FACULTY OF PATHOLOGY

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

Post CSCST Training in

CLINICAL MICROBIOLOGY
Liver, Kidney/Pancreas & Haematopoietic Stem Cell Transplant

This curriculum of training in Clinical Microbiology, Liver Kidney/Pancreas & HSC Transplant was developed in 2017 and undergoes an annual review by Dr Kirsten Schaffer National Specialty Director, Dr Ann O'Shaughnessy, Head of Education, Innovation & Research and by the Clinical Microbiology Training Committee. The curriculum is approved by the Faculty of Pathology.

Version	Date Published	Last Edited By	Version Comments
0.0	01/07/2017	Ann Coughlan	New Curriculum

Table of Contents

Introduction

The Fellowship in Clinical Microbiology in Liver, Pancreas/Kidney and Haematopoietic Stem Cell Transplantation is a training programme in a sub-speciality of Clinical Microbiology.
It is concerned with the advanced diagnostic and management approach for infections occurring in transplant patients. St.Vincent's University hospital is the national Irish reference centre for liver transplantation and combined kidney/pancreas transplantation. The haematology department manages patients undergoing chemotherapy and autologous stem cell transplantation. The fellowship will give the opportunity to undertake advanced clinical training in the diagnosis and management of infections in these patients in combination with gaining laboratory expertise

Entry Requirements

Applicants for the Post CSCST Fellowship in Liver, Kidney/Pancreas and Haematopoietic Stem Cell Transplant will have successfully completed the RCPI Higher Specialist Training programme in Clinical Microbiology within two years of the start date of the Post CSCST Fellowship programme.

Prior experience in Liver, Kidney/Pancreas and Haematopoietic Stem Cell Transplantduring Clinical Microbiology training would be an advantage.

Recruitment and Selection

Post CSCST Fellowship training in Liver, Kidney/Pancreas and Haematopoietic Stem Cell Transplant will build on broad basic and early core specialist training in Clinical Microbiology. This is in line with training models internationally. Selection of candidates for Post CSCST Fellowship training in Liver, Kidney/Pancreas and Haematopoietic Stem Cell Transplant will be via a competitive recruitment process coordinated by the relevant Training Body. Recruitment will follow similar timeline where possible to HST recruitment and post will commence in July of each year (unless otherwise specified).

Duration and Organisation of Training

The Post CSCST Fellowship in Liver, Kidney/Pancreas and Haematopoietic Stem Cell Transplant is a one year training programme designed to dovetail with the Irish Higher Specialist Training programme in Clinical Microbiology. The curriculum is competency-based, however it is anticipated that the candidate will complete training within one year.
The curriculum takes into account the major areas of competence required by the subspecialist in Liver, Kidney/Pancreas and Haematopoietic Stem Cell Transplant and will be supervised by the Faculty of Pathologyof the Royal College of Physicians in Ireland. Doctors who have successfully completed the RCPI Higher Specialist Training programme in Clinical Microbiology and are within two years of completion will be deemed eligible to apply for the Post CSCST Fellowship in Liver, Kidney/Pancreas and Haematopoietic Stem Cell Transplant Completion of this program will ensure the knowledge and competencies in all areas of the curriculum, meeting international standards for best practice and allowing candidates to practice as a subspecialist in Liver, Kidney/Pancreas and Haematopoietic Stem Cell Transplant

Training Programme

The training programme offered will provide opportunities to fulfil all the requirements of the curriculum of training for Liver, Kidney/Pancreas and Haematopoietic Stem Cell Transplant in approved training hospitals. Each post within the programme will have a named trainer/educational supervisor and the programme will be under the direction of the National Specialty Director for Clinical Microbiology

Trainee Numbers

It is expected that the Post CSCST Fellowship in Liver, Kidney/Pancreas and Haematopoietic Stem Cell Transplant will be awarded to one candidate per year.

ePortfolio

The trainee will be required to keep their ePortfolio up to date and maintained throughout their Fellowship training. The ePortfolio will be countersigned as appropriate by the Trainer to confirm the

satisfactory fulfilment of the required training experience and the acquisition of the competencies set out in the Curriculum. This will remain the property of the Trainee and must be produced at the end of year Evaluation meeting. At the end of year Evaluation, the ePortfolio will be examined. The results of any assessments and reports by the named trainer/educational supervisor, together with other material capable of confirming the trainee's achievements, will be reviewed.

