



**IRISH COMMITTEE
ON HIGHER
MEDICAL TRAINING**

ROYAL COLLEGE OF
PHYSICIANS OF IRELAND

Post CSCST TRAINING IN

GASTROENTEROLOGY Hepatology



This curriculum of training in Hepatology was developed in 2017 and undergoes an annual review by Ross Mc Nicholas, Subject Matter Expert, Dr Ann O’Shaughnessy, Head of Education, Innovation & Research and by the Gastroenterology Training Committee. The curriculum is approved by the Irish Committee on Higher Medical Training.

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

Table of Contents

INTRODUCTION	4
ENTRY REQUIREMENTS	4
RECRUITMENT AND SELECTION	4
DURATION AND ORGANISATION OF TRAINING	4
TRAINING PROGRAMME	4
TRAINEE NUMBERS	4
ePORTFOLIO	5
PROGRAMME MANAGEMENT	5
SPECIALITY SECTION	6
ASSESSMENT OF LIVER FUNCTION	7
INVESTIGATION OF JAUNDICE	8
CHRONIC LIVER DISEASE	9
ASCITES AND OTHER ABDOMINAL SWELLINGS	10
LIVER FAILURE AND ENCEPHALOPATHY	11
ADVANCED LIVER SUB-SPECIALTY TRAINING	12
LIVER TRANSPLANTATION	13
ACUTE LIVER FAILURE	14
HEPATITIS C	15
HEPATITIS B	16
COMPLICATIONS OF CHOLESTATIC LIVER DISEASE	17
VASCULAR LIVER DISEASE	18
PREGNANCY-ASSOCIATED LIVER DISEASE	19
BENIGN LIVER TUMOURS	20
MALIGNANT LIVER TUMOURS, HEPATOCELLULAR CARCINOMA (HCC)	21
CHOLANGIOCARCINOMA	22
GENETIC LIVER DISEASE	23
PORTAL HYPERTENSIVE BLEEDING	24
STAGING OF HEPATIC FIBROSIS	25
NON ALCOHOLIC FATTY LIVER DISEASE (NAFLD)	26
DOCUMENTATION OF MINIMUM REQUIREMENTS FOR TRAINING	27

Introduction

This 1 year post CSCST Fellowship in Hepatology is designed to dovetail with the Irish Higher Specialist Training programme in Gastroenterology. Hepatology is the specialty concerned with the structure, functions, diseases, and abnormalities of the liver, and with the diagnosis, treatment, management and prevention of disorders of the liver. It includes, but is not limited to, the study of acute and chronic hepatitis, viral hepatitis, cirrhosis, genetic and metabolic liver diseases and their complications, liver cancer, liver transplantation, drug metabolism and immunology as it pertains to the liver.

The Fellowship programme takes into account the major areas of competence required by the subspecialist in Hepatology and will be supervised by the Irish Committee on Higher Medical Training of the Royal College of Physicians in Ireland. The programme will provide the clinical foundation for managing patients with Hepatological disease.

Entry Requirements

Applicants for the Post CSCST Fellowship in Hepatology will have successfully completed the RCPI Higher Specialist Training programme in Gastroenterology within two years of the start date of the Post CSCST Fellowship programme.

Prior experience in Hepatology during Gastroenterology training would be an advantage.

Recruitment and Selection

Post CSCST Fellowship training in Hepatology will build on broad basic and early core specialist training in Gastroenterology. This is in line with training models internationally. Selection of candidates for Post CSCST Fellowship training in Hepatology 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 Hepatology is a one year training programme designed to dovetail with the Irish Higher Specialist Training programme in Gastroenterology. 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 Hepatology and will be supervised by the Irish Committee on Higher Medical Training of the Royal College of Physicians in Ireland. Doctors who have successfully completed the RCPI Higher Specialist Training programme in Gastroenterology and are within two years of completion will be deemed eligible to apply for the Post CSCST Fellowship in Hepatology. 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 Hepatology.

