



Year 3 Curriculum Document 2022-23

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Overview of Year 3 Curriculum Document 2022-23

This document lists the overall learning content for Year 3.

The learning outcomes for the lectures, workshops, the CCT sessions, placement CBLs (case-based learning tutorials) & Safe Prescribing sessions are all included.

Students should ensure they have read around the topics, their differential diagnoses, investigations, non-prescribing and prescribing management plans using first and second line medications.

We have organised this document so that the first section outlines the content relating to each of the seven Y3 placements (including the relevant pre-recorded lecture content). The next part of the document contains the topics covered on campus (eg CCT, Therapeutics and campus-taught Clinical Skills).

There are seven academic weeks in Year 3 to consolidate placement learning over the year and to explore important professionalism themes in medicine.

All these areas can be examined on as can learning from previous years.

Please use this document along with Y3 E-Portfolio Requirements Document which outlines specific learning expectations on placement.

Expectations of Student Competence in Clinical Settings

Background Information from A100/ A101 Programme Specification MBChB

The model that underpins clinical learning is the CARE/CARER cycle-

- Collect case information,
- Analyse and investigate,
- Rationalise treatment options and
- Evaluate the outcomes.

The evaluation phase comes in two parts. The first asks students to reflect on clinical care/practice in the specific patient's case and in a second phase reflect on the use of best evidence with a view to improving patient care. This evolves to CARER with the addition of *reflection* as experience builds.

Students are asked to reflect on where the case fits into their existing learning plan and map learning objectives that have been met, and to identify any areas of further personal development required as a result of their involvement with the case. Through this process students will learn how to diagnose and manage a particular condition, taking into account the

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circumstances of the individual, and evaluate (audit) their care of the patient in the light of current evidence, as well managing and documenting their professional development towards F1 training.

By the end of the Year 3 clinical placements students should be able to:

C	<ul style="list-style-type: none"> Take a thorough history from patients in a consistent manner, ensuring all relevant information is gathered Complete physical examinations using a competent technique and be able to identify abnormalities Safely perform practical procedures under supervision and practice to improve
A	<ul style="list-style-type: none"> Formulate first line differential diagnoses Identify appropriate first line investigations
R	<ul style="list-style-type: none"> Formulate first line management plans e.g. non-pharmacological, pharmacological and surgical
E	<ul style="list-style-type: none"> Evaluate their own practice as a student doctor including history taken, physical examination completed, differential diagnoses, suggested investigations and management plans
R	<ul style="list-style-type: none"> Reflect on own performance and feedback received from health care professionals and develop to improve performance

eMandatory Training Modules (e- Learning for Health)

All students should register on the e-learning for health platform (eLfH) and complete the following modules in the first Academic Week: All students should register on the e-learning for health platform (eLfH) and complete the following modules in the first Academic Week:

- Data Security Awareness - Level 1
- Fire Safety - Level 1
- Health, Safety & Welfare - Level 1
- Moving & Handling - Level 1
- Infection Prevention & Control - Level 1
- Preventing Radicalisation - Basic Prevent Awareness
- Safeguarding Children - Level 1
- Safeguarding Children - Level 2
- Safeguarding Adults - Level 1 (Only if not completed in Y2 e.g. Safeguarding Adults - Level 1 (Only if not completed in Y2 e.g. IMU & OMFS students etc.))
- Adult Sepsis (IMU & OMFS students only)

PART 1: Clinical Placements

Medicine A

In the Hospital Trusts:

At the end of this 4-week block students will be able to:

- Take a competent history and develop skills in CVS, Respiratory and Dermatology
- Discuss likely diagnosis and differential diagnoses
- Select appropriate investigations and justify them
- Develop immediate management plans both non prescribing and prescribing
- Develop (with support from colleagues) professional values and understand legal frameworks of practice
- Experience a wide breadth of medical experience
- Recognise and understand emergency management of shock and the acutely unwell patient in different groups and scenarios
- With regard to specific cases and investigative experiences, please be guided by the examples given in the E-Portfolio Requirements Guide

Pre-block specialist 'placement primer' teaching:

- Introduction to the Cardiology History and Examination and Understanding ECGs
- Respiratory Clinical Concepts -History, Examination, Investigations, and Therapeutics
- Dermatology terminology, history, diagnosis & basic treatment of the most common skin presentations

Academic Week CCT

- The Breathless Patient

Suggested CPAD Cases:

Cardiology

- Ischaemic Heart Disease/Cardiac Chest Pain
- Valvular Disease
- Heart Failure
- Cardiac Shortness of Breath
- Arrhythmias

Respiratory

- Obstructive Sleep Apnoea
- Infection (infective exacerbation or airways disease / pneumonia)
- Obstructive Lung Disease (COPD/Asthma)

- Pleural Effusion
- Lung Cancer

Dermatology

- Suspected Skin Cancer
- Patient with a Rash

Trust Case Based Learning (CBL) Tutorials:

- CBL1: Chest Pain
- CBL2: ECG Interpretation
- CBL3: Breathlessness
- CBL4: Eruptions, Erythroderma and Vasculitis

Safe Prescribing Tutorial

- CVD/COPD/Atopic Eczema

Lectures:

Cardiology

- Syncope
- Hypertension
- Palpitations
- Heart Failure
- Chest Pain
- Cardiovascular post-mortem cases
- Valvular Heart Disease

Respiratory

- Asthma
- Lower Respiratory Infection
- The Pathology of Lung Cancer
- Lung Cancer
- Chronic Obstructive Pulmonary Disease (COPD)
- Sleep Breathing Disorders
- Interstitial Lung Disease
- Acute Respiratory Failure (Acute)

Dermatology

- Benign and Malignant Skin Lesions
- Cutaneous Infection and Infestation

Medicine A Case-Based Learning Outcomes:

CBL1: Chest Pain

- Identify features of a patient with chest pain symptoms and from the history formulate a reasonable differential diagnosis.
- Recognise high risk features of chest pain and institute immediate therapy
- Understand the indications for basic investigations and apply to this to decision making.
- Understand the principles of onward referral and procedures patients may undertake
- Know normal targets for primary and secondary prevention of CHD
- Understand the acute management of MI
- Be aware and understand the importance of trauma and lung disease in chest pain
- Be able to justify items on a discharge prescription
- Consider complications of MI
- Practice thinking in patient centred terms and weighing up ethical considerations for management, including bleeding risks of anticoagulant and other important medications.

CBL2: ECG Interpretation

- To describe and interpret a normal ECG recording
- To interpret an abnormal ECG recording in patient presenting with symptomatic severe bradycardia
- To investigate and initially manage the bradycardia
- To treat the bradycardia and seeking specialist advice regarding the need for pacemaker therapy
- To be aware of the indications for usage of cardiac pacemakers and their different types

CBL3: Breathlessness

- Interview and examine patients with shortness of breath with a view towards a differential diagnosis
- Take a full respiratory history; history should include presence or absence of dyspnoea, chest pain, cough, haemoptysis sputum production, wheeze and stridor and report back findings concisely and coherently, both verbally and in text. This should include a

pertinent social and smoking history, travel history, occupational and personal exposure history and a sleep breathing history.

- The student should be able to complete an examination of the chest and the full respiratory system reporting back examination findings in the context of the history, both verbally and in text. This should include a general examination and integrate with cardiac examination e.g. for signs of cor pulmonale.
- The student should be able to assess the acutely and chronically (slowly progressive) breathless patient and propose a differential diagnosis. Including from the cardiac and respiratory point of view. They should be able to form an initial investigation and management plan.

CBL4: Eruptions, Erythroderma and Vasculitis

- Recognise and initiate management for drug eruptions including severe variants
- Diagnose and manage urticaria
- Give a differential diagnosis for erythroderma and know its possible complications and initial management
- Diagnose and investigate vasculitis presenting in the skin
- Recall conditions which may be associated with underlying systemic disease

Medicine A Safe Prescribing Tutorial:

- Demonstrate an ability to adjust medications based on presenting complaint
- Prescribe and monitor medications used in the secondary prevention of cardiovascular disease
- Safely prescribe appropriate medications to manage COPD exacerbations
- Provide information to the patient and/or their parents/carer on the appropriate use of treatments for atopic eczema
- Demonstrate an ability to write a safe prescription to manage atopic eczema, including choosing an appropriate topical steroid potency, choice of emollients and quantity of supply
- Manage a patient with atopic eczema during and between flares of the condition

Medicine A Lectures:

Cardiology

Syncope

- Aetiology, including cardiovascular and non-cardiovascular causes
- Clues to the cause from history and examination
- Investigations for cardiac syncope

- Treatment options depending on the cause found
- Value of blackout clinics and multidisciplinary input

Hypertension

- Hypertension and cardiovascular risk modification
- Aetiology of hypertension
- Investigations for hypertensive patient
- Treatment options for hypertension
- Poorly controlled and malignant hypertension

Palpitations

- Taking a good clinical history
- What are the potential causes of palpitations
- What investigations to choose
- Interpreting ECG's with common examples
- Treatment of palpitations (which drugs to choose and non-pharmacological options)

Heart Failure

- Be aware of the different classifications of heart failure and the associated pathophysiology
- Be aware of the typical clinical examination findings in a patient with decompensated heart failure
- Have an understanding of the evidenced based medical therapies for heart failure (triple therapy)
- Understand the basic investigations for heart failure (ECG/ECHO etc)