Programme Management

- Coordination of the training programme will lie with the Medical Training Department.
- The training year will usually run from July to July in line with HST programmes
- Annual evaluations will usually take place between April and June each year
- Each trainee will be registered to the ePortfolio and will be expected to fulfil all requirements relating to the management of yearly training records
- Opportunities for audit and research may be available
- Each trainee will be issued with a training agreement on appointment to the training programme and will be required to adhere to all policies and procedures relating to Post CSCST Fellowships.

Specialty Section

Basic Scientific Principles

Objective: To be expert on the diagnosis and interpretation of diagnostic methods and interpretation in transplantation medicine infectious complications

KNOWLEDGE

- Diagnosis of transplantation medicine infectious complications
- Interpretation of diagnosis methods

SKILLS

- Assessment and evaluation of patients undergoing liver transplantation or kidney/pancreas transplantation and of patients with haematological malignancy and haematopoietic stem cell transplantation related infections

ASSESSMENT & LEARNING METHODS

- Communication course
- Prepare and present a lecture / update of the current data :
    - to hospital physicians
    - to allied health professionals
- Feedback from people attending presentations

Lifestyle

Objective: To be familiar with the data and knowledge gaps regarding potential causes and/or complications of transplant related infection illness.

To be aware of the clinical trials describing the prevention of infections in the post-transplant era on morbidity and mortality.

KNOWLEDGE

- Familiarity with the data and knowledge gaps regarding potential causes and/or complications of transplant related infection illness
- To be aware of the clinical trials describing the prevention of infections in the post-transplant era on morbidity and mortality

SKILLS

- Advise on health promotion

ASSESSMENT & LEARNING METHODS

- Write a review, patient information booklet regarding post transplantation related infection prevention
- Review national and international guidance documents considering quality of available evidence

Epidemiology and Public Health

Objective: To be familiar with national outbreaks and epidemics and their effect on transplant programme patients.

To be familiar with current interventions to mitigate the adverse consequences of infections pre- and post-transplant for patients.

KNOWLEDGE

- National outbreaks and epidemics and effect on transplant programme patients.
- Current interventions to mitigate the adverse consequences of the infections pre- and post-transplant for patients.

SKILLS

- Analysis and interpretation of epidemiological data
- Multidisciplinary team working
- Awareness of public health policies

ASSESSMENT & LEARNING METHODS

- Multidisciplinary team meetings
- Attend interactions between HPSC, outbreak meetings
- Research meetings

Special Groups – Adults with Special Risk Factors

Objective: To become competent in working clinically with adults with specific risk factors. To review pre-transplant special risk groups, e.g. patients colonized with multi-drug resistant isolates (MDRO), BBV or recurrent *Clostridium difficile*

KNOWLEDGE

- Pre-transplant specific issues in specific risk groups, e.g. patients colonized with MDROs, BBV or recurrent *Clostridium difficile*

SKILLS

- Provide interventions to prevent infectious complications in these groups

ASSESSMENT & LEARNING METHODS

- MDTs
- Observe ID team re transplant with BBV
- Work in liaison with transplant coordinators and ward staff

Laboratory/Specific Area

Objective: To be able to apply an evidence-based approach to the management of patients with infections (fungal, bacterial, parasitic or viral), including MDRO.