Training Programme

The training programme offered will provide opportunities to fulfil all the requirements of the curriculum of training for Hepatology 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 in Gastroenterology.

Trainee Numbers

It is expected that the Post CSCST Fellowship in Hepatology 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.

Speciality Section

Assessment of Liver Function

Objective: To understand and be able to recognise the manifestations of hepatic dysfunction and the range of disease processes which may be responsible. To know the range of investigations available and be able to advise of the selection and interpretation of appropriate tests. To understand the place of liver biopsy in the management of patients with liver dysfunction, to know the indications, contra-indications and risks, and the techniques available

KNOWLEDGE

Investigation of abnormal liver function tests

- Knowledge of bilirubin metabolism, hepatic and biliary inflammatory processes, hepatic blood flow
- Knowledge of biochemical, haematological, viral, autoimmune and metabolic markers of liver disease, and ability to select appropriate markers
- Indications for liver biopsy, abdominal ultrasound, CT, ERCP, MRI/ERCP/EUS
- Demonstrates willingness to use appropriate tests in correct circumstances

Liver biopsy

- Knowledge of pre and post procedure care, complications
- Be able to recommend ultrasound guidance or transjugular approach as necessary, recognise complications
- Demonstrates willingness to undertake procedure or refer to radiologist for ultrasound guidance or transjugular biopsy as appropriate

SKILLS

- Recognise the range of disease processes possible
- Select and interpret appropriate markers
- Select and interpret appropriate tests as required
- Recommend and obtain informed consent for ultrasound guidance liver biopsy

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Investigation of Jaundice

Objective: To understand the production of bile, the structure and function of the biliary system; diseases of the biliary tract; the significance of jaundice, its causes and investigation. To be able to advise on the management of a patient with jaundice and recommend treatment

KNOWLEDGE

Jaundice - structure and function of the biliary system:

- Knowledge of anatomy and physiology of the biliary system
- Can describe the physiology of bile production
- Causes of extra and intrahepatic biliary obstruction and their clinical manifestations
- Differential diagnosis of jaundice (non-obstructive) including hepatitis, alcoholic liver disease, chronic liver disease (e.g. AIH, PBC, PSC)
- Medical, surgical and radiological treatment of jaundiced patients
- Knowledge of indications and complications of ERCP
- Demonstrates willingness to recognise the development of various causes of jaundice and take appropriate action

SKILLS

- Recognise biliary obstruction and its complications
- Make use of and interpret investigations of jaundiced patients including ultrasound, CT, MRI, ERCP and liver biopsy and initiate appropriate treatment
- Select the most appropriate treatment for individual patients

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Chronic Liver Disease

Objective: To be able to determine the cause of chronic liver disease and to recommend appropriate management or refer for other specialist opinion

KNOWLEDGE

- Knowledge of causes of chronic liver disease due to systemic disease
- Knowledge of causes of chronic liver disease – chronic viral hepatitis, AIH, PBC, PSC, alcohol liver disease, NASH, haemochromatosis, alpha1 antitrypsin deficiency and Wilson's disease, and vascular disorders, and select therapeutic options where available
- Knowledge of complications of chronic liver disease and ability to order and interpret appropriate investigations for complications of cirrhosis
- Knowledge of complications of drug therapies associated with treatment of chronic liver disease
- Demonstrates willingness to diagnose and treat chronic liver disease

SKILLS

- Diagnosis of chronic liver disease due to systemic disease
- Make use of and interpret investigations of jaundiced patients including ultrasound, CT, MRI, ERCP and liver biopsy and initiate appropriate treatment
- Select the most appropriate treatment for individual patients
- Recognise need for referral to specialist liver unit for consideration for liver transplantation

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Ascites and Other Abdominal Swellings

Objective: To be able to determine the cause of an abdominal swelling and to recommend appropriate management or refer for other specialist opinion

