WARWICK
MEDICAL SCHOOL

MB ChB Phase II

Learning Outcomes

Academic Year 2022/2023

Student name: _____

Phase II Learning Outcomes

Contents

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Introduction

Overview

This document aims to give overall guidance to what you should be learning during Phase II (Year 2) and your summative assessment will be based on these learning outcomes, including AC1, Phase I and the different Themes you have learnt about. The addition of CCE aims to pull together how to use these resources to plan your learning now, and also your revision before the summative assessment at the end of the Phase II year.

The Warwick MBChB curriculum consists of blocks (such as AC1 or CCE) as well as overriding themes (such as Social and Population). Each Phase of the course, and therefore each Phase examination, will contain outcomes relating to particular blocks but also to these Themes you have been taught about. Where possible, these are integrated in terms of both learning and assessment especially as Theme outcomes are often met during clinical exposure rather than in specific sessions relating to the Theme. However, all the learning outcomes relate to the 'GMC Outcomes for graduates 2018', of which the three components are listed below.

Outcomes for graduates (2018)

- Outcomes 1: Professional values and behaviours
  - Professional and ethical responsibilities
  - Patient safety and quality improvement
  - Dealing with complexity and uncertainty
  - Safeguarding vulnerable patients
  - Team working

- Outcomes 2: Professional skills
  - Communication and interpersonal skills
  - Diagnosis and medical management
  - Using information effectively and safely

- Outcomes 3: Professional knowledge
  - Applying biomedical scientific principles
  - Applying psychosocial principles
  - Health promotion and illness prevention
  - The health service: understanding and working in the NHS
  - Clinical research and scholarship

Assessment

Overall, you should expect the balance of the summative assessment to be in approximate proportion to learning time in the Phase. Therefore, just over a quarter will be material learnt in AC1, with a further quarter being based on your clinical experience, Trust / GP learning and case-based learning in each of the three blocks of CCE (Medicine, Surgery and Specialties). Medical learning is not modular, and material learnt in Phase I will be included when it relates to and provides the basis for the learning you have undertaken in Year 2.

Advanced Cases 1 (AC1) Learning Outcomes

Introduction

This 12-week block is the start of your second year (Phase II) of the MBChB course. Throughout Phase II, you will build on your learning from Phase I, and during AC1 you will be developing your skills in history taking, examination and most importantly the life-long skill of learning from patients, in preparation for your Core Clinical Education placements that form the remainder of Phase II.

Week 1: Genetics and Paediatrics

- Recognise and describe symptoms and signs and explain the relevant underlying scientific process of the more common genetic conditions in adults and children such as Cystic Fibrosis, Haemophilia, Down's syndrome, and Duchenne Muscular Dystrophy.
- Begin to form basic investigation and management plans for children with genetic conditions.
- Demonstrate working collaboratively with patients, their relatives, carers or other advocates, in planning their care, negotiating and sharing information appropriately and supporting patient self-care.
- Apply the principles and knowledge relating to genetics and genomics to care of those with genetic disorders.
  Summarise the current ethical dilemmas including those involving genetics in medical science and healthcare practice.

Week 2: Diabetes & Adolescence

- Recognise and describe symptoms and signs and explain the relevant underlying scientific process of endocrine disease including diabetes.
- Begin to form basic investigation and management plans for patients with endocrine disease.
- Recognise the complex medical needs, goals and priorities of patients and the factors that can affect health and wellbeing in young people especially those with chronic conditions.
- Explain the sociological aspects of behavioural change and treatment concordance and compliance such as in adolescents and apply these as part of person-centred decision making.
- Demonstrate how to communicate sensitively and effectively with patients especially when communicating with children and young people and people who lack insight into their illness or are ambivalent about treatment.

Week 3: Infectious diseases & Viruses

- Recognise and describe symptoms and signs and explain the relevant underlying scientific process of common and important viral infectious diseases and of infections affecting the immune system.
- Apply the principles and knowledge relating to immunology and microbiology to care of those with viral infections.
- Begin to form basic investigation and management plans for patients' fever of unknown origin including appropriate investigations.

- Begin to form basic investigation and management plans for patients with infectious viral diseases.
- Demonstrate how to communicate sensitively and effectively with patients especially when discussing issues that may be sensitive for the patient such as alcohol, smoking, diet, weight, and sexual behaviour.