KNOWLEDGE

- Evidence-based approach to the management of fungal risk in patients undergoing solid organ transplantation (SOT) or haematology chemotherapy and/or stem cell transplantation
- Evidence-based approach to the management of patients with bacterial infections, including MDRO
- Evidence-based approach to the screening for and management of parasitic infections in SOT and haematology patients
- Evidence-based approach to the management and prevention of viral infections in SOT and haematology patients in liaison with NVRL.

SKILLS

- Manage fungal infections using EORTC guidelines
- Recognise and understand the role of laboratory in management of infections.
- Advise on methods to reduce risk e.g. antimicrobial stewardship and environmental measures and role of surveillance and reductions measures
- Review and develop SOPs to ensure prevention of parasitic infections
- Provide medical management to patients with parasitic infections
- Appropriate referral to specialists
- Screening, assessment and management of viral disease in SOT and haematology patients in liaison with NVRL.
- Early intervention in viral disease to prevent progression

ASSESSMENT & LEARNING METHODS

- MDT meetings
- Attend courses:
- NEQAS Mycology course
- EFISG , ESCMID
- Attend laboratory / ASTX rounds
- Attend laboratory SRG meetings
- Liver transplant/Pancreas/Kidney transplant, Haematology MDTs
- Meetings with consultant virologist

Solid Organ Transplant Ward/Haematology Oncology Ward/Phoresis Unit

Objective: To understand the infrastructural and physical requirements of an inpatient or day ward for transplant patients to prevent acquisition of infection

KNOWLEDGE

- Evidence-based approach to infection prevention and control in SOT patients and haematology patients based on national and international guidance

SKILLS

- Ability to access suitability of physical environment and work flow practices and to make recommendations in line with best practices for the prevention of infection in this setting

ASSESSMENT & LEARNING METHODS

- Coordinate an audit on ward
- MDT meetings

Other Co-Morbidities

Objective: To be able to apply an evidence-based approach to the management of, and prevention of infection related treatments with specific comorbidities e.g. obesity, cardiac, renal etc.

KNOWLEDGE

- Evidence-based approach to management and prevention of infection in transplant patients with specific comorbidities e.g. obesity, cardiac, renal etc.

SKILLS

- Provide antimicrobial advice on management of infections in people with comorbidities, obesity etc.

ASSESSMENT & LEARNING METHODS

- MDT meetings
- Develop in conjunction with pharmacists protocols to manage infections in patients with co-morbidities
- Attend wards
- Attend Liver transplant /Pancreas/Kidney transplant Haem/Micro MDTs

Clinical Assessment

Objective: To be competent in the assessment of patients with infections in the pre- and post-transplant period

KNOWLEDGE

- How to assess patients with infections in the pre- and post-transplant period

SKILLS

- Carry out a physical examination with special focus on infection related challenges
- Appropriate screening for infection related illnesses
- Identification and treatment of transplant related infections

ASSESSMENT & LEARNING METHODS

- Attend wards
- Attend Liver transplant /Pancreas/Kidney transplant /Haem/Micro MDTs

Management and Treatment Options

Objective: To become competent in the management and the most appropriate treatment of all infectious complications in SOT patients and haematology patients.

KNOWLEDGE

- The associations between antimicrobial choice and infection management of patients with transplant related infections
- The prescription of antimicrobials for treatment, prevention and prophylaxis of infection in transplant patient cohort
- Awareness of new emerging therapies e.g. FMT role in transplant patients
- The associations between colonization with MDRO and subsequent development and treatment of infection
- The associations between behaviour modification with prevention of infection post-transplant

SKILLS

- Provide information to patients on the indications, contra-indications, risks, alternatives and benefits of antimicrobials.
- Assess newer antimicrobials for use in transplant patients.
- Develop an application algorithm in transplant patients.
- Choose appropriately for agent dosing and titration and therapeutic monitoring.
- Carry out SWOT analysis of laboratory input to transplant programme and set SMART goals in attainment.
- Promote policies and procedures that reduce and prevent infection.
- Advocate for the prevention of infection, develop contingencies and identify potential future challenges/threats.
- Advocate for the prevention of infection in transplant unit.