KNOWLEDGE

Ascites

- Pathophysiology of portal hypertension
- Differential diagnosis of ascites (hepatic and non-hepatic)
- Knowledge of management of spontaneous bacterial peritonitis with diuretics, antibiotics, and albumin as necessary
- Knowledge of appropriate use of paracentesis, complications of procedure
- Knowledge of indications for and complications of TIPS
- Demonstrates willingness to consult with and refer to a specialist unit as appropriate

Abdominal masses including cysts

- Causes of hepatic and extrahepatic masses, knowledge of benign and malignant liver tumours
- Make use of and interpret investigations including ultrasound, CT, MRI, ERCP and liver biopsy
- Knowledge of treatment modalities for liver cancer
- Demonstrates willingness to investigate or to refer to surgeons as appropriate
- Be aware of patient's anxiety regarding potential outcome of investigation

SKILLS

- Give a differential diagnosis and safely manage ascites
- Recognise abdominal masses and initiate appropriate investigations
- Recognise need for referral to specialist liver unit for consideration for liver transplantation

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion
- DOPS: Paracentesis

Liver Failure and Encephalopathy

Objective: To understand the pathogenesis of the features of acute and chronic liver failure, and the occurrence of hepatic encephalopathy To be able to separate encephalopathy from other confusional states in patients with liver disease and to arrange to provide treatment which is appropriate

KNOWLEDGE

Hepatic encephalopathy

- Knowledge of pathophysiology, clinical features, stage and precipitants of hepatic encephalopathy in liver disease
- Recognise, investigate and treat alcohol withdrawal syndromes and other causes of confusion
- Demonstrates willingness to recognise and treat hepatic encephalopathy

Liver failure

- Definition of Acute Liver failure and chronic liver failure
- Causes and manifestations of acute and chronic hepatic failure
- Demonstrates willingness to consult and refer to specialist liver unit as appropriate

SKILLS

- Recognise, investigate and treat hepatic encephalopathy, alcohol withdrawal syndromes and other causes of confusion
- Recognise progression to hepatic failure and need for referral to specialist liver unit for consideration for liver transplantation

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Advanced Liver Sub-Specialty Training

Objective: To develop more detailed knowledge and advanced skills in the diagnosis and management of the diseases of the liver and biliary system.

KNOWLEDGE

Anti viral therapy

- Criteria for treatment and efficacy of antiviral therapy for Hepatitis B & C
- Ability to administer and monitor complications of antiviral therapy
- Demonstrates willingness to participate in the diagnosis and management of advanced liver disease

Acute hepatic failure

- Causes and manifestations of acute hepatic failure and its complications including cerebral oedema and hepatorenal syndrome
- Awareness of progression of liver failure and need for liver transplantation
- Demonstrate a willingness to liaise appropriately with specialist liver unit

Benign and malignant tumours of the hepatobiliary system

- Hepatic adenoma, hepatoma and cholangiocarcinoma and medical, surgical and radiological management
- Ability to advise use of screening, and different therapeutic treatment modalities including immunotherapies and biologic therapies

Liver transplantation

- Selection of patients and timing of transplantation Management of peri- and post-operative complications including rejection and infection
- Knowledge of immunosuppression therapy, complications and drug interactions
- Knowledge of long-term complications of liver transplantation
- Appreciate patients and family anxiety pertaining to liver transplantation
- Demonstrate willingness to liaise with specialty transplant units

SKILLS

- Administer and monitor antiviral therapy for hepatitis B & C with appropriate investigations as necessary
- Recognise progression of acute hepatic failure and the need for liver transplantation
- Advise use of and follow up of TIPS or surgery in patients with portal hypertension
- Advise use of screening and the different therapeutic strategies for individual patients
- Explain complex diagnosis in simple terms to patient
- Enrol multidisciplinary team in investigation and treatment
- Liver transplantation module:
 - Appropriately select patients for liver transplantation
 - Be able to manage complications of transplantation
 - Be able to manage immunosuppressive therapy