Week 4: Homelessness and Health

- Understand the complex medical needs, goals and priorities of vulnerable patients and the factors that can affect health and wellbeing including the environmental, social, behavioural, and cultural factors which influence health and disease.
- Begin to demonstrate the ability to work collaboratively with other health and care professionals / organisations when working with patients, particularly vulnerable groups of patients.
- Recognise the symptoms and signs and explain the relevant underlying scientific process of infectious disease including multisystem infectious diseases.
- Begin to form basic investigation and management plans for patients with infectious diseases by applying the principles and knowledge relating to immunology and microbiology.
- Apply the basic principles of communicable disease control in hospital and community settings, including disease surveillance.

Week 5: Autoimmune diseases & Renal

- Recognise and describe the symptoms and signs and explain the relevant underlying scientific process of autoimmune disease.
- Begin to form basic investigation and management plans for patients, applying the principles and knowledge relating to cell biology and immunology to care of those with allergies or autoimmune disease.
- Begin to demonstrate the ability to work collaboratively with other health and care professionals and organisations when working with patients with complex multisystem disease.
- Recognise the complex medical needs, goals and priorities of patients and the factors that can affect health and wellbeing in those with complex multisystem diseases.
- Recognise and describe the symptoms and signs and explain the relevant underlying scientific process of acute and chronic kidney disease.
- Begin to form basic investigation and management plans for patients with renal disease.

Week 6: Hypertension & Arrhythmias

- Recognise and describe symptoms and signs and explain the relevant underlying scientific process of developing arrhythmias such as atrial fibrillation.
- Begin to form basic investigation and management plans for patients with atrial fibrillation and other common or important cardiac conditions.
- Describe the risks associated with atrial fibrillation; evaluate the benefits and risks for patients starting anticoagulation medication for atrial fibrillation and communicate this risk effectively with patients.

- Recognise and describe symptoms and signs and explain the relevant underlying scientific process of hypertension, the epidemiology, and the associated risks of hypertension and how to apply the principles of primary, secondary, and tertiary prevention of disease.
- Begin to form basic investigation and management plans for patients with hypertension.

Week 7: Chronic physical & Mental health

- Recognise the symptoms and signs and explain the relevant underlying scientific process of developing chronic multisystem disease such as heart failure.
- Begin to form appropriate basic investigation and management plans for patients with heart failure.
- Explain the relationship between psychological and chronic physical conditions
- Recognise and describe symptoms and signs of depression and be able to perform a mental state examination.
- Begin to form basic management plans for patients with depression including appropriate investigations and assessments as well as demonstrate an understanding of how to assess the needs and support required for people with mental health conditions.

Week 8: Cancer, and Week 10: Palliative care

- Recognise and describe symptoms and signs of cancer and explain the relevant underlying scientific process including principles and knowledge relating to anatomy, biochemistry, cell biology, pathology and genetics applying and integrating this into patient care.
- Begin to form basic management and investigation plans for patients with common, important, and chronic illnesses, such as cancer, taking into consideration the patients' preferences, social needs, multiple morbidities, frailty and long term physical and mental conditions.
- Demonstrate working collaboratively with patients, their relatives, carers, or other advocates, in planning their care, negotiating and sharing information appropriately and supporting patient self-care.
- Recognise how treatment and care can place an additional burden on patients and make decisions to reduce this burden where appropriate, particularly where patients have multiple conditions or are approaching the end of life.
- Describe how health care professionals can communicate sensitively and effectively with patients especially when sharing news about a patient's condition that may be emotionally challenging for the patient and those close to them.

Week 9: Frailty & Confusion

- Explain how normal human structure and function and physiological process differs in the older age group, including the concept of frailty.
- Recognise and describe symptoms and signs and explain the relevant underlying scientific process of developing confusion.
- Be able to perform a cognitive state examination and understand the importance of assessing the mental capacity of a patient.

- Begin to form appropriate basic investigation and management plans for patients with confusion.
- Demonstrate the ability to work collaboratively with other health and care professionals / organisations when working with patients, particularly those with multiple morbidities, frailty, and long term physical and mental conditions.

