epidemiology, complications, treatment, and long-term care needs of chronic conditions including but not limited to patients with HIV/TB/Chronic fatigue syndromes/Viral hepatitis/Transplant recipients with increasing complexity through HST (Year 1-3).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Case discussions/presentations
Participation in MDT
Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 2 – ABLE TO MANAGE COMPLEX CHRONIC CONDITIONS

A trainee should be able to demonstrate an ability to manage complex chronic conditions including but not limited to HIV/TB/Chronic fatigue syndromes/Viral hepatitis/transplant (Year 2).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Case discussions/presentations
Audit/QI Projects
Participation in MDT
Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 3 – DEVELOP AND LEAD ON MANAGEMENT PLANS

A trainee should be able to demonstrate the ability to formulate and lead on appropriate management plans whilst demonstrating an understanding of the complex psychosocial issues associated with chronic infection such as stigma, social isolation, marginalisation, and social inclusion (Year 3).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Case discussions/presentations
Rotation on social inclusion service
Lead MDT

Training Goal 7 – Application and dissemination of research and biostatistics

The Trainee must demonstrate understanding and application of biostatistics as a central aspect of research in Infectious Diseases and evidence-based practice. The trainee is expected to be able to understand and apply knowledge of research methodology and biostatistics to clinical practice, including the interpretation of data to aid the management of complex conditions.

OUTCOME 1 – DEMONSTRATE KNOWLEDGE OF RESEARCH METHODS AND BIOSTATISTICS

A trainee should be able to demonstrate knowledge of principles of research methods including basic biostatistics (Year 1).

Assessment and learning opportunities

Feedback Opportunity
Journal club discussion
Mandatory course run by RCPI
Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 2 – APPLICATION OF RESEARCH METHODS AND BIOSTATISTICS IN CLINICAL PRACTICE

A trainee should be able to demonstrate understanding and the ability to apply the principles of research methods and biostatistics to the practice of clinical infectious diseases (Year 2-3).

Assessment and learning opportunities

Feedback Opportunity
Workplace Based Assessment (Mini-CEX or CBD) as indicated by Trainer
Journal club discussion
National/International presentations
Infectious Diseases Society of America Fellows In-Training Exam

OUTCOME 3 – UNDERTAKE RESEARCH PROJECT

A trainee should be able to undertake a research project ideally with involvement throughout from planning to approval, execution, data analysis and presentation.

Assessment and learning opportunities

Feedback Opportunity
Clinical/Laboratory/QI research project
OCPE
Infectious Diseases Society of America Fellows In-Training Exam

Training Goal 8 – Quality Improvement and Infectious Diseases service development and delivery

The Trainee is expected to recognise the role of infectious diseases in service development and delivery including equitable use of national resources and the importance of developing services that meet the changing needs of the population. The trainee must demonstrate an understanding of the management structures within the Health Service (HSE), and the role of Clinical Governance.

The trainee must perform an audit annually and a formal QIP for at least one of their ID training years.

By the end of Year 2 of ID training, the Trainee is expected to demonstrate programmatic understanding of the consult service including principles of a consulting service, structures for communication, and engagement. The trainee should be able to develop and apply Key Performance Indicators (KPI) within the ID and consult service.

By the end of Year 3 of ID training, At the end of year 3 they should be able to operate independently as a treating clinician within the existing management structures and actively participate in those structures. In addition to the consult service, the understanding of the management of an ambulatory care service is desirable with the knowledge and ability to progress to an integrated care model.

OUTCOME 1 – CONDUCT AUDIT IN RELATION TO INSTITUTIONAL KPI

A trainee should be able to conduct audit in relation to institutional KPI (Year 2-3).

Assessment and learning opportunities

Feedback Opportunity
Formal presentation of audit results

OUTCOME 2 – UNDERTAKE QUALITY IMPROVEMENT PROJECT

A trainee should be able to undertake a substantive quality improvement project (Year 2-3).