ASSESSMENT & LEARNING METHODS

- Mini-CEX
- Case-based Discussion

Liver Transplantation

Objective: To appreciate the role of liver transplantation in the management of both chronic and acute liver disease and the management, complications of immunosuppression

KNOWLEDGE

- Knows the indications for liver transplantation, appropriate timing of referral for assessment, and outcomes after transplantation
- Understands the long-term management of liver transplant recipients including complications of immunosuppression and management of recurrent disease

SKILLS

- Can identify potential candidates for liver transplantation, as well as demonstrating an understanding of why patients with end-stage liver disease are not appropriate candidates for liver transplantation
- Has detailed understanding of the transplant assessment process.
- Identify all potential candidates for liver transplantation, refer at the appropriate time and contribute to life-long follow-up of liver recipients

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Acute Liver Failure

Objective: The recognition, investigation, both ward based and ICU management, early identification of patients that would benefit from transplantation and timing of referral/transfer to specialist unit

KNOWLEDGE

- Understands the causes and pathophysiology of acute liver failure
- Can plan appropriate investigation, evaluate prognosis and construct a detailed management plan
- Identifies those potentially suitable for emergency liver transplantation

SKILLS

- Develops ability to make accurate evaluation of patients with liver failure at the stage of initial presentation
- Can deliver management plan, appropriately evaluate changes in patient's condition and react accordingly
- Utilises the range of medical interventions necessary to support critically ill patients
- Identify patients at risk of developing acute liver failure and understand the criteria for referral to specialist centres

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Hepatitis C

Objective: To be able to assess and evaluate patients with acute and chronic hepatitis C infection and determine suitability for treatment and further management

KNOWLEDGE

- Can identify the rare cases of acute hepatitis
- Can define chronic hepatitis C and can describe its natural history and prognosis
- Appreciates the absolute and relative contra-indications to combination therapy with pegylated interferon and ribavirin and understands the contribution of genotype and viral load to therapy
- Can select appropriate DAA regimens
- Knows the predictable adverse effects of therapy and has an awareness of the unpredictable effects
- Can describe a programme of appropriate surveillance for patients with oesophageal varices and hepatocellular carcinoma
- Identifies patients who are appropriate candidates for liver transplant assessment

SKILLS

- Able to take a relevant history and organise appropriate investigations
- Appropriate awareness of psycho-social situation and referral to psychiatric services
- Selects appropriate monitoring to assess response to therapy
- Able to identify which supportive measures to manage adverse effects appropriately including selection of dose reduction, growth factors and anti-depressants
- Can select appropriate imaging techniques for evaluation of abnormal results
- Appreciates the social stigma attached to hepatitis C and the psychosocial problems often encountered in considering therapy
- Ability to educate patients and close contacts/families about their condition and the implications of having chronic viral liver disease
- Appreciates the input of voluntary organisations and substance misuse groups/specialists
- Appreciates the importance of liaison psychiatry and treatment nurses in the management of this group of patients

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Hepatitis B

Objective: To assess patients with acute and chronic hepatitis B infection and determine requirement for treatment and appropriate long term management

KNOWLEDGE

- Identifies patients with acute hepatitis B and can ascertain the severity of their illness
- Defines the different phases of chronic hepatitis B infection with a clear understanding of serological results
- Appreciates risks of transmission to close contacts
- Has awareness of indications for therapy in both HBeAg positive and negative hepatitis and the potential influence of genotype on choice of therapy
- Identifies patients where prophylaxis is required to prevent reactivation and vertical transmission
- Can determine an appropriate surveillance programme for those patients with varices and/or hepatocellular carcinoma
- Identifies patients who are appropriate candidates for liver transplant assessment