Clinical Days

By the end of AC1 students should be able to:

- Explain and demonstrate the importance of seeking patient consent respecting the wishes of patients and whether they wish to participate in the education of students.
- Explain the importance of integrating patients' care across different settings to ensure person-centred care.
- Raise and escalate concerns about patient safety, quality of care, bullying, harassment, and undermining.
- Apply measures to prevent the spread of infection and apply the principles of infection prevention and control.
- Develop skills to elicit and accurately record a patient's history exploring ideas, concerns, expectations, values, and preferences.
- Develop skills to undertake appropriate examination safely and sensitively.
- Be able to interpret findings from the history and examination.
- Be able to propose some common differential diagnoses.
- Be able to propose some options for investigation taking into account potential risks and benefits.
- Be able to perform the diagnostic therapeutic and practical procedures listed for AC1 safely and effectively.
- Be able to synthesise findings from the history, examination, and investigations, and make some proposals about underlying causes or pathology for common or important diseases.
- Provide immediate basic life support and cardiopulmonary resuscitation.
- Recognise and show respect for the roles and expertise of other health and social care professionals in the context of working and learning as a multi-professional team.
- Identify the impact of their behaviour on others.

Core Clinical Education (CCE)

Introduction

The 30 weeks of Core Clinical Education has an overall aim of transitioning students from mainly classroom-based activities (with some clinical experience) to clinical students who can thrive in an active clinical environment and access clinical learning effectively. We appreciate that dealing with the breadth of possible clinical learning experiences can seem daunting. To deal with this, please remember the overall ethos of CCE (see below). You will do 10 weeks of clinical placement in each of Medicine, Surgery and Specialties, and this will also include some time in GP placements too.

Guidance and outcomes for CCE in general and specific learning outcomes for Medicine, Surgery and Specialties and their individual presentations list follow this. However, this division of presentations between Medicine, Surgery and Specialties is slightly artificial in the clinical environment, as there are overlaps and students will come across various presentations during each block. It is important to take any learning opportunity available even if it doesn't 'fit' the learning outcomes of your specific block.

Overall Ethos

To become competent and confident at

- History taking
- Examination
- Constructing differential diagnoses
- Planning investigations
- Considering initial management
- Communicating with patients and with teams in relation to common and important conditions.

Guidance

Your teaching will have focussed on classic presentations in terms of the history and examination findings of common and important conditions. You do need to be aware that not all patients present classically but you are not expected to know all those atypical presentations, just the very common and important ones.

Your list of differential diagnoses should include causes which are common in clinical practice **(usually the first two you will see listed in textbooks)**, and the investigations you suggest should be routinely available to those in GP and secondary care. You have been provided with a list of relevant investigations.

Your management plans should have a biopsychosocial model and should include a basic knowledge of the modalities available (including psychological and social), and where a drug treatment is available, the class of medication and one or two specific examples. You are not required to remember drug doses except in specific examples. Your CCE online handbook contains a guide to a holistic approach to management. You will also be provided with a Phase II drug list which is present to complement the drug list for Phase I.

Remember the most important thing in medicine is diagnosis; if you begin by thinking about the differential diagnosis, this will guide your questioning to do a focussed history, determine your examination and the choice of investigations.

Presentation List

The main focus of Phase II is to learn from a presentation list taken directly from the **GMC presentation list 2021**, which is to help you focus on areas of clinical practice and patient care. Assessments will focus on these presentations. In terms of the 'depth' of learning for each presentation, you will meet the cases in a variety of settings – some in case-based learning sessions, some in 'planned' clinical encounters and some you will seek out yourself in the clinical environment. You should follow the key principles:

1) Epidemiology
How common is this presentation? How important?

2) Relevant basic science/knowledge
What basic science do I need to revise in order to understand this presentation fully? (For example, in a case of chronic cough / COPD, it would be helpful to revise lung anatomy, the pathological effects of smoking on the bronchial tree and lung tissue; type 1 vs type 2 respiratory failure, arterial blood gas results, etc.)

3) History and Examination
What are the classical findings for this presentation? How do patients usually present? Are there any common and important ways that the presentation can be misleading?

4) Differential diagnosis
What are the *likely / common* causes? This is usually the first 2 to 3 on a list you would find in any of the standard texts e.g., Macleod's Clinical Examination or Kumar and Clark. What are the *important causes* you need to think about in this patient? (For example, something that may be life-threatening)

5) Investigations
What are the first line investigations for this presentation? Which are most useful? Which will help you decide between your differential diagnoses?

6) Management
What are the key modalities of management? (Advice, self-care, drugs, surgical, etc.) What are the most important examples for the diagnosis you have made? Refer to the drug list but remember that management is about a lot more than drugs. **Most importantly for the medical management, what are the first line treatments?**

7) Prognosis
What is the likely outcome of this case? What factors could alter this prognosis?