Assessment and learning opportunities

Feedback Opportunity
Formal presentation of QI results

OUTCOME 3 – PERFORM ACTIVE ROLE IN COMMITTEE AND AWARENESS OF SERVICE DEVELOPMENT

A trainee should be able to perform an active role in hospital committee or working group membership. This could include assessment of services and service development.

Assessment and learning opportunities

Feedback Opportunity
MDT
Quality Improvement Project
Committee Membership
Presentations

6. APPENDICES

This section includes...

ASSESSMENT APPENDIX

Workplace-Based Assessment and Evaluations

The expression “workplace-based assessments” (WBA) defines all the assessments used to evaluate trainees’ daily clinical practices employed in their work setting. It is primarily based on the observation of trainees’ performance by trainers. Each observation is followed by a trainer’s feedback, with the intent of fostering reflective practice.

Relevance of Feedback for WBA

Although “assessment” is the keyword in WBA, it is necessary to acknowledge that feedback is an integral part and complementary component of WBA. The main purpose of WBA is to provide specific feedback for trainees. Such feedback is expected to be:

- **Frequent:** the opportunities to provide feedback are preferably given by directly observed practice, but also by indirectly observed activities. Feedback is expected to be frequent and should concern a low-stake event. Rather than being an assessor, the trainer is an observer who is asked to provide feedback in the context of the training opportunity presented at that moment.
- **Timely:** preferably, the feedback should be a direct conversation between trainer and trainee in a timeframe close to the training event. The trainee should then record the feedback on ePortfolio in a timely manner.
- **Constructive:** the recorded feedback would inform both trainee’s practice for future performance and committees for evaluations. Hence, feedback should provide trainees with behavioural guidance on how to improve performance and give committees the context that leads to a rating, so that progression or remediation decisions can be made.

Types of WBAs in use at RCPI

There is a variety of WBAs used in medical education. They can be categorised into three main groups: *Observation of performance*; *Discussion of clinical cases*; and *Feedback*.

As WBAs at RCPI we use *Observation of performance* via MiniCEX and DOPS; *Discussion of clinical cases* via CBD; *Feedback* via Feedback Opportunity.

Mandatory Evaluations are bound to specific events or times of the academic year, for these at RCPI we use: Quarterly Evaluation/End of Post Evaluation; End of Year Evaluation; Penultimate Year Evaluation; Final Year Evaluation.

Recording WBAs on ePortfolio

It is expected that WBAs are logged on an electronic portfolio. Every trainee has access to an individual ePortfolio where they must record all their assessments, including WBAs. By recording assessments on this platform, ePortfolio serves both the function to provide an individual record of the assessments and to track trainees’ progression.

Formative and Summative Feedback

The Trainee can record any WBA either as formative or summative with the exception of the *Mandatory Evaluations* (Quarterly/End of Post, End of Year, Penultimate Year, Final Year evaluations).

If the WBA is logged as **formative**, the trainee can retain the feedback on record, but this will not be visible to an assessment panel, and it will not count towards progression. If the WBA is logged as **summative** it will be regularly recorded and it will be fully visible to assessment panels, counting towards progression.