Chest Pain

- Potential causes both cardiac and non-cardiac and what to gain from detailed history taking and clinical examination
- Investigation of stable chest pain, acute coronary syndrome, myocardial infarction and individual treatments
- Investigation and treatment of other causes of chest pain, including pericarditis and aortic dissection

Cardiovascular post-mortem cases

- Understand the sequence of events leading to pulmonary embolism, and how the pathological features correlate with the clinical features
- Understand the sequence of events leading to a myocardial infarction and how the pathological features correlate with the clinical features

- Be able to formulate a cause of death on a death certificate for a cardiovascular death

Valvular Heart Disease

- The pathophysiology of valvular heart disease – revision from Year 2 and forward
- The symptoms and signs of valvular heart disease
- Investigation (non-invasive and invasive) of valvular heart disease, including echocardiography and cardiac CT
- Management of valvular heart disease including MDT discussion and the roles of medical treatments, cardiac surgery and structural intervention

Respiratory

Asthma

- Define asthma, explain how diagnosis is reached and confirmed (lecturer brief review of year 2 please).
- Describe the concept of an exacerbation and acute (emergency) asthma management recognising degrees of severity. Know interventions including use of bronchodilators inhaled/nebulised beta-agonist and anti-muscarinics, IV bronchodilators i.e. salbutamol, magnesium, aminophylline, use of steroids, oxygen, antibiotics, understand monitoring and place of ventilation and critical care.
- Detail long-term management (goal of control of symptoms and strategies to reduce future risk of exacerbations) please based on the current British Guidelines. Signpost to BTS/Sign 2019 and GINA 2019 guidelines.
- Understand good practise points; place of patient education and ensuring adequate inhaler technique
- Concept of step up and step down.
- Place of action plans and self-management
- Describe organisation of care General Medical Services contract and QOF, intermediate care and hospital at home, role of the asthma specialist services.
- Revisit concept of personalised medicine in asthma and the use of biologic agents such as anti-IgE therapy and anti-IL5 therapy.

Lower Respiratory Infection

- Describe the presentations of upper respiratory tract infections and their management including sinusitis, laryngitis and the common cold.
- Describe the presentations of lower respiratory tract infection and their diagnosis and management; acute bronchitis, pneumonia (see below), empyema and lung abscess, influenza, fungal infection and allergy, infection in the immuno-compromised
- Describe in pneumonia the clinical presentations including possible symptoms and signs. Understand the concept of CAP, Nosocomial and atypical infection and the different

organisms involved. Understand investigations, radiological, microbiological (sputum culture and stain, blood cultures, antigen detection, serology) and possible rapid diagnostic techniques. Understand how to assess severity, detect a systemic inflammatory response and possible sepsis. Describe empirical treatment and antibiotics choice based on classification and severity.

- Describe the presentations of TB and Non-Tuberculous Mycobacteria Lung Disease and their management.

The Pathology of Lung Cancer

- Understand that lung cancer is not a single disease but many, and how the genomics and immunoprofile are taking over the definition of its different types.
- Understand how the different lung cancer tumours are treated by selective drugs targeted to genetically driven mechanisms, or by immune modulators.
- Understand the role of the pathologist in ensuring rational and effective use of targeted therapies.
- Understand how these new developments in lung cancer therapy are changing the outlook of lung cancer from a disease which was almost uniformly and rapidly fatal to a chronic condition which can be manipulated and managed over several months or even years.

Lung Cancer

- Describe the presentations of lung cancer.
- Describe the investigation of suspected lung cancer; the use of radiology i.e. CXR, CT, PET, US and endoscopic techniques e.g. bronchoscopy, EBUS, thoracoscopy, mediastinoscopy in the diagnosis and management of lung cancer.
- Explain the importance of obtaining a tissue diagnosis n.b. the role of pathology will be fully covered in a separate lecture.
- Understand the centrality of the MDT and role of clinical and radiation oncology, role of surgery, role of interventional radiology, specialist nursing and pharmacists.
- Explain the concept of holistic care, palliation and palliative care and their contribution to the MDT.
- Describe opportunities in screening for early diagnosis and intervention.

Chronic Obstructive Pulmonary Disease (COPD)

- Define COPD and describe how it is diagnosed.
- Describe natural history and understand the importance of exacerbations.
- Describe prevention with tobacco control and smoking cessation.
- Describe acute management of a COPD exacerbation, including use of bronchodilators, antibiotics, corticosteroids, O₂ (understand and explain oxygen sensitivity and use of controlled oxygen acutely), NIV and invasive ventilation.

- Describe long term management, beta- agonists and antimuscarinics, ICS, theophyllines, PDE4 inhibitors, mucolytics and long-term oxygen, therapy.
- Describe non-pharmacological treatments including rehabilitation, optimising weight and long term NIV.
- Describe organisation of care General Medical Services contract and QOF, intermediate care and hospital at home, role of the respiratory specialist.
- Explain the role of lung transplant
- Understand the place of palliation and specialist palliative care and possible use of advanced directives.

Sleep Breathing Disorders

- Describe the importance of sleep breathing disorder and non-respiratory sleep disorders (Covered year 2).
- Understand and describe the investigation of sleep breathing disorders from continuous oximetry through to polysomnography.
- Detail the management of OSAS including the role of CPAP.
- Describe OHS and its management including CPAP or NIV.
- Understand the importance of co-morbidities.
- Understand legal considerations such as fitness to drive including specifics for HGV drivers.
- Describe narcolepsy how it is diagnosed and managed.

Interstitial Lung Disease

- Describe the spectrum of Interstitial lung disease and classification (covered year 2 lecturer brief review please)
- Describe the diagnosis and management of asbestosis. Including explanation of available enhanced state support and possible civil action.
- Describe how a diagnosis of hypersensitivity pneumonitis is reached including a brief review of its natural history. Describe principles of management of these conditions
- Describe stages of pulmonary sarcoid its natural history and management
- Describe the natural history of UIP/NSIP include periods of acute worsening and how they are managed.
- Appreciate how the characterising the patient and reaching a specific diagnosis dictates the treatment strategy.
- Explain role of specialist management of ILD, service configuration, the MDT and the use of pirfenidone and nintedanib.
- Describe role of transplant
- Describe role of palliation and what is useful in ILD e.g. O2, opiates.
- State the mechanism of action & adverse effects of non-steroidal anti-inflammatory drugs (NSAIDs)

Dermatology

Benign and Malignant Skin Lesions

- Diagnose and know how to manage common benign skin lesions
- Diagnose and know how to manage premalignant lesions
- Diagnose and know how to manage the main types of skin cancer
- Discuss the prognosis of the main types of skin cancer
- List the risk factors for skin cancer
- Counsel a patient on sun protection

Cutaneous Infection and Infestation

- Diagnose, investigate and know how to treat infections due to staphylococci or streptococci
- Diagnose necrotising fasciitis and know its immediate management
- Diagnose, investigate and know how to treat cutaneous infection due to viruses
- Diagnose, investigate and know how to treat dermatophyte infections
- Diagnose scabies and head-lice, and explain how to manage them

Medicine B

In the Hospital Trusts:

At the end of this 4-week block students will be able to:

- Take a competent history and develop skills in Gastroenterology, Diabetes/Endocrinology and Infection/Infectious Disease
- Discuss likely diagnosis and differential diagnoses
- Select appropriate investigations and justify them
- Develop immediate management plans both non-prescribing and prescribing
- Develop (with support from colleagues) professional values and understand legal frameworks of practice
- Experience a wide breadth of medical experience
- Recognise and understand emergency management of shock and the acutely unwell patient in different groups and scenarios
- With regard to specific cases and investigative experiences, please be guided by the examples given in the E-Portfolio Requirements Guide

Pre-block specialist 'placement primer' teaching:

- Electrolytes and fluids
- Metabolic and Diabetic Emergencies
- GI History and Examination
- PUO and assessment of the febrile patient

Academic Week CCT

- The Patient with Upper GI Symptoms in Primary Care

Suggested CPAD Cases:

Gastrointestinal:

- Liver disease
- Inflammatory bowel disease
- GI malignancy

Endocrine:

- Diabetic foot
- Acute diabetic complication
- Thyroid disease
- Hyponatraemia

Infection:

- A febrile illness

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- HIV
- Bacteraemia
- Nosocomial infection.