CCE Overarching Learning Outcomes

By the end of CCE students should be able to take a competent history and perform relevant examination of a patient, know key differential diagnoses for the common patient presentations, provide the most important investigation(s) and suggest initial management.

1. Take and record a patient's medical history, including family and social history, talking to relatives or other carers where appropriate.
   a. Demonstrate the skills of a patient-centred interview in an active clinical environment.
   b. Explain the immediate and long-term health-related consequences of a 'poor' consultation for the patient and clinician e.g., failure to adhere to advice, delay in seeking help in future, and negative anticipatory effects on subsequent consultation.

2. Present a comprehensive summary of a patient's clinical problem in real clinical scenarios having obtained a full clinical history and performed relevant detailed clinical examination including the likely clinical diagnoses and important differential diagnoses.

3. Observe and reflect on the process of clinical decisions made by teams, particularly where the initial diagnosis is unclear, incorrect or the diagnosis changes,
   a. Reflect on a series of clinical judgements and decisions in relation to exemplar clinical cases and how decisions were arrived at.

4. Outline the framework of obtaining consent, exploring ideas, concerns and expectations whilst also showing due regard for respecting the autonomy of a patient. There needs to be an appreciation that this applies to all clinical encounters apart from a few selected emergency situations.

5. Outline the microbiological principles in relation to surgical scrubbing
   a. Outline the etiquette of theatre behaviour in relation to safe surgical practice and specific infection control.
   b. Demonstrate surgical scrubbing and donning of personal protective equipment (including hand antisepsis, surgical gowning, gloving and masking).
   c. Apply the principles of the epidemiology of infectious diseases in a hospital setting. Demonstrate adherence to hospital infection control measures.

Learning Outcomes – History and Examination

Achieving history taking and examination learning outcomes during each block can mostly be achieved by practicing history taking and examination on patients. The importance of this cannot be overestimated.

At the end of each block students should be able to:

1. Demonstrate effective communication in real and simulated scenarios involving patients, carers and other professionals
    a. Identify and reflect on the communication style of peers.

2. Carry out a competent history and examination of a real or simulated patient including the accurate observation and recording of signs and symptoms.
    a. Demonstrate the skills of seeking questions and checking patient understanding in an active clinical environment.
        i. Analyse how poor consultation/communication results from incongruent doctor-patient beliefs, expectations, and experiences AND in a failure to recognise and respond appropriately to the incongruence.
        ii. Demonstrate accepted methods of allowing patients to ask questions and discuss their views, concerns, and preferences.
    b. When asked to by a supervising clinician, accurately prepare and update clinical records from clinical cases seen in clinical practice. Not all students will get the chance to do this in CCE, but students will have the opportunity as they progress through the course.
        i. Describe ways in which a patient's individuality can be maintained in written communications.
        ii. Apply the principles of legislation, guidance and protocols surrounding the security and confidentiality of patient identifiable information and the access of such information by patients, their representatives, or clinicians in common scenarios.
    c. Take an occupational history and proceed to relevant clinical examination and necessary investigations as relevant to the occupational condition.
    d. Take a nutritional history and relate under/over nutrition to relevant clinical cases.
    e. Demonstrate gaining a relevant and focused drug history from real and simulated patients.
        i. Identify common and important barriers in gaining a full medication history particularly in the young, the elderly and those on complex treatment regimes.
        ii. Understand the key issues in identifying a standard drug history including drug names, dose, route, and concordance.
        iii. Make an accurate assessment of adherence to medication as part of a medical history.

f. Recognise and ensure accurate documentation of patient's level of functioning in activities of daily living and requirements for social support by informal or professional carers.
g. Assess the impact of alcohol consumption using an appropriate tool e.g. CAGE.

3. Demonstrate a structured approach to examining the well adult including observation, palpation, and auscultation.
   a. Demonstrate ability to communicate appropriately with patient while performing a physical examination; to explain what is going to be done; reassure during inspection and also keep continual observation of patient's non-verbal and verbal cues during examination.
   b. Relate key examination findings in common clinical cases to relevant clinical decisions.

4. Accurately present the results of history taking and examination in a succinct but comprehensive way including, when necessary, the ability to prioritise the most clinically relevant data
   a. Present a series of clinical cases with varying degrees of complexity conveying the key relevant clinical information.
   b. Present a series of clinical cases that demonstrate a systematic, integrated and efficient process for making an initial assessment of a patient's presentation.