WORKPLACE-BASED ASSESSMENTS	
CBD Case Based Discussion	<p>This assessment is developed in three phases:</p> <ol style="list-style-type: none"> 1. Planning: The trainee selects two or more medical records to present to the trainer who will choose one for the assessment. Trainee and trainer identify one or more training goals in the curriculum and specific outcomes related to the case. Then the trainer prepares the questions for discussion. 2. Discussion: Prevalently, based on the chosen case, the trainer verifies the trainee's clinical reasoning and professional judgment, determining the trainee's diagnostic, decision-making and management skills. 3. Feedback: The trainer provides constructive feedback to the trainee. <p>It is good practice to complete at least one CBD per quarter in each year of training.</p>
DOPS Direct Observation of Procedural Skills	<p>This assessment is specifically targeted at the evaluation of procedural skills involving patients in a single encounter.</p> <p>In the context of a DOPS, the trainer evaluates the trainee while they are performing a procedure as a part of their clinical routine. This evaluation is assessed by completing a form with pre-set criteria, then followed by direct feedback.</p>
MiniCEX Mini Clinical Examination Exercise	<p>The trainer is required to observe and assess the interaction between the trainee and a patient. This assessment is developed in three phases:</p> <ol style="list-style-type: none"> 1. The trainee is expected to conduct a history taking and/or a physical examination of the patient within a standard timeframe (15 minutes). 2. The trainee is then expected to suggest a diagnosis and management plan for the patient based on the history/examination. 3. The trainer assesses the overall trainee's performance by using the structured ePortfolio form and provides constructive feedback.
Feedback Opportunity	<p>Designed to record as much feedback as possible. It is based on observation of the trainees in any clinical and/or non-clinical task. Feedback can be provided by anyone observing the trainee (peer, other supervisors, healthcare staff, juniors). It is possible to turn the feedback into an assessment (CDB, DOPS or MiniCEX)</p>
MANDATORY EVALUATIONS	
QE Quarterly Evaluation	<p>As the name suggests, the Quarterly Evaluation recurs four times in the academic year, once every academic quarter (every three months).</p> <p>It frequently happens that a Quarterly Evaluation coincides with the end of a post, in which case the Quarterly Evaluation will be substituted by completing an End of Post Evaluation. In this sense the two evaluations are interchangeable, and they can be completed using the same form on ePortfolio.</p>
EOP End of Post Evaluation	<p>However, if the trainee will remain in the same post at the end of the quarter, it will be necessary to complete a Quarterly Evaluation. Similarly, if the end of a post does not coincide with the end of a quarter, it will be necessary to complete an End of Post Evaluation to assess the end of a post.</p> <p>This means that for every specialty and level of training, a minimum of four Quarterly Evaluation and/or End of Post Evaluation will be completed in an academic year as a mandatory requirement.</p>
EOYA End of Year Evaluation	<p>The End of Year Evaluation occurs once a year and involves the attendance of an evaluation panel composed of the National Specialty Directors (NSDs); the Specialty Coordinator attends too, to keep records of and facilitate the meeting. The assigned trainer is not supposed to attend this meeting unless there is a valid reason to do so. These meetings are scheduled by the respective Specialty Coordinators and happen sometime before the end of the academic year (between April and June).</p>
PYE Penultimate Year Evaluation	<p>The Penultimate Year Evaluation occurs in place of the End of Year Evaluation, in the year before the last year of training.</p> <p>It involves the attendance of an evaluation panel composed of the National Specialty Directors (NSDs) and an External Member who is a recognised expert in the Specialty outside of Ireland; the Specialty Coordinator attends too, to keep records of and facilitate the meeting. The assigned trainer is not supposed to attend this meeting unless there is a valid reason to do so.</p>
FYE Final Year Evaluation	<p>In the last year of training, the End of Year Evaluation is conventionally called Final Year Evaluation, however, its organisation is the same as an End of Year Evaluation.</p>

Examination

FITE exam: The Infectious Diseases Society of America Fellows In-Training Exam (ITE) is listed as one of the assessment methods in the specialty section of this curriculum. The purpose of this exam is not as a certifying or qualifying examination but is to be used as a self- assessment tool designed to gauge knowledge of infectious diseases.

TEACHING APPENDIX

MANDATORY COURSES

ACLS

Ethics Foundation

Ethics for General Medicine

An Introduction to Health Research Methods

HST Leadership in Clinical Practice

Mastering Communication

Performing Audit

Wellness Matters

Management Course

SHEA course (Desirable)

US Board Review Course (Desirable)

General Internal Medicine Mandatory Courses

NIHSS Stroke Scale

Delirium Recognition and Response (Online)

Bedside Ultrasound (POCUS) for GIM

Study Days

Study days vary from year to year, they comprise a rolling schedule of hospital-provided topic-specific educational days and national/international events selected for their relevance to the Infectious Diseases/GIM HST curriculum.

Trainees should attend 60% of the formal teaching opportunities available within the ID/GIM HST.