Trust Case Based Learning (CBL) Tutorials

- CBL1: Dysphagia, dyspepsia and Diarrhoea
- CBL2: Jaundice and Ascites
- CBL3: Diabetes
- CBL4: Infectious Disease

Safe Prescribing Tutorial

- Antibiotics/Thyroid/T2DM/Insulin

Lectures:

Gastrointestinal:

- The Management of Nutrition in Health and Disease
- Irritable Bowel Syndrome & Inflammatory Bowel Disease
- Upper GI Bleeding
- Lower GI Bleeding
- Gastrointestinal Pathology

Endocrine:

- Obesity
- Pituitary Gland
- Endocrine Pathology
- Thyroid and Adrenal Disease

Infection:

- Sepsis (inc management)
- Antimicrobial Prescribing
- Fever including The Returning Traveller
- Health-care associated infections and infection control

Simulation day (within Medicine B placement)

Clinical

- Develop skills in the recognition of an acutely ill patient using ABCDE format
- Develop focused history taking skills and examination skills with an acutely ill patient using ABCDE format

- Discuss likely diagnosis and differentials
- Select appropriate investigations and justify them
- Develop immediate management plans both non-prescribing and prescribing

Non-technical skills

- Understand how your own actions and communication contribute to patient safety.
- Demonstrate the ability to identify the limitations of your skills and knowledge, and subsequently demonstrate how to call for help.
- Be able to use guidelines, algorithms and protocols appropriately.
- Be able to use handover models appropriately.
- Understand the characteristics of an effective team.
- Demonstrate the qualities and role of a leader and a follower

Medicine B - Case-Based Learning Outcomes:

CBL1: Dysphagia, dyspepsia and Diarrhoea

- Be able to approach the diagnosis and management of a patient with chronic abdominal pain
- Awareness of IBS as a common diagnosis
- Consider other more serious pathology and investigate or refer accordingly

CBL2: Jaundice and Ascites

- Outline potential causes for jaundice and the initial investigations required
- Awareness of the differential diagnoses to consider for a patient with ascites
- Describe a suitable initial management plan for a patient with ascites

CBL3: Diabetes

- Types of diabetes and the pathophysiology underlying them.
- Common presentations of diabetes and how diabetes is diagnosed.
- Develop understanding of diabetic emergencies, including hypoglycaemic episodes and the pathophysiology of diabetic ketoacidosis (DKA).
- Describe complications of type 2 diabetes with reference to longer-term risks e.g. cardiovascular disease, eyes, nephropathy and neuropathy.
- An overview of the medications used in type 2 diabetes, and the pathways followed to use them. i.e. NICE guidance for type 2 diabetes.

- An understanding of the different types of insulin and when it is appropriate to use them.
- Lifestyle management in diabetes.
- The role of education in diabetes management, including carbohydrate counting and the role of the diabetic nurse specialist (DSN).
- An understanding of gestational diabetes, including risk to baby, treatment and criteria for diagnosis, and health implications for mother.

CBL4: Infection & Infectious Disease

- To understand the clinical urgency of investigation and treatment of bacteraemia
- To understand clinical manifestations and treatment of infective endocarditis
- To understand the epidemiology and routes of transmission of hospital acquired infections
- To understand the interventions used to manage hospital acquired infections and know the key elements of antibiotic stewardship
- To know how to take an appropriate and comprehensive travel history
- To understand the features of some key illness that may present after travel and outline an approach to suitable investigations in a returning traveller

Medicine B Safe Prescribing Tutorial

- Understand the importance of considering patient factors such as allergy, interactions and co-morbidities when prescribing antibiotics
- Describe how to start thyroid replacement therapy
- Demonstrate an understanding of the drug management of T2DM and the risks of treatment
- Demonstrate an awareness of how to complete a yellow card report
- Classify the different insulin brands by duration of action
- List four appropriate insulin regimens and demonstrate an ability to adjust insulin doses safely.

Medicine B Lectures:

Gastrointestinal

The Management of Nutrition in Health and Disease

- Role of nutrition in health and disease (micro and macronutrients)
- Assessment of nutritional status in patients
- Anthropometric and biochemical markers of nutrition

- Consequences of malnutrition in hospitalised patients
- Nutritional support in the hospitalised patients
- Indication of parenteral support and its role in hospital
- Metabolic complications associated with parenteral nutrition

Irritable Bowel Syndrome & Inflammatory Bowel Disease

- Understand the presentation and investigation of IBS; the aetiology; the subtypes and the treatment of various types of IBS
- Understand the presentation and investigation of IBD; the aetiology; the subtypes and the treatment of various types of IBD
- understand differences between IBS and IBD

Upper GI Bleeding

- Assessment of the upper GI bleed
- Rockall score; Glasgow-Blatchford score
- Management
- Varices and portal hypertension
- NICE guidance

Lower GI Bleeding

- Immediate management of lower GI bleeding
- Common causes of acute lower GI bleeding
- Investigations for acute lower GI bleeding
- Discussion of diverticulitis, angiodysplasia, colitis and carcinoma

Gastrointestinal Pathology

- Understand the role of the pathologist in diagnosing gastrointestinal disease.
- Understand the clinical and pathological features of different types of gastritis
- Understand the complications of Helicobacter gastritis
- Understand the clinical and pathological features of Barrett's oesophagus
- Understand the complications of Barrett's oesophagus
- Understand the clinical, biochemical and pathological features of coeliac disease
- Understand the metaplasia-dysplasia-carcinoma sequence.

Endocrine:

Obesity

To understand:

- What obesity is and how it is defined
- Understand the different ways obesity can be assessed/measured
- Appreciation of epidemiology of obesity

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- Causes of obesity
- Consequences of obesity: understand the medical, mechanical and psychosocial complications of obesity
- Understand medical and surgical treatment approaches
- Use of appropriate language when conducting clinical consultations

Pituitary Gland

- Reminder of anatomy and physiology of the pituitary gland
- Pituitary tumours (non-functional): presentation and management
- Pituitary functional tumours (prolactinoma, Cushing's disease, acromegaly)
- Hypopituitarism and its treatment
- Pituitary apoplexy

Endocrine Pathology

- Understand the management pathway of a thyroid lump
- Understand how cytology is used in the diagnosis and management of thyroid lesions, including an understanding of the Thy scoring system
- Know the main types of thyroid neoplasms
- Understand the potential pathological sequelae of diabetes and how the pathological features correlate with the clinical features

Thyroid and Adrenal Disease

- Reminder of thyroid anatomy and physiology
- Clinical presentation, investigation and causes of thyrotoxicosis
- Management options (medical, surgical or radioiodine)
- Clinical presentation and causes of hypothyroidism
- Treatment of hypothyroidism
- Acute presentations of thyroid disease
- Reminder of adrenal anatomy and physiology
- Clinical presentation and investigation of adrenal disease
- Management options for Addison's Disease & Cushing's Syndrome

Infection:

Sepsis (inc management)

- To review definitions, recognition and clinical outcomes of sepsis
- To describe key interventions in early management of sepsis
- To understand which investigations are appropriate to identify the source of sepsis

Antimicrobial Prescribing

- To understand the principles of the “Start smart then focus” approach to antibiotic selection
- To appreciate how susceptibility testing influences selection of agents for individual patients and formulation of treatment guidelines
- To know the key elements of antibiotic stewardship

Fever including The Returning Traveller

- To describe the causes of fever of unknown origin
- To list key investigations in the diagnosis of fever of unknown origin
- To know how to take an appropriate and comprehensive travel history
- To understand the features of some key illnesses that may present after travel
- To outline an approach to suitable investigations and initiating appropriate treatment

Bacteraemia & Endocarditis

- To appreciate the clinical urgency of investigation and treatment of bacteraemia
- To understand the pathogenesis, clinical manifestations and treatment of infective endocarditis

Health-care associated infections and infection control

- To understand the epidemiology and routes of transmission of hospital-acquired infections
- To describe the chain of infection and interventions that can interrupt it (isolation, hand hygiene, asepsis)

Surgery A

In the Hospital Trusts:

At the end of this 4-week block students will be able to:

- Take a competent surgical history and develop skills in colorectal, upper GI, liver, breast and urology
- Abdominal/breast examination
- Understand the importance of preoperative assessment and the role of the anaesthetist
- Understand the consent process and apply principles of capacity
- Identify and assess the acute surgical abdomen
- Develop the ability to create likely and relevant differential diagnoses
- Suggest and justify appropriate investigations
- Suggest immediate and longer term management plans: non-surgical, therapeutic and surgical
- Identify post op complications including cases of sepsis and bleeding (teaching in Year 3 lectures) and identify those at risk of complications
- With regard to specific cases and investigative experiences, please be guided by the examples given in the E-Portfolio Requirements Guide

Pre-block specialist 'placement primer' teaching:

- Wound care
- Pain Management
- Stoma care
- Catheter Care
- Drain Management

Academic Week CCT

- The Patient with Lower GI symptoms in Primary care and Men's Health

Suggested CPAD Cases:

- A patient with a catheter
- A patient with a stoma
- Complex surgical management either due to;
- Serious illness (Crohns or Severe pancreatitis)
- Iatrogenic injury (Bile duct transections, other complications)
- Laparoscopic vs. Open surgery

Trust Case Based Learning (CBL) Tutorials:

- CBL1: Colorectal Disease
- CBL2: Upper GI and Hepatobiliary Disorders
- CBL3: Red Flag/2WW Urology Referrals
- CBL4: Breast Conditions

Safe Prescribing Tutorial

- Peri-operative period – analgesia/anti-emetics/opioids/antimicrobial therapy

Lectures:**Upper GI and Colorectal Surgery**

- Colorectal Carcinoma

Urology

- Sexual Dysfunction in the Male Patient
- Urological Trauma

Breast Surgery

- Breast Disease

Surgery A Case-Based Learning Outcomes:**CBL1: Colorectal Disease**

- Assessment & Management of Acute Diverticulitis
- List the complications of Diverticulitis
- Recognition and Management of Sepsis
- Assessment & Management of Large Bowel Obstruction
- Assessment & Management of Small Bowel Obstruction