SKILLS

- Demonstrates ability to take a relevant history, perform examination and organise appropriate investigations
- Able to advise risks of viral transmission
- Interprets results of blood tests for hepatitis B antigen and antibody
- Appreciates when liver biopsy is appropriate
- Be able to select the most appropriate treatment and how to monitor patient response
- Able to select appropriate imaging techniques for evaluation of abnormal results.
- Appreciates the cultural differences in the ethnic populations infected and the influence this may have on screening
- Provides advice and education to families and shows appreciation of the potential difficulties that may arise
- Understands the importance of cooperation with virologists and staff in other clinical laboratories

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Complications of Cholestatic Liver Disease

Objective: To be able to carry out specialist assessment, investigate, diagnose, initiate treatment of patients with cholestatic liver disease (e.g. PBC, PSC) and exclude large duct obstruction

KNOWLEDGE

- Shows recognition of the potential complications of cholestasis: including; pruritus, osteoporosis, fatigue, fat malabsorption
- Aware of the investigations and treatment of each complication
- Knows the therapeutic options and potential complications of ursodeoxycholic acid, cholestyramine, rifampicin and naltrexone
- Able to assess individual patients concerning the timing of potential transplantation
- Knows how to use of calcium, vitamin D and biphosphonates in chronic liver disease.
- Aware of how to monitor treatment regimens for osteoporosis

SKILLS

- Can take a relevant history and perform appropriate investigation
- Is aware and can act on the potential complications of cholestasis
- Selects and uses investigations appropriately (specifically in PSC,) to be aware of possible inflammatory bowel disease and regimens for colonoscopic surveillance
- Ensures the patient understands the importance of prevention of complications, such as fracture risk in osteoporosis
- Empathises with patients who have sometimes intractable symptoms such as pruritus

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Vascular Liver Disease

Objective: To be able to carry out specialist assessment of vascular disease of the liver appreciating the risks and benefit of anticoagulation

KNOWLEDGE

- Recognises and shows understanding of vascular liver disease including Budd-Chiari syndrome, veno-occlusive disease and portomesenteric venous thrombosis; understands the underlying anatomy and physiology of these often complex conditions
- Aware of need for investigation for associated myeloproliferative and procoagulant conditions
- Understands the role of anticoagulation and indications for further intervention including TIPSS, surgery or transplantation

SKILLS

- Can make careful clinical assessment of these conditions and has heightened awareness of liver vascular disease in differential diagnosis.
- Able to make a potentially difficult diagnosis of less common variants of vascular conditions
- Ability to keep patient and relatives informed and to refer appropriately for specialist management

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Pregnancy-Associated Liver Disease

Objective: To recognise the spectrum of liver diseases of pregnancy with respect to the stage of pregnancy and the timing of obstetric intervention

KNOWLEDGE

- Knows the range of potentially serious liver diseases that can complicate pregnancy
- Knows the various manifestations of pregnancy-associated liver disease including obstetric cholestasis and is aware of the urgency of such situations
- Knows how to manage the more severe pregnancy-associated liver diseases including eclampsia and acute fatty liver of pregnancy
- Aware of importance of close liaison with obstetric colleagues over the timing of delivery

SKILLS

- Is aware that, more than with any other aspect of liver disease, the optimum management of these diseases requires acute clinical acumen
- Shows the ability to liaise and respond urgently to what is often rapidly escalating severity
- Liaises closely and effectively with obstetric colleagues
- Communicates effectively with concerned patients and relatives about the needs of the foetus and the overriding need to preserve the health of the mother

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Benign Liver Tumours

Objective: Imaging methods, role of biopsy and oral contraceptive agents in hepatic adenomas

KNOWLEDGE

- Knows the epidemiology, pathology, clinical presentation and natural history of benign tumours of the liver
- Can define a programme of investigation and characterisation of benign liver lesions including haemangioma, focal nodular hyperplasia and adenoma

SKILLS

- Demonstrates ability to make an appropriate differential diagnosis
- Formulates appropriate plan of management.
- Recognises importance of the role of multidisciplinary team in diagnosis and management

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Malignant Liver Tumours, Hepatocellular Carcinoma (HCC)