5. Summarise clinical observations for real and simulated patient cases.
   a. Use chart clinical data, including patient symptoms, into locally used approaches such as MEWS, ABCDE, Glasgow Coma Scale to gauge the severity of a clinical presentation
   b. List and describe key emergencies Foundation doctors need to respond to. Please note that management of these emergencies will be covered in Phase 3.

6. Provide a full list of additional differential diagnoses and co-morbidities for relevant core clinical cases and analyse the relevant likelihood and importance of each

7. Apply accepted practice in the recording of patients' notes derived from histories taken in the clinical environment of patients presenting with core presentations.
   a. List basic abbreviations and their meanings commonly used when recording medical histories. e.g. TIA for transient ischaemic attack
   b. Having taken a comprehensive clinical history and performed a full clinical examination, list possible clinical systems implicated and state possible diagnoses for the presenting complaint

Top Tips

- Be pro-active, ask the junior doctors and nursing staff if there are suitable patients on the ward for you to talk to.

- Try to see a variety of patients and use your whole faculty team for learning opportunities, not just your consultant. However, all patients are different, 10 patients with the same diagnosis will give different histories so don't exclu;de patients because they have a condition you have seen before.

- Observe and be observed by your clinical partner and give each other feedback; ask for specific feedback if you have a particular area you are working on. Ask patients for feedback. Talk to relatives

- Follow up patients during their hospital stay; go with them for investigations, if possible.

- Sign up for bedside teaching sessions. In hospital or GP sessions it doesn't matter if you get it wrong, you will get good constructive feedback on how to improve.

- Ask junior doctors for extra Mini-CEX, OSLERs and CBDs.

Time spent on the wards at this stage is far more productive than in the library.

Learning outcomes: Investigations and Differential Diagnoses

At the end of each block students should be able to:

1. Outline the process of formulating a plan of investigation / care and how to discuss this with a patient (and carers / family if appropriate). Demonstrate how to check patients' understanding and talk to family about a plan if the patient consents.

2. Interpret the results of common investigations and clinical images in relation to disease severity and track patient progress in real clinical scenarios.
    a. Interpret various sets of clinical results and clinical images from the subset of the clinical skills listed in Tomorrows Doctors and presented in the investigations list for CCE. If you're not sure: ask!
    b. Interpret the results of common investigations and clinical images in relation to refining a clinical diagnosis including understanding normality and potential life-threatening scenarios.

3. Demonstrate reaching relevant and useful conclusions about a patient's general health and progress during common illnesses or treatment using clinical data (MEWS charts, blood results etc,) in real or simulated patients,

4. Describe the selection of investigations used for the differential diagnosis of common and / or important conditions as specified in the presentations list.
    a. List the categories of investigations used for common and/or important conditions and explain the fundamental principles underlying the categories. Eg. LFTs for abdominal pain.
    b. List the individual tests, which belong to the categories of investigations used for common and/or important conditions. Eg. Trop T for ACS. Describe the risks and contraindications to the individual tests.

5. Describe patterns of test abnormality that are typical of common and important conditions.
    a. Describe the changes in values for a given test that constitute abnormality rather than normal variability.
    b. Describe patterns of test abnormality which though may not be frequent may lead to errors in assessing common and important conditions e. D-dimer when not indicated, which may lead to unnecessary CTPA.
    c. Demonstrate an ability to question when the result of a laboratory test may be erroneous considering a knowledge of an individual patient's clinical state. Don't be afraid to ask questions of your seniors.

6. Describe investigations in terms that health service users may understand, in supervised clinical environments, such that the description might be used as the basis of informed consent. Eg. An explanation of an ABG,

a. Explain a plan of investigation formulated to resolve a differential diagnosis in terms understandable by a health service user.

Top Tips

- Keep taking histories and examining as many patients as you can.
- At the end discuss with your clinical partner what the differential diagnoses might be – even if you know the diagnosis you can still think of other possibilities. How would the history or examination differ with the other diagnoses?
- Discuss what investigations you would do it you were the doctor seeing each patient for the first time.
- Look at various test results – from patients' records, from your GP placement and try to interpret them.
- Follow patients for radiological investigations, endoscopies, etc. Could you describe to a patient what is going to happen during the test? Talk to patients about their experience of the test.
- Use the investigations list as a guide.