CBL2: Upper GI and Hepatobiliary Disorders

- Using history, examination and use of the surgical sieve be able to construct a list of differential diagnoses.
- Be able to refine the likely diagnosis using appropriate investigations for acute abdominal pain.
- Be able to suggest urgent potential lifesaving treatment for acute abdominal pain

- Be able to narrow the diagnosis down to cholecystitis where appropriate.
- Be able to suggest management options for cholecystitis.
- Be able to narrow the diagnosis down to retained gall stone with cholangitis where appropriate.
- Be able to suggest management options for retained gall stones with cholangitis
- Be able to narrow the diagnosis down to a likely upper GI perforation.
- Be able to suggest management options in cases of upper GI perforation

CBL3: Red Flag/2WW Urology Referrals

- To list the criteria for 2ww referral for haematuria and the duties of the referrer
- To be able to name and explain to a patient the investigations they will undergo at a standard haematuria clinic
- To be able to interpret elements of a haematuria history in order to form an appropriately ordered list of differential diagnoses
- To review the way that bladder tumours are graded and staged
- To understand the role of the SMDT in decisions regarding treatment
- To be able to evaluate the risks and benefits of the management options for G3pT1 transitional carcinoma of the bladder. To know the criteria for 2ww referral for a testicular mass
- To be able to list the risk factors for testicular tumours
- To understand the investigation and staging of testicular tumours
- To know the anatomy of the scrotum, testis and inguinal canal and understand how this affects the surgical approach during radical orchidectomy
- To be able to debate the pros and cons of the timing of sperm banking when considering treatment of men with testicular cancer
- To have an understanding of the treatment options and cure rates for different types of testicular tumours
- To understand the types of imaging available to assess the kidney including the relative advantages and disadvantages of each
- To be able to list common causes of a renal mass and explain their natural history
- To understand the treatment options for renal tumours
- To be able to synthesise information from this history in order to present that information in a logical way to a family
- To be able to understand ways to approach a difficult consultation in order to make it as easy as possible for all parties concerned

CBL4: Breast Conditions

- To describe the causes and clinical features of common breast conditions including mastalgia and be able to formulate differential diagnoses
- To be aware of the management of common benign breast conditions and mastalgia
- To evaluate the different risk factors for breast cancer
- To be aware of the NHS breast screening programme
- To describe the appropriate referral pathways and different components involved in the diagnosis of breast cancer
- To be aware of the different treatment options for breast cancer (surgical and non-surgical)
- To be aware of indications for screening patients with a family history of breast cancer

Surgery A Safe Prescribing Tutorial:

- Describe the principles of the management of medicines in the peri-operative period
- Prescribe appropriate analgesia and anti-emetics for use within the peri-operative period
- Prescribe opioid analgesia taking into account the potency of different opioid preparations
- Prescribe appropriate antimicrobial therapy taking patient and drug factors into account when making your decision

Surgery A Lectures:

Upper GI and Colorectal Surgery

Colorectal Carcinoma

- Understand how colorectal carcinoma presents, how it is investigated and how it is treated.
- Understand the concepts of clonal selection, oncogenes and tumour suppressor genes and how these are relevant in colorectal carcinoma.
- Understand the molecular basis of colorectal carcinoma.
- Understand the importance of APC, RAS and p53 as driver variants.
- Understand the basis and use of RAS analysis and the MMR pathway as companion diagnostics.

Urology

Sexual Dysfunction in the Male Patient

- Describe the anatomy and physiology of the normal penile erection



- List and briefly describe the major causes of erectile dysfunction (ED)
- List the important components of the history when interviewing a patient with ED
- Outline the important components of the physical examination of a patient with ED
- List the treatment options for erectile dysfunction and describe the mechanisms by which they work
- Describe the contra-indications and side-effects of phosphodiesterase inhibition for ED
- Understand the diagnosis and management options of premature ejaculation
- Understand the diagnosis and initial management of Peyronie's Disease

Urological Trauma

- Understand the common mechanisms of injury, investigation and initial management of trauma to:
 - Kidneys – Bladder – Ureter – Urethra – Scrotum - Penis

Breast Surgery

Breast Disease

- Normal breast development
- Breast assessment & examination
- Benign breast conditions
- Red flag symptoms

Surgery B

In the Hospital Trusts:

At the end of this 4-week block students will be able to:

- Take a competent surgical history and develop skills in trauma and orthopaedics and vascular assessment
- Perform joint/peripheral vascular examination
- Understand the importance of preoperative assessment and the role of the anaesthetist
- Understand the consent process and apply principles of capacity
- Develop the ability to create likely and relevant differential diagnoses
- Suggest and justify appropriate investigations
- Suggest immediate and longer-term management plans: non-surgical, therapeutic and surgical
- Identify post op complications including cases of sepsis and bleeding (teaching in Year 3 lectures) and identify those at risk of complications
- With regard to specific cases and investigative experiences, please be guided by the examples given in the E-Portfolio Requirements Guide

Pre-block specialist 'placement primer' teaching:

- Arthritis
- Fracture treatment
- Symptomatic carotid stenosis
- Aortic aneurysms

Academic Week CCT

- The Patient with Back Pain in Primary Care (Including lower limb pain)

Suggested CPAD Cases:

Trauma and Orthopaedics

- Arthritis (hip, knee etc.)
- Hip fracture
- Extremity fracture (wrist, ankle etc.)
- Knee injury (fracture, ligamentous or meniscal)
- Neuropathy (carpal tunnel syndrome etc.)
- Tendon pathology (rotator cuff, Achilles etc.)

Vascular Surgery

- Acute and chronic limb Ischaemia
- Aneurysm

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Trust Case Based Learning (CBL) Tutorials:

- CBL1: Hip fracture, soft tissue infection and compartment syndrome
- CBL2: Spinal Injuries
- CBL3: Elbow/Knee Injuries
- CBL4: Vascular Emergencies

Safe Prescribing Tutorial

- DVT prophylaxis/Perioperative anticoagulation/IV fluids

Lectures:

Trauma and Orthopaedics

- Common fractures, treatment and prevention
- The Diagnosis and Management of Osteoarthritis

Vascular

- Vascular Surgery: Lower Limb Ulceration

Surgery B Case-Based Learning Outcomes:

CBL1: Hip fracture, soft tissue infection and compartment syndrome

- Case 1 – hip fracture
 - To understand the vascular anatomy of the hip.
 - To understand why the vascular anatomy of the hip is important to treatment.
 - To understand the factors contributing to hip fracture.
 - To understand the clinical assessment of a patient with suspected hip fracture.
 - To understand the investigation and treatment of a hip fracture.
- Case 2 - severe soft tissue infection
 - To understand the differential diagnosis of severe soft tissue infection
 - To understand the causes of severe soft tissue infection.
 - To understand the investigation of severe soft tissue infection.
 - To understand the treatment of severe soft tissue infection.
- Case 3 – open fracture
 - To understand the assessment of open fracture
 - To understand the treatment of open fracture

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- To understand the risks of open fracture

CBL2: Spinal Injuries

- To have an understanding of traumatic and atraumatic spinal emergencies
- To diagnose these pathologies using patient history, examination and order appropriate imaging
- To develop skills in recognising and describing the radiographic appearances of various spinal emergencies
- To understand basic anatomy and pathology relating to spinal emergencies

CBL3: Elbow/Knee Injuries

- To understand basic anatomy and pathology and classification relating to paediatric supracondylar humerus fractures.
- To develop a focussed approach to detailed neurovascular examination in relation to these injuries.
- To develop skills in recognising and describing the radiographic appearances of paediatric supracondylar humerus fractures.
- To understand the emergency management neurovascular injuries associated with paediatric supracondylar humerus fractures.
- To have an understanding of the anatomy of the knee
- To understand the Mechanism, History and Examination of knee dislocation
- To understand the initial management of acute knee dislocation
- To be aware of the BOAST guidance in relation to neurovascular injuries

CBL4: Vascular Emergencies

- To describe the presentation of an acute aortic aneurysm
- To describe the presentation of an acutely ischaemic limb
- To describe the presentation of an acute aortic syndrome (aortic dissection, intramural haematoma and acute aortic ulcer)
- To understand the principals of vascular imaging
- To describe the treatment options for an acute aortic aneurysm and understand the main complications
- To describe the treatment options for an acutely ischaemic limb and understand the main complications
- To describe the treatment options for an acute aortic syndrome and understand the main complications

Surgery B Safe Prescribing Tutorial:

- Prescribe appropriate medication for use as extended venous thromboembolism prophylaxis
- Prescribe appropriate initial and long-term treatment for the management of venous thromboembolism
- Recognise potential interactions that can occur with anticoagulant therapy
- Demonstrate an understanding of the management of warfarin during the peri-operative period
- Prescribe appropriate intravenous fluids for resuscitation and routine maintenance

Surgery B Lectures:

Trauma and Orthopaedics

Common fractures, treatment and prevention

- To know the principles of assessment of a patient with a fracture
- To know the principles of an accurate and problem-focused musculoskeletal history.
- To know the common signs of a fracture.
- To understand the common investigations requested.
- To understand the principles behind treatment.
- To understand the principles behind prevention.