Objective: Importance of HCC screening in cirrhosis, diagnosis and treatment

KNOWLEDGE

- Understands the epidemiology, risk factors, pathology, prevalence and range of presentations of HCC
- Knows the appropriate investigation and staging of the disease
- Aware of treatment options including trans-arterial chemoembolisation (TACE), radiofrequency ablation (RFA), local ethanol injection and radioembolisation
- Appreciates the indications and contraindications of each and how the most appropriate is selected. Aware of surgical treatment options
- Aware of role of surveillance and referral for specialist multi-disciplinary management including liaison with oncology

SKILLS

- Appreciates the indications and contraindications of each modality of treatment and how the most appropriate is selected.
- Understands the process of selection of patients for liver resection or transplantation
- Appreciates Involvement of multi-disciplinary team in management decisions, close liaison with surgical, radiology, oncology and pathology colleagues

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Cholangiocarcinoma

Objective: Investigation and treatment options for bile duct tumours

KNOWLEDGE

- Knows the epidemiology, pathology and clinical presentation of bile duct tumours
- Can recognise the presentation of biliary tumours arising de novo or in the context of PSC. Can plan programme of investigations including detailed staging
- Understands treatment options including surgery, chemotherapy and endoscopic management

SKILLS

- Aware of the treatment options including biliary drainage, chemotherapy, radiotherapy, photodynamic therapy or surgery
- Understands rationale for selection of particular therapy in individual patients
- Awareness of the diagnostic modalities, including CT, MRI scanning, brush cytology, intra ductal cholangioscopy and biopsy
- Understands importance of multidisciplinary team of oncologist, surgeon, radiologist, histopathologist in decision making.

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Genetic Liver Disease

Objective: Investigation and treatment options for genetic liver diseases

KNOWLEDGE

- Knows the epidemiology, pathology and clinical presentation of genetic liver diseases including: HHT, Wilson's disease, Alpha-1-Antitrypsin deficiency, Iron overload syndromes, Cystic Fibrosis and other liver diseases
- Knows the appropriate investigation and staging
- Aware of other organ dysfunction associated with these diseases
- Knows the therapeutic options

SKILLS

- Can take a relevant history and perform appropriate investigations
- Formulates appropriate plan of management.
- Provides advice regarding family screening if required

ASSESSMENT & LEARNING METHODS

- Clinical presentations
- Case Based Discussion

Portal Hypertensive bleeding

Objective: Able to investigate and treat bleeding

KNOWLEDGE

- Knows how to classify gastroesophageal varices by location and size
- Aware of high risk stigmata

SKILLS

- Formulates appropriate screening regimen for varices
- Formulates appropriate management plan for primary prophylaxis
- Able to perform band ligation
- Able to perform injection of histoacryl
- Knows how to insert a Sengstaken Blakemore tube
- Selects appropriate patients for TIPSS

ASSESSMENT & LEARNING METHODS

- Case Based Discussion
- DOPS

Staging of Hepatic Fibrosis

Objective: Ability to stage hepatic fibrosis in chronic liver disease

KNOWLEDGE

- Knows the different histological staging (Ishak, Metavir)
- Interprets liver stiffness results for different liver diseases
- Knows different serum markers of liver fibrosis

SKILLS

- Able to perform a Fibroscan
- Able to identify signs of chronic liver disease on examination

ASSESSMENT & LEARNING METHODS

- Case Based Discussion
- DOPS

Non Alcoholic Fatty Liver Disease (NAFLD)

Objective: Ability to diagnose and manage non-alcoholic fatty liver disease

KNOWLEDGE

- Knows the epidemiology, pathology and clinical presentation of NAFLD
- Able to identify those at higher risk of NASH
- Describes how to distinguish ALD from NAFLD

SKILLS

- Advises appropriate therapeutic options including lifestyle changes, medical and surgical
- Able to identify and manage cardiovascular risk factors