ASSESSMENT & LEARNING METHODS

- MDT meetings
- Undertake AMS audits
- Inpatient management
- Laboratory based project
- Develop guidelines for foreign travel in the post-transplant period
- Committee attendance
- Review of policies and procedures

Documentation of Minimum Requirements for Training

- These are the minimum number of cases you are asked to document as part of your training. It is recommended you seek opportunities to attain a higher level of exposure as part of your self-directed learning and development of expertise.
- You should expect the demands of your post to exceed the minimum required number of cases documented for training.
- If you are having difficulty meeting a particular requirement, please contact your specialty coordinator.

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Number
Section 1 - Training Plan				
Personal Goals Plan (Copy of agreed Training Plan for your current training year signed by both Trainee & Trainer)	Required	1	Training Programme	Form 052
Personal Goals Review Form	Required	1	Training Programme	Form 137
Weekly Timetable (Sample Weekly Timetable for Post/Clinical Attachment)	Required	1	Training Programme	Form 045
Section 2 - Training Activities				
Outpatient Clinics				Form 001
Liver Transplant outpatient clinics	Required	5	Training Programme	Form 001
Hepatitis outpatient clinics	Desirable	5	Training Programme	Form 001
Pancreas/Kidney Transplantation outpatient clinics	Required	2	Training Programme	Form 001
Haematology Oncology Day Ward	Required	5	Training Programme	Form 001
Ward Rounds				
Liver/Pancreas/Kidney Transplantation	Required	20	Training Programme	Form 002
Haematology Oncology	Required	20	Training Programme	Form 002
On call /dealing with queries of Transplantation medicine Clinical Microbiology	Desirable		Training Programme	Form 003
Additional/Special Experience Gained- Clinical Microsystems QI training (depending on availability)	Desirable	1	Training Programme	Form 005
Attachment with National Transplant Co-ordinator	Desirable	1	Training Programme	Form 006
Section 3 - Educational Activities				
Mandatory Courses				
Observership in Clinical Virology, NVRL	Required	5	Training Programme	Form 006
Health Economics Course	Desirable	2	Training Programme	Form 006
Patient Survey	Required	1	Training Programme	Form 006
Patient booklet /App	Desirable	1	Training Programme	Form 006

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Number
Non – Mandatory Courses				
Viral Infections in Immunocompromised host ESCMID Course	Desirable	1	Training Programme	Form 007
Communication Course	Desirable	1	Training Programme	Form 007
NEQAS Mycology course	Desirable	1	Training Programme	Form 007
In-house activities				Form 011
Journal Club	Required	10	Training Programme	Form 011
MDT Meetings	Required	30	Training Programme	Form 011
One to one meetings with transplant coordinator	Required	3	Training Programme	Form 011
Examinations	Desirable	1	Training Programme	Form 012
Formal Teaching Activity (1 per month)				
Lecture	Required	4	Training Programme	Form 013
Tutorial	Required	4	Training Programme	Form 013
Research	Desirable	1	Training Programme	Form 014
Audit activities/QIP **HODW /Transplantation and ward processes audits and Quality Improvement programmes**	Required	4	Training Programme	Form 015
Clinical Audit Report form	Required	3	Training Programme	Form 135
Publications	Desirable	1	Training Programme	Form 016
Presentations	Desirable	5	Training Programme	Form 017
National/International meetings	Desirable	1	Training Programme	Form 010
Additional Qualifications	Desirable	1	Training Programme	Form 065
Committee Attendance	Required	3	Training Programme	Form 063
Section 4 - Assessments				
CBD	Required	1	Training Programme	Form 020
Quarterly Assessments	Required	4	Training Programme	Form 092
End-of-Post/End-of-Year Assessments	Required	1	Training Programme	Form 092