The Diagnosis and Management of Osteoarthritis

- To know the principles of assessment of a patient with osteoarthritis
 - To know the principles of an accurate and problem-focused musculoskeletal history.
 - To know the common signs of osteoarthritis.
 - To understand the potential differential diagnosis based on these findings.
 - To understand the common investigations requested.
- Treatment:
- To understand the non-operative management options for osteoarthritis.
 - To be able to discuss the potential benefits and limitations including Pharmacological.
 - Physical (physiotherapy, rest, exercise).
 - Supports and aids (e.g. sticks, home modification).
 - To understand the indications, potential benefits, risks and results for surgical treatment.

Vascular Surgery

Lower Limb Ulceration

- Recognise the features of arterial, diabetic and venous ulceration
- Describe the initial investigation and management options for lower limb ulceration due to arterial, diabetic and venous aetiologies

Paediatrics

In the Hospital Trust:

By the end of this 4 week block, students will be able to:

- Competently take a full history for a range of common acute and long-term illnesses occurring in infancy and childhood and also to screen appropriately for family, social and developmental problems
- Gain experience of a complete physical examination of an infant or child including a screening developmental assessment
- Gain experience of determining a differential diagnosis and investigation plan appropriate to the presenting complaint of the child
- Gain experience of core acute and long-term paediatric neurological, chest, abdominal and cardiovascular conditions
- Complete core practical procedures: measurement of height, weight & head circumference; use and plotting on centile growth charts; measurement of temperature; urinalysis
- With regard to specific cases and investigative experiences, please be guided by the examples given in the E-Portfolio Requirements Guide

Pre-block specialist 'placement primer' teaching:

- The normal child milestones and regression.
- Specialist paediatric history and examination
- (Note the intention is for Y3 to focus on the normal child and how they may become unwell; in Y4 aspects such as chronic and complex illness will be covered)

Academic Week CCT

- The Unwell Child with a Fever

Suggested CPAD Cases:

- UTI
- Febrile convulsion
- Headache
- Breathlessness
- Abdominal pain
- Allergic reactions
- The well-baby
- Reference to nutrition, growth and development within your assessment in at least one CPAD.

Trust Case Based Learning (CBL) Tutorials:

- CBL1: Abdominal pain in children
- CBL2: Breathlessness in Children
- CBL3: Developmental Delay
- CBL4: Sepsis & Childhood Infection

Safe Prescribing Tutorial

- Paediatric Prescribing/ Drug-Dose Calculation/ Terminology

Lectures:

- New and emerging respiratory virus threats to children
- Neonatal and Perinatal Screening
- When the unthinkable happens: Child Safeguarding
- Paediatric surgery: What's it all about?
- Establishing and maintaining mental healthiness in children and young adults

Paediatric Case-Based Learning Outcomes:

CBL1: Abdominal pain in children

- Know how to recognise features of abdominal pain in children
- Know the common causes of abdominal pain in children
- Understand the pathophysiology of appendicitis
- Understand the management strategies for:
 - Acute appendicitis
 - Constipation

CBL2: Breathlessness in Children

- Know how to recognise breathlessness in a child
- Know the common causes of breathlessness in children
- Understand the pathophysiology of bronchiolitis
- Know common respiratory viruses and presentations in children (and adults)
- Understand the supportive management strategy
- Know how RSV bronchiolitis might be prevented

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- Know the acute management of wheeze

CBL3: Developmental Delay

- Describe what milestones are and explain why they are important
- Use milestones to identify the problems with development in each of these cases
- Use a systematic approach to construct a differential diagnosis for a developmental disorder
- Construct a response to parental concerns about what has caused the delay
- Describe some of the methods for treatment of the specific problems in the scenarios

CBL4: Sepsis & Childhood Infection

- Know the distinct features of sepsis in children:
 - Tachypnoea - Convulsion (often febrile) - Mottled appearance (pale or bluish) - Non-fading rash - Lethargic - Decreased conscious level - Cold peripheries
- Know the common causes of Sepsis
- Appreciate how shock in children may present differently to adults:
 - Poor peripheral perfusion (increased capillary refill time)
 - Persistent tachycardia (sometimes without fever)
 - Blood pressure not a useful acute measure in children
- Understand the immediate treatment of suspected sepsis

Paediatric Safe Prescribing Tutorial:

- Recognise the difference between adult and paediatric drug histories
- Utilise appropriate resources such as the BNFC and formulary monographs when making prescribing decisions
- Accurately define the terminology; licensed, unlicensed, off-label, with respect to medicines
- Demonstrate an ability to accurately perform paediatric drug dose calculations

Paediatric Lectures:

New and emerging respiratory virus threats to children

- To appreciate the global impact of respiratory viruses on child health
- To understand what places children and communities at risk

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- To know strategies to minimise or prevent threats

Neonatal and Perinatal Screening

- Define the selection criteria for screening programmes in the England and explain the rationale for these criteria.
- State the abnormalities and conditions for which screening exists during the antenatal and perinatal period in the England.
- Explain the testing process for each screening test currently in use.
- Outline some of the advantages and disadvantages of current screening processes, showing an understanding of basic analytical and clinical test statistics.

When the unthinkable happens: Child Safeguarding

- To understand the risks that children face
- To appreciate presentations and vulnerabilities
- To understand the role of society and individuals in protecting children from abuse

Paediatric surgery: What's it all about?

- To appreciate the range of conditions that require surgery in infancy and childhood
- To recognise common childhood conditions that require referral to a surgeon
- To understand the challenges of operating on a neonate

Establishing and maintaining mental healthiness in children and young adults

- To identify key factors that contribute to mental healthiness in children
- To appreciate how changing relationships in society challenge young people
- To recognise early signs of distress
- To know some interventions to support children and young adults

Obstetrics & Gynaecology

In the Hospital Trust:

At the end of this 4-week block students will be able to:

- Take a competent obstetric history
- Be competent in normal obstetric palpation
- Develop skills in assessment of the pregnant woman and the foetus
- Discuss the diagnosis of the following, with differentials, rational investigations and first-line therapy:
 - Normal reproductive health medicine
 - Normal antenatal care
 - Antenatal screening, foetal diagnosis and management
 - Intrauterine growth restriction
- Develop skills in taking a menstrual and gynaecological history
- Develop skills in gynaecological examination including bimanual and speculum examination
- With regard to specific cases and investigative experiences, please be guided by the examples given in the E-Portfolio Requirements Guide

Pre-block specialist 'placement primer' teaching:

- Specialist O+G history taking
- Assessment (pelvic exam, speculum exam, cervical smear)
- (Note: the intention is for Y3 to focus on general gynaecology and obstetrics)

Academic Week CCT

- The Woman with Vaginal Bleeding and Pelvic Pain

Suggested CPAD Cases:

- Pelvic pain
- Menstrual disorder
- Delay in labour
- Bleeding in early pregnancy
- Abdominal pain in pregnancy

Trust Case Based Learning (CBL) Tutorials:

- CBL1: Labour & Delivery
- CBL2: Normal & Complex Antenatal Care
- CBL3: Menstrual Disorders

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- CBL4: Pelvic Pain

Safe Prescribing Tutorial

- Oral contraception/Managing conditions in pregnancy

Lectures:

- Medical Disorders in Pregnancy
- Pre-term Birth
- Endometrium: the age defying organ
- Sexual health risk assessment: introduction to Sexually Transmitted Infections (STIs) and contraception
- Tumours of the female reproductive tract

O&G Case-Based Learning Outcomes:

CBL1: Labour & Delivery

- Describe the duration and issues common to pregnancy
- Describe the process of labour including its stage
- Describe how the baby progresses through the birth canal
- Consider how fetal well-being is assessed in labour
- Understand the issues around preterm birth

CBL2: Normal & Complex Antenatal Care

- Understand the routine screening tests that are undertaken during pregnancy
- Describe the timing and purpose of antenatal scans
- Recognise what nutritional supplements are required in pregnancy
- Describe the routine appointments undertaken in the antenatal period
- Consider how fetal well-being is assessed and the limitations of these assessments
- Understand common maternal medical problems and their influence on antenatal care

CBL3: Menstrual Disorders

- Revision of normal menstrual cycle
- Revision of endocrine control of menstruation
- Recognise and manage heavy menstrual bleeding
- Recognise and manage dysfunctional uterine bleeding

CBL4: Pelvic Pain

- Understand how to investigate pelvic pain
- Describe common gynae and no-gynae causes of pelvic pain
- Know how to manage endometriosis
- Take a sexual history
- Describe investigations and management of Chlamydia

O&G Safe Prescribing Tutorial:

- Demonstrate an understanding of how to choose an appropriate oral contraceptive taking patient factors and contraindications into consideration.
- Provide patients with appropriate advice on the safe and effective use of oral contraception
- Manage conditions associated with pregnancy, including: nausea and vomiting, venous thromboembolism, UTI and candidiasis
- Describe the use of analgesic medications during pregnancy and breastfeeding
- Discuss the drug treatments available to manage raised blood glucose in pregnancy
- Discuss the medications available to manage hypertension in pregnancy
-

O&G Lectures:

Medical Disorders in Pregnancy

- Understand common medical disorders unique to pregnancy (pre-eclampsia, gestational diabetes, obstetric cholestasis)
- Understand how pregnancy can be affected by common medical disorders
- Understand how common medical disorders are affected by being pregnant

Pre-term Birth

- Understand the issues related to preterm birth
- Understand current approaches to the management of spontaneous preterm birth
- Understand strategies to prevent spontaneous preterm birth

Endometrium: the age defying organ

- Understand the histology, function and regulation of human endometrium
- Understand how that knowledge is relevant to the pathogenesis of the common gynaecological disorder, endometriosis
- Understand the diagnosis, medical and surgical management of endometriosis

Sexual health risk assessment: introduction to Sexually Transmitted Infections (STIs) and contraception

- Describe how to take a sexual history
- Assess the need for STI screening
- Assess use of contraception and risk of pregnancy
- Recognise the important groups of people who may be at higher risk of STIs

Tumours of the female reproductive tract

- **Ovarian tumours:**
 - Presentation
 - Classification
 - Risk Factors for epithelial tumours
 - Types of epithelial tumours
 - FIGO Staging for epithelial tumours and prognosis
- **Cervical Tumours:**
 - Presentation and HPV screening
 - Classification
 - Risk factors
 - FIGO Staging
- **Endometrial tumours:**
 - Risk Factors
 - Presentation
 - Classification
 - FIGO Staging

General Practice

The GP Curriculum Learning Outcomes are over-arching and are to be achieved fully during your clinical years. They will be attained both through your experiences on your Community GP Placement (16 days) and also during four additional CCT sessions during this block.

Learning outcomes

- Apply knowledge of the pathophysiology of common conditions including hypertension, fatty liver, hyperlipidaemia, and pre-diabetes. Identify lifestyle factors that impact on these conditions.
- Be able to risk stratify patients for common long-term conditions and identify treatment and management plans.
- Describe the concept of primary prevention and the management of secondary prevention in long term conditions.
- Compare epidemiology of problems presenting in primary care with that of secondary care.
- Describe common conditions encountered in primary care and their treatment.
- Outline the processes of referral into secondary care and other care pathways and understand the role of primary care in the NHS.
- Adopt a patient-centred consultation model that explores patient's ideas, concerns and expectations.
- Be able to communicate effectively with patients and provide information in a way they can understand.
- Apply the principles of consultation models to understand patients as a bio-psycho-social 'whole'.
- Describe the three aspects of continuity: personal continuity; episodic continuity and continuity of care
- Appraise the use of disease registers and data recording templates effectively for opportunistic and planned monitoring of long-term conditions, in order to ensure continuity of care between different healthcare providers.
- Apply the principles of managing co-morbidity, coordinating care of acute illness, long term illness, health promotion and disease prevention in the general practice setting.

Pre-block specialist 'placement primer' teaching:

- The role of the GP within the NHS
- The structure of the GP placement
- Remote consulting

- Helpful hints and tips (including advice regarding Primary Care mental health consultations)

Academic Week CCT

- Health Promotion and Disease Prevention incorporating Diabetes 1

GP CCT Sessions

- Week 1 - What is General Practice?
- Week 2 – Dermatology in Primary Care
- Week 3 – Cardiovascular Disease Risk Management
- Week 4 – Physical Disability in Primary Care

GP CCT Sessions

Week 1 - What is General Practice?

- Understand the various roles of a General Practitioner, and other healthcare professionals, both within a practice and the wider NHS.
- Describe the basic elements of a working day and week in General Practice.
- Develop their understanding of the general approach to care of a patient in primary care, including the importance of awareness of the patients' journey and perspectives.
- Observe, analyse and reflect on a consultation in primary care with insight into the patient-doctor interaction, including use of consultation models and awareness of safety netting.
- Discuss perceptions of General Practice among the public, medical students and healthcare professionals.

Week 2 – Dermatology in Primary Care

- List and apply dermatological terminology to describe skin lesions and rashes.
- Recognize and describe common skin cancers i.e. Melanoma, Basal Cell Carcinoma and Squamous Cell Carcinoma.
- Describe the important factors in the history when assessing a skin lesion or rash.
- Describe appropriate basic initial management of common skin lesions and rashes including appropriate management of common skin cancers e.g. referral pathways.

Week 3 – Cardiovascular Disease Risk Management

- Identify the modifiable and non-modifiable risk factors for cardiovascular disease.
- Apply the current guidelines for assessing cardiovascular risk including using clinical risk calculators and the pharmacological management of primary prevention of cardiovascular disease.

- Specify detailed lifestyle modifications which can improve cardiovascular risk.
- Describe the initial assessment & diagnostic criteria for hypertension in primary care, recognising when there might be an underlying secondary cause.
- Describe the treatment algorithm for hypertension and recognise when co-morbidity may affect prescribing choice.

Week 4 – Physical Disability in Primary Care

- Identify common causes of a physical disability and consider the pathophysiology, clinical features, management and progression of these conditions.
- Recognise potential challenges when taking a history and examination on a person with a long-term disability and outline strategies to ensure effective communication with patients with a mental or physical disability and their carers.
- Consider how a long-term physical or mental disability may impact a person's life, considering issues around health, emotional well-being, family life, employment, housing and education and other social aspects.
- Recognise the relationship between a long term mental or physical disability and physical and mental health.
- Recognise the potential impact of their own attitudes, values, beliefs, perceptions and personal biases on people with a disability, and demonstrate an awareness of diagnostic overshadowing.
- Identify the members of the multidisciplinary team and their individual roles and responsibilities when caring for a patient with a disability and the importance of collaborative team-working.

PART 2: Campus-based Content

Introductory/General Lectures

- Welcome & Overview of Y3
- Introduction to Y3 E-Portfolio
- Introduction to Y3 Clinical Skills
- Introduction to Y3 PSM & PEL
- Introduction to Y3 CCP
- Introduction to Diversity Assignment
- Introduction to RS3 Project
- Wellbeing in Y3
- Assessment in Y3
- Intercalation Information
- Y3 Careers Information
- Introduction to the Good Doctor Assessment
- Assessment for Learning (AfL) AKT Feedback
- Looking ahead to Y4

Academic Week CCT (Community Clinical Tutorials)

You will have one session of CCT in each of the Academic Weeks and it will relate directly to Primary Care topics associated with your upcoming placement block.

During each CCT session the student will:

CCT 3.1	Work effectively within a group to enhance their own and others learning.
CCT 3.2.	Be given opportunity to discuss professional or ethical issues that have arisen in clinical placement.
CCT 3.3	Discuss in an enquiry-based format, cases brought by the students from their previous placement.

CCT 3.4	Understand the patient journey and the interface between primary and secondary care.
CCT 3.5	Identify the members of the multidisciplinary team and their individual roles and responsibilities when caring for patients of all abilities and diversities, and the importance of collaborative team working.
CCT 3.6	Recognise the potential challenges of patients with disability in history taking, examination investigation and ongoing care.
CCT 3.7	Identify his or her own learning needs to plan their own learning.

CCT Case Presentations:

During each CCT session the student will:

1	Develop presenting, summarising, feedback and teaching skills from the discussion with fellow students and Tutor.
2	Progress their clinical reasoning skills to enable formulation of differential diagnoses, appropriate investigations, management plans as determined by level of year.
CCT case3	Consider options for patients such as personalised care, therapeutic management, self-care, and other non-pharmacological means of care e.g. social prescribing in the patient journey.
CCT case4	Evaluate the patient with polypharmacy, the approach to medication reviews and de-prescribing as well as prescribing practice in complexity.
CCT case5	Rehearse the skills necessary to facilitate shared decision making with a patient, the explanation of risk and relevant safety netting.
CCT case6	Recognise the importance of tolerating uncertainty and other human factors as a medical professional.

CCT case7	Value the importance of working collaboratively and in teams with other health care professionals and other agencies as teams, longitudinally for the benefit of the patient.
CCT case8	Evaluate best evidence and guidance as it pertains to the case.
CCT case9	Incorporate the issues of patient safety in case discussion.
CCT case10	Reflect on cases, integrating experiences in placement and elsewhere including ethical and professional issues.

Introduction to Clinical Reasoning (1 hour). All CCT sessions in Academic week one

By the end of this session the student will be able to:

CR 1	Understand the concept of clinical reasoning.
CR 2	Describe hypothesis generation in eliciting a patient's history and examination
CR 3	Demonstrate awareness of how clinical reasoning skills are used to formulate differential diagnoses in primary care.

The Breathless Patient - Before Medicine A

By the end of this session the student will be able to:

- Select the necessary features of history, examination and investigations in a patient presenting with Breathlessness in Primary care.
- Contrast the diagnosis and management of the breathless patient with an underlying diagnosis of COPD, Asthma, Lower Respiratory Tract Infection or Heart failure.
- Judge the appropriate long-term support and self-management for the above patients in either a primary or secondary care setting and how these impact on the patients well-being or disability.

The Patient with Upper GI Symptoms in Primary Care – Before Medicine B

By the end of this session the student will be able to:

- Differentiate the clinical features, in history taking, examination, diagnosis and investigations for a patient presenting in primary care with upper abdominal pain
- Identify symptoms and signs for a patient with upper abdominal pain necessitating a 2-week referral.
- Demonstrate counselling a patient in primary care about the two-week referral process and likely investigations and outcomes.