Learning Outcomes – Initial management plan

To effectively develop an **initial** management plan with patients depends on having already:

- Taken a good history and examination, including ICE and biopsychosocial history
- Formed appropriate differential diagnosis
- Considered appropriate investigations
- Formed a good relationship with the patient

At the end of each block students should be able to:

1. Formulate and present a management plan including treatment, symptomatic management and advice for a single diagnosis in a clinical case and understand how this may be altered in cases where there are co-morbidities.

2. Select appropriate forms of initial management for common and important conditions in the presentation list

3. Explain management in terms understandable by users of health services, including the modes of action and risks of various forms of treatment for common diseases (including surgical, medical, radiotherapeutic, supportive, palliative) as well as discussing preventive approaches to common diseases with them.

4. State how to assess pain using the WHO ladder

a. State the therapeutic steps available for effective analgesia, nausea and other common symptoms often managed by FY1 and FY2 doctors
b. Assess past as well as current symptom control (particularly pain) and medication use to determine effectiveness of different approaches

5. Explain appropriate forms of lifestyle management for common and important diseases in terms understandable to health service users including when there is resistance to change.

a. Select appropriate forms of lifestyle management for common and important diseases.

b. Identify skills that enhance behaviour change. Use reflective statements in clinical and simulated environments. Demonstrate the ability to conduct a “Brief Intervention” (e.g. FRAMES) to encourage behaviour change.

Top Tips

- Your management plans should take a holistic approach to the patient and their needs. Using a **bio-psycho-social approach** can be helpful in providing a structure.

- Another approach is to use a **problem list.** Consider different modalities of treatment: surgical, medical, radiotherapeutic, supportive, palliative and preventive.

- You need to know the drugs on the Year 2 drugs list. You will usually be asked the **drug class**, of which you should be able to name an example, briefly describe the mechanism of action, and also a couple of common side effects. You do **NOT** need to know doses at this stage.

- Management is not just about drugs. Think about other health professionals, social care, family and caregivers who might be involved. The multi-disciplinary team is very important in managing patient care.

- Practice your brief interventions on patients you see. Communicating the plan with patients is key to concordance. Practice explaining to patients what their diagnosis is, what their investigations are, and what treatment may involve.

- Detailed knowledge of guidelines is not required. NICE clinical knowledge summaries provide a REALLY useful overview. You should know red flags which require urgent referral for common cancers

Medicine Block Presentations and Learning Outcomes

Below is a list of common and important presentations you should cover during medicine block in CCE. The presentations are not an exhaustive list; it is to give you an idea of the common conditions you are expected to come across in the clinical environment.

Cardiovascular	**Neurological**
1. Breathlessness (cardiac)	15. Dizziness
2. Chest pain	16. Headache
3. Heart murmurs	17. Seizures
4. Hypertension	18. Stroke
5. Painful swollen leg	
6. Palpitations	**Renal and urinary**
7. Peripheral oedema and ankle swelling	19. Acute Kidney Injury & Renal failure
	20. Chronic Renal Failure & Proteinuria
Endocrine	21. Fluid and electrolyte abnormalities
8. Abnormal blood sugar / Polydipsia	
9. Fatigue	**Respiratory**
10. Weight gain (Obesity) / Weight loss	22. Acute upper respiratory symptoms /sore throat
General medicine / Metabolic	23. Breathlessness (non-cardiac)
11. Acid-base abnormalities	24. Cough (+/- wheeze)
12. Allergy / Anaphylaxis	25. Haemoptysis
13. Deteriorating patient / Sepsis	26. Pain on inspiration
14. Fever	

The key learning outcomes are:

- To take an adequate history and understand relevant differentials
- Carry out necessary examinations and investigations
- To understand initial management plans for such conditions

Cardiovascular

1. Breathlessness (cardiac)

By the end of the block students should be able to:

History

- Take a history of a patient with breathlessness (cardiac related) including onset / duration of symptoms, chest pain, orthopnoea, PND, and risk factors.

Examination

- Demonstrate key features of a cardiovascular examination and abnormal findings which may be seen such as crackles, raised JVP and heart murmurs

Differential diagnoses

- Identify important differential diagnoses for acute cardiac breathlessness (including cardiogenic pulmonary oedema, acute coronary syndrome, cardiac tamponade, arrhythmia, acute valvular heart disease) and chronic cardiac breathlessness (chronic heart failure, valvular coronary artery disease, constrictive pericarditis and pericardial effusion). Understand the underlying pathophysiology of breathlessness

Investigations

- Describe important bedside, laboratory and radiological investigations for cardiac breathlessness including ABG, FBC, CXR, ECG, echocardiogram and their interpretation.

Management

- Describe initial management including for heart failure, cardiac arrythmia, fluid overload, and other common causes.

2. Chest pain

By the end of the block students should be able to:

History

- Take a history of a patient with chest pain, onset of symptoms, radiation, duration, progression, characterisation of the pain, red flags, and risk factors for cardiovascular disease as well as diet, lifestyle, and family history.

Examination

- Perform a cardiovascular examination and elicit findings which may be seen in patients with chest pain such as heart murmurs, pulmonary oedema, and other associated signs.

Differential diagnoses

- Describe key differential diagnoses for acute chest pain including angina pectoris, types of acute coronary syndrome and acute pericarditis.
- Describe important differential diagnoses for chronic chest pain including angina pectoris, gastro-oesophageal reflux disease, musculoskeletal pain and also anxiety.

Investigations

- Describe relevant bedside, laboratory and radiological investigations including ECG, echocardiogram, (serial) serum troponin, coronary angiogram, CXR, upper GI endoscopy, along with their interpretation.

Management

- Explain the principles of management (drug and non-drug treatment) including analgesia, cardiac medications, lifestyle advice and referral.

3. Heart murmurs

By the end of the block students should be able to:

History

- Take a history including cardiac symptoms, functional impairment, past medical history, and family history.

Examination

- Carry out a cardiovascular examination including nature of the murmur including timing, duration, nature, intensity, location, radiation, and severity. Also be able to describe the anatomy and physiology of heart murmurs.

Differential diagnoses

- Describe important types of murmurs including 1) Ejection systolic murmurs (possible causes- increased flow, innocent murmurs from fever, pregnancy, atrial-septal defect, severe anaemia, aortic/pulmonary stenosis. 2) Pansystolic murmurs (possible causes- mitral / tricuspid regurgitation, VSD). 3) Diastolic murmurs (possible causes- aortic regurgitation, pulmonary regurgitation and mitral stenosis).
- Describe common and important underlying causes of heart murmurs including rheumatic heart disease, infective endocarditis, myocardial infarction with rupture of papillary muscles, valve prolapse, calcific degeneration, congenital bicuspid valve, congenital aortic stenosis, ankylosing spondylitis and Marfan's syndrome.

Investigations

- Describe bedside, laboratory and radiological investigations including echocardiogram, ECG and FBC, plus specialist investigations, as needed.

Management

- Describe initial management including monitoring of murmurs, treatment of underlying causes, and referral to a specialist when appropriate.

4. Hypertension

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, progression, associated risk factors, lifestyle factors, demographics and red flags.

Examination

- Carry out examination including general, cardiovascular and neurological exam where appropriate (as hypertension can affect multiple organ systems)

Differential diagnoses

- Identify important differential diagnoses including essential hypertension, secondary causes such as renal disease, and understand the demographics and risk factors associated with each cause.

Investigations

- Describe important bedside, laboratory and radiological investigations including ambulatory BP monitoring, U & Es, and ECG.

Management

- Understand initial management including non-drug measures, NICE hypertension guidelines and effect of hypertension on other organ systems.

5. Painful swollen leg

By the end of the block students should be able to:

History

- Take a history including risk factors for DVT and any history of trauma or infective symptoms.

Examination

- Examine for key features including calf swelling, erythema, tenderness, deformity, neurological pathology. Consider a Wells score, PERC score (especially if chest pain) and also a neurovascular assessment of the leg

Differential diagnoses

- Describe important differential diagnoses including DVT, trauma, cellulitis, thrombophlebitis, compartment syndrome, and ruptured Baker's cyst.

Investigations

- Describe bedside, clinical, laboratory and radiological investigations including, D-Dimer, FBC, doppler USS and X-ray of the leg.

Management

- Explain initial management including pain relief, LMWH for DVT and antibiotics for cellulitis.

6. Palpitations

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration and progression (including chest pain), risk factors, medications and social history.

Examination

- Carry out a cardiovascular examination including checking for murmurs and JVP, and also understand the mechanisms which can cause palpitations.

Differential diagnoses

- Describe important differentials including 1) Sinus tachycardia (causes including anxiety, anaemia, thyrotoxicosis, fever, $Beta_2$ agonists, anticholinergics, amphetamines) 2) Premature ventricular complexes. 3) Atrial arrhythmias such as SVT (Wolff-Parkinson-White syndrome), atrial tachycardia/flutter/fibrillation (causes including ischaemic heart disease, valvular heart disease, hypertension, alcohol excess); 4) Ventricular tachycardias (causes including previous MI, cardiomyopathy).

Investigations

- Describe bedside, laboratory and radiological investigations including ECG, FBC, TFTs, echocardiogram and U & Es; understand their interpretation

Management

- Explain initial management for palpitations including for SVT, AF and VT.

7. Peripheral oedema and ankle swelling

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration and progression of the swelling including past medical history, cardiac history, medications, and red flags.

Examination

- Perform a general examination checking for pitting or non-pitting oedema, lymphadenopathy, assessment of fluid status and cardiovascular examination.

Differential diagnoses

- Describe important differential causes including cardiac failure, renal failure, liver disease, pelvic mass, drugs, pretibial myxoedema, DVT, chronic venous insufficiency

and lymphoedema. Also consider common causes including long periods of standing, pregnancy and being overweight.

Investigations

- Describe important bedside, laboratory and radiological investigations including ECG, echocardiogram, FBC, U+Es, LFTs, TFTs, D-dimer, USS abdomen / pelvis, and pregnancy test.

Management

- Explain the principles of management of peripheral oedema including initial treatment of underlying conditions, lifestyle advice, elevation of legs, medications and referral for red flags.

Endocrine

8. Abnormal blood sugar (including polydipsia)

By the end of the block students should be able to:

History

- Describe key findings in the history which may indicate abnormal blood sugar such as polyuria, polydipsia, symptoms of hyperglycaemia and hypoglycaemia, as well as features assessing diabetic control, compliance and complications.

Examination

- Do a general examination including findings which may indicate abnormal blood sugar (hyperglycaemia and hypoglycaemia) and diabetic complications including low GCS, confusion, abnormal neurological examination and diabetic foot signs.

Differential diagnoses

- Describe differential diagnoses for symptoms such as diabetes insipidus, neurological conditions, endocrine conditions, iatrogenic causes and intoxication.

Investigations

- Describe investigations for abnormal blood sugar including blood glucose monitoring, glycosylated haemoglobin and follow up monitoring for diabetics.

Management

- Carry out initial management of hypoglycaemia including oral/IV glucose and consider diet, lifestyle advice, oral medications or insulin for acute/chronic hyperglycaemia.

9. Fatigue

By the end of the block students should be able to:

History

- Take a history including current symptoms, lifestyle, drug history, social and past medical history as well as red flags, plus ensure an understanding that fatigue may indicate issues with mood or social circumstances.

Examination

- Demonstrate key features in the examination of a patient with fatigue including general examination, thyroid signs and assessment of mood.

Differential diagnoses

- Identify important differential diagnoses for long-term fatigue including 1) Non-organic (psychological stress / overwork, depression, fibromyalgia, ME). 2) Medication-induced fatigue (beta-blockers, benzodiazepines, corticosteroids) 3) Haematological causes (anaemia, lymphoma); 4) Endocrine causes (DM, hypothyroidism, adrenal insufficiency, vitamin deficiency); 5) Infection (TB, HIV, infectious mononucleosis); 6) Sleep apnoea, CCF, 7) Malignancy 8) Short-term causes including transient infections and difficult life circumstances

Investigations

- Describe important bedside, laboratory and radiological investigations including TFTs, LFTs. FBC, Iron, B12 and Folate levels, plus specialist investigations as indicated.

Management

- Explain drug and non-drug management including lifestyle factors

10. Weight gain/loss

By the end of the block students should be able to:

History

- Take a history including medication, social, dietary history, past medical history and exploration of risks of weight gain (hypertension, hyperlipidaemia, NIDDM, gallbladder disease, sleep apnoea, reduced life expectancy, oesophageal and renal cancer)
- Identify key features in a history including degree of weight loss, if weight loss is intentional or unintentional, associated symptoms and red flags for weight loss.

Examination

- Carry out general examination for signs of anaemia, vitamin deficiency and also consider lymph node examination, abdominal examination (for abdominal tenderness, masses, PR bleeding), as well as looking for signs of Cushing's or