ASSESSMENT & LEARNING METHODS

- Case Based Discussion

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 Name
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
On Call Rota	Required	1	Training Programme	Form 064
Section 2 - Training Activities				
Outpatient Clinics				
HCC	Required	40	Training Programme	Form 001
Liver Transplant	Required	40	Training Programme	Form 001
Viral Hepatitis	Required	40	Training Programme	Form 001
General Hepatology	Required	40	Training Programme	Form 001
Ward Rounds/Consultations (minimum 2 per week)	Required	80	Training Programme	Form 002
Emergencies/Complicated Cases	Desirable	1	Training Programme	Form 003
Procedures/Practical Skills/Surgical Skills				
Ultrasound and ultrasound guided liver biopsy (observe only)	Required	10	Training Programme	Form 004
Trans-jugular liver biopsy (observe only)	Required	1	Training Programme	Form 004
Placement of trans-jugular intrahepatic portal systemic shunts (TIPSS) (observe only)	Required	1	Training Programme	Form 004
Cadaveric liver procurement and liver transplant (observe)	Required	1	Training Programme	Form 004
Interpretation of native/allograft liver biopsies	Required	200	Training Programme	Form 004
Ligation of oesophageal varices	Required	50	Training Programme	Form 004
Gastric varices	Required	1	Training Programme	Form 004
Fibroscans	Required	50	Training Programme	Form 004
Injection of Histoacryl glue/thrombin	Required	1	Training Programme	Form 101

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
Use of APC	Required	1	Training Programme	Form 101
Additional/Special Experience Gained (Advanced Options)	Desirable	1	Training Programme	Form 005
Relatively Unusual Cases	Desirable	1	Training Programme	Form 019
ICU/CCU (weekly ward round)	Required	40	Training Programme	Form 090
Chronic Cases/Long term care				
New Transplant recipients – follow up at least 3 months	Required	20	Training Programme	Form 066
Patients who are more than a year post transplant	Required	20	Training Programme	Form 066
Management Experience	Desirable	1	Training Programme	Form 110
Section 3 - Educational Activities				
Mandatory Courses				
	Required	1	Training Programme	Form 006
Non – Mandatory Courses	Desirable	1	Training Programme	Form 007
Study days	Required	5	Training Programme	Form 008
In-house activities				
Grand Rounds (minimum of 2 per month)	Required	5	Training Programme	Form 011
Journal Clubs	Required	20	Training Programme	Form 011
Liver Transplant MDT Meetings – Present liver transplant candidates	Required	20	Training Programme	Form 011
Pathology conference	Required	1	Training Programme	Form 011
Formal Teaching Activity (minimum 1 formal teaching session per month)				
Lecture/Tutorial/Bedside teaching	Required	5	Training Programme	Form 013
Research	Desirable	1	Training Programme	Form 014
Audit activities	Required	1	Training Programme	Form 015
Clinical Audit Report Form	Required	1	Training Programme	Form 135
Publications	Desirable	1	Training Programme	Form 016
Presentations (oral or poster)	Desirable	1	Training Programme	Form 017
National/International meetings (AASLD/EASL/BASL or equivalent)	Required	1	Training Programme	Form 010
Additional Qualifications	Desirable	1	Training Programme	Form 065
Section 4 - Assessments				

Curriculum Requirement	Required/Desirable	Minimum Requirement	Reporting Period	Form Name
DOPS				
Variceal banding	Required	2	Training Programme	Form
Injection of Histoacryl glue/thrombin	Required	1	Training Programme	Form
Use of APC	Required	1	Training Programme	Form
Paracentesis	Required	1	Training Programme	Form
CBD	Required	4	Training Programme	Form 020
Mini-CEX (At least two Mini-CEX assessments)	Required	2	Training Programme	Form 023
Quarterly Assessments	Required	4	Training Programme	Form 092
End-of-Post/End-of-Year Assessments	Required	1	Training Programme	Form 092