The Patient with Lower GI symptoms in Primary Care and Men's Health - Before Surg A

By the end of this session the student will be able to:

- Differentiate the symptoms, signs, investigations and differential diagnosis of a patient of any age presenting with changed bowel habit and or rectal bleeding.
- Take a focused history from a man presenting with lower urinary tract symptoms, testicular lump and/or pain and describe appropriate examination, a differential diagnosis and outline a management plan.
- Consider when a two week referral to secondary care is appropriate for patients presenting with lower GI or urological symptoms.
- Discuss the long-term impact of lower GI or lower urinary tract symptoms on patients, in terms of their biological, psychological and social functioning.

Health Promotion and Disease Prevention incorporating Diabetes 1 – Before GP

By the end of this session the student will be able to:

- Discuss the different NHS screening opportunities with reference to health and well-being in the population, including screening for Abdominal Aortic Aneurysm, breast, cervical and bowel cancer and lifestyle measures that reduce lifetime risk.
- Debate the issues around providing universal PSA screening.
- Describe the diagnosis of diabetes and impaired glucose regulation, also known as pre-diabetes, in primary care.
- Explain, in language a patient can understand, the self-management, lifestyle advice and monitoring required to a patient to prevent complications of diabetes including both macrovascular and microvascular complications.

The Patient with Back Pain in Primary Care (Including lower limb pain) – Before Surg B

By the end of this session the student will be able to:

- Compare the different clinical features in history and examination in a patient presenting to a GP with back pain, including common and serious causes, and red flags for musculoskeletal, orthopaedic, neurological and vascular conditions.

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- Develop differential diagnoses for a patient presenting with back or leg pain and investigate and refer on appropriately.
- Evaluate the physical, social and psychological impact of disability on patients seen in primary care with long term chronic back or limb pain.

The Woman with Vaginal Bleeding and Pelvic Pain – Before Obstetrics & Gynaecology

By the end of this session the student will be able to:

- Explain the menstrual cycle and normality in an adult woman.
- Take a focussed history for a woman presenting with vaginal bleeding symptoms and/or pelvic pain in primary care.
- Incorporate examination findings with a focussed history and relevant investigations to generate differential diagnoses for a woman presenting with vaginal bleeding and/or pelvic pain including red flag symptoms.

The Unwell Child with a Fever – Before Paediatrics

By the end of this session the student will be able to:

- Develop differential diagnoses for acute fever in a child
- Take a history from a child or carer in a simulated scenario and be able to conduct an examination on a child presenting unwell with a fever, to form a differential diagnosis and management plan.
- Share experiences on how to perform an effective paediatric examination.
- Apply the NICE traffic light system for assessing a febrile child.
- Recognise and manage a seriously ill child in a rehearsed scenario e.g. video.

Campus-Based Clinical Skills Sessions

In the first 4 academic weeks students will have training in:

Arterial/Venous Blood Gases (ABGs)

- To understand reasons for undertaking arterial/venous blood sampling
- To understand hazards of arterial/venous puncture including needle stick guidelines
- To understand the principles of ANTT (Aseptic non touch technique)
- To be able to carry out arterial/venous puncture safely and within Trust guidelines

Male and Female Catheterisation

- To understand indications for catheterisation
- To understand hazards of catheterisation
- To understand the principles of ANTT (Aseptic non touch technique)
- To be able to carry out catheterisation safely and within Trust guidelines

Breast Examination

- To revise anatomy and physiology of breast
- To link anatomy and physiology to practical skill
- To demonstrate the ability to perform breast examination and have an understanding of the common abnormalities and examination of appropriate lymph nodes

Obstetric Examination and Speculum Examination

- To revise anatomy and physiology of reproductive system
- To link anatomy and physiology to practical skill
- To understand reasons for undertaking obstetric examination
- To be able to carry out obstetric examination

- To revise anatomy and physiology of reproductive system
- To link anatomy and physiology to practical skill
- To understand reasons for undertaking gynaecological procedures
- To be able to carry out gynaecological examination and procedures

During first hospital rotation, students will undertake training in:

- Adult and paediatric BLS
- Venepuncture recap

During each hospital rotation, the placement teams will also offer Clinical Skills support for the following skills:

- Medicine A – PEFr measurement and inhaler technique
- Medicine B – Placement SIM day
- Surgery A – Recap of male genital exam/rectal exam
- Surgery B – sterile gloving/aseptic no-touch technique (ANTT)
- Paediatrics – collection of a paediatric urine specimen
- Obstetrics & Gynaecology – Partogram

Please note that the placement skills may be covered in a clinical setting and/or a specific session – please liaise with your placement team.

Campus-Based Simulation Session (LivDocSim1):

Leadership & Management

- Understand different styles of leadership
- Identify your own strengths and areas for development
- Identify your own emotions and prejudices
- Be able to use handover models –SBAR, appropriately
- Understand the difference between a team and a collaborative group and the characteristics of an effective team
- Demonstrate the qualities and role of a leader and a follower
- Demonstrate ability to challenge and be challenged
- Be able to communicate effectively as a leader and a follower

Communication for Clinical Practice (CCP)

Workshop 1 - “Doctor, I have a question!” – An introduction to sharing complex information and Motivational Interviewing

- To consider challenges posed by sharing information in complex and emotionally difficult situations
- To explore a step-wise framework for use when sharing complex information
- To discuss Motivational Interviewing as an alternative way of approaching conversations about change
- To begin exploring the ‘guiding style’ and tools used for Motivational Interviewing
- To review and consolidate previously learned clinical communication skills
- To gain confidence in using these skills flexibly and responsively in increasingly complex situations
- To demonstrate the ability to reflect on your own and others’ clinical communication skills
- To practise providing constructive feedback to tutors and peers

Workshop 2 - Workshop with Simulated Patients

- To review and consolidate previously learned clinical communication skills
- To gain confidence in using these skills flexibly and responsively in increasingly complex situations
- To appreciate the importance of clear communication in providing person-centred care and supporting shared decision making
- To demonstrate the ability to reflect on and critically appraise your own clinical communication skills
- To demonstrate the ability to reflect on your peers’ clinical communication and provide constructive feedback
- To formulate plans and strategies for developing your communication abilities

During this workshop, students will have the opportunity to practice, observe and consider:

- The sharing of information in complex and emotionally difficult situations
- Communication in situations involving uncertainty and the concept of risk
- The application of principles and tools for Motivational Interviewing
- The gathering of information over the telephone and in situations where the patient is accompanied by a third party

Academic Week Themes

Therapeutics: Lectures

Anaesthetic Pharmacology 1 (General Anaesthesia 1: getting the patient to sleep)

- List the commonly used therapeutic classes of general anaesthetics, and the names of the most commonly used drugs
- State the mechanism of action of the commonly used therapeutic classes in general anaesthesia

Anaesthetic Pharmacology 2 (General Anaesthesia 2: Preventing movement)

- List the commonly used therapeutic classes of muscle relaxants, and the names of the most commonly used drugs
- State the therapeutic and adverse effects of commonly prescribed muscle relaxants, explained by the mechanism of action of the drug
- Describe the use of additional medications to reverse muscle relaxation

Analgesic Drugs 1 (Background, simple analgesia)

- List the common analgesic therapeutic classes, and the names of specific drugs within each class
- State where different analgesic drugs are placed on the WHO analgesic ladder
- Explain the therapeutic actions, and adverse effects, of paracetamol
- Describe the principles of the arachidonic acid pathway
- State the mechanism of action & adverse effects of non-steroidal anti-inflammatory drugs (NSAIDs)

Analgesic Drugs 2 (Opioids and Opiates)

- Define "opioids" and "opiates"
- State the mechanism of action of opioid drugs, and name their receptors
- Explain the therapeutic and adverse effects of opioids, explained by the mechanism of action of the drug.
- Reference the concept of the Risk:Benefit ratio and the potential for drugs to harm
- Describe the concept of tolerance in relation to the mechanism of action of opiates
- Demonstrate knowledge of specific drug antagonists (i.e. naloxone)

Analgesic Drugs 3 (Local Anaesthetics)

- List the commonly used therapeutic classes of local anaesthetics, and the names of the most commonly used drugs
- State the therapeutic and adverse effects of lignocaine, explained by the mechanism of action of the drug
- Recognise common clinical situations where use of a local anaesthetic may be appropriate

Intravenous Fluids

- Recognise the difference between maintenance and bolus fluids
- Define a "colloid" and "crystalloid"
- Recall the normal fluid requirements in an adult patient are
- Describe the constituents of commonly prescribed IV fluids, and list advantages/disadvantages of each
- Recognise common clinical situations where IV fluids are administered

Endocrine Pharmacology 1 (Type 1 Diabetes, insulin pharmacology)

- List the common therapeutic drug classes used to treat Type 1 diabetes, and the names of specific drugs within each class
- State the mechanism of action of the commonly used therapeutic classes for type 1 diabetes
- Describe commonly used devices used in the management of type 1 diabetes (e.g. insulin pumps, injection devices)
- Describe the national prescribing guidelines for the management of this situation, where these apply

Endocrine Pharmacology 2 (Type 2 diabetes treatments)

- List the common therapeutic drug classes used to treat type 2 diabetes, and the names of specific drugs within each class
- State the mechanism of action of the commonly used therapeutic classes for type 2 diabetes
- Describe the national prescribing guidelines for the management of this situation, where these apply

Endocrine Pharmacology 3 (Corticosteroids)

- Recall the physiology of cortisol in health
- Describe the difference between mineralocorticoid and glucocorticoid effects
- List the names of specific corticosteroid drugs within the class
- Explain the mechanism(s) of action of commonly used corticosteroids, and relative potency of different steroid compounds
- Describe common clinical situations where treatment with corticosteroids is required
- Explain how the variation in pharmacokinetic and pharmacodynamic factors supports selection of corticosteroids in different conditions
- List local and systemic adverse effects of corticosteroid treatment
- Discuss how adverse effects can be minimised

Endocrine Pharmacology 4 (Hormonal Contraception)

- List the common therapeutic drug classes used to achieve contraception, and the names of specific drugs within each class, and how administered

- State the mechanism of action of the commonly used hormonal contraceptive medications
- Recognise common clinical situations where hormonal contraception is used
- Describe factors that can affect the efficacy of hormonal contraception

Haematological Pharmacology 1 (Immunosuppressants)

- List the common therapeutic drug classes used to achieve immunosuppression, and the names of specific drugs within each class
- State the mechanism of action of the commonly used immunosuppressive drug classes
- Recognise common clinical situations where immunosuppression is seen (both intentional and as an adverse effect)

Haematological Pharmacology 2 (Heparin & Warfarin based anticoagulation)

- State the mechanism of action of heparin and warfarin based anticoagulants, and the relationship to the clotting cascade
- Identify differences between unfractionated heparin, and other therapeutic agents that act in the same pathway, and list names and mechanisms of specific drugs
- Identify differences between warfarin and DOACs, and list names and mechanisms of specific drugs
- Explain what the International Normalised Ratio (INR) is, and how it affects clinical management of patients
- Explain what the APTT is, and how it affects clinical management of patients
- Recognise common clinical situations where anticoagulation is required

Biologic medicines and Biosimilars

- State the difference between a biologic drug and a small molecule
- Explain why biosimilars are not like generic medicines
- Describe the structure and function of commonly prescribed biologic medicines
- Recognise common clinical situations where biologic and biosimilar medicines are prescribed
- List the significant common and rare ADRs associated ADRs, and how recognise that biosimilar ADRs can differ from originator products

The Acutely Ill Patient: Lectures

Management of the Acutely Ill Patient

- To introduce an organised approach to the recognition, assessment and management of an acutely unwell patient.

Acute Respiratory Failure

- Understand and explain the common causes of acute respiratory failure (focusing on common acute medical conditions, with an awareness of factors such as respiratory depressant drugs, OHS, neuromuscular conditions, skeletal abnormalities, and neuromuscular diseases).
- Develop a structured approach to the recognition, assessment, and initial management of patients presenting with acute respiratory failure (to include definition and systematic approach to the assessment of type 1 and 2 respiratory failure).
- Discuss the management of respiratory failure in the acute setting – including oxygen therapy, NIV and IPPV, and basic pharmacological management for specific causes.

Shock (incl. cardiogenic)

- Define the different types of shock and their common causes.
- Describe the initial assessment of the patient presenting in a shocked state (including use of investigations and initial management).
- Explain initial management for the key diagnoses and recognise where patients may need a high level of care and emergency specialist input.

Professionalism, Ethical & Legal Context: Lectures

Introduction to Professionalism, Ethics & Legal Context (PEL)

- Overview of Professionalism, Values and Legal Context during Year 3

Advancing Medical Professionalism – The answer to medical discontent?

- Be aware of the RCP document “Advancing Medical Professionalism.”
- Become familiar with the GMC website learning modules.
- Understand the consequences of behaviour even outside of term time.

Hope in Health Care

- To understand and consider 'hope' as a concept
- To understand and consider the 'role of hope' in the healthcare setting
- To understand and consider the alleged problems associated with the 'role of hope' in the healthcare setting

Introduction to Reproductive Ethics: including the ethico-regulatory framework of abortion

- to review and understand some of the basic ethical norms and ideas that inform debates around human reproduction and reproductive ethics

- to highlight and review some of the key areas of debate falling within the scope of 'reproductive ethics'
- To introduce, review, and consider the ethical and legal landscape regarding abortion in the UK

Professionalism, Ethics & Legal Context: Workshop

PEL - ethico-professional analysis and reflection

- Practice case analysis and reflection skills
- Practice the above skills in respect of medico-moral and medico-professional problems via a set of cases
- Apply knowledge of professional practice to a set of cases

Personalised Medicine: Lectures

Introduction to Personalised Medicine

- Demonstrate how medical practice is informed by research and progressive advances in genetics, cell biology and therapeutics that include personalised medicine approaches
- Critically appraise the value of clinical decision support systems

Basic Clinical Genetics

- Differentiate the clinical genetics of diverse organ systems
- Recognise how the complexity and evidence base of clinical issues inform clinicians' shared decision making with patients from core medicine disciplines

Personalised Medicine: Workshop

Pharmacogenomics in clinical practice

- Demonstrate how medical practice is informed by research and progressive advances in genetics, cell biology and therapeutics that include personalised medicine approaches
- Evaluate the value of Big Data interpretation (including scenarios with imprecise and conflicting information)
- Critically appraise the value of clinical decision support systems

Population Perspectives & Global Health (PPGH): Lectures

Infectious disease, globalisation, climate change and sustainability

- Describe the global burden of infectious disease

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- Understand how globalisation and climate change is causing profound changes to the burden of infectious diseases
- Critically interpret the role of poverty, urbanisation and food insecurity on infectious diseases
- Examine and critically analyse the role of epidemiology, and disease surveillance in particular, in identifying emerging trends

Child health: inequalities, advocacy, and service design

- Describe and evaluate the design and delivery of services in the context of child health
- Analyse the creation of child health inequalities in practice
- Describe the role of different health professionals in advocacy for children and their families
- Critically interpret the role of different types of evidence to improve health care quality

Women's health: screening, risk communication, and using evidence

- Apply the principles of health improvement to contemporary issues in women's health
- Describe and critically analyse measures of population health, particularly fertility and pregnancy outcome measures
- Examine and critically analyse health inequalities in relation to women's health
- Evaluate the use of different forms of evidence, including national confidential enquiries, to inform service design and improve health care quality

Global Women's Health

- Understand the challenges facing women's health globally
- Understand the challenges of maternity in low resource settings
- Understand the challenges of gynaecology in low resource settings

Population Perspectives & Global Health (PPGH): Workshops

PPGH1 – Health Policy

By the end of this session students will be able to:

- Define and interpret health policy
- Apply frameworks to critique and prioritise policy options to improve population health
- Calculate and critique standard measures of effect used to monitor health policy

PPGH2 – Health Needs Assessment

By the end of this session students will be able to:

- Define and interpret health needs assessment (HNA);
- Show awareness of the wider determinants of health, and resulting inequalities in disease burden;
- Provide examples of prioritization criteria used in different HNA strategies

Psychology & Sociology as applied to Medicine (PSM): Lectures

Introduction to Psychology & Sociology as applied to Medicine

- Overview of Psychology and Sociology in Medicine during year 3

Medicalisation and Over-diagnosis

- Understand concepts of medicalisation and over-diagnosis
- Understand examples of how these concepts are applied in clinical practice
- Be able to explain their links with overtreatment
- Be able to describe some of the pressures to medicalise and over-diagnose
- Be able to describe some of the benefits and risks of this approach

Supporting self-management in those chronic illness: responsibilities, and the role of social networks

- Understand the impact of chronic illness upon individuals' lives
- Roles
- Relationships and prognosis, including demonstrating an understanding of the differences between the medical and social models of disability

Psychology & Sociology as applied to Medicine (PSM): Workshop

Bias and error in medical decision-making

- Understand:
 - the multiple sources of information
 - decision-making
 - biases
 - errors
 - types of reasoning
 - situated reasoning
 - factors specific to the situation

Technology in Medicine: Lectures

Design Innovation in Healthcare

- Develop an awareness of various models of innovation
- Understand potential role and impact of design-led innovation in healthcare
- Identify examples of healthcare design innovation in products/services/environments
- Understand basic stages of a design process

Design Thinking & Human Centred Design

- Describe principles of human centred design
- Develop a general understanding of design thinking mindsets and practices
- Recognise importance of, and difference between problem-framing and problem-solving stages of a design process
- Learn about a range of human centred design methods and tools used in healthcare design

User Experience Mapping

- Understand basic principles of human factors and ergonomics
- Develop an understanding of various user experience models and research techniques
- Understand empathy and ethics implications in the context of healthcare design
- Be able to apply user experience research mindsets and techniques to identify design challenges and opportunities

Technology in Medicine: Workshop

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Altcar Leadership and Management Day (provisionally planned for April 2023)

- *To understand the basic skills and qualities associated with leading a team during a simulated major incident*
- *To recognise what constitutes good teamwork and be able to contribute to this*
- *To understand the importance of building positive working relationships with peer colleagues*
- *To develop the ability to accept leadership by others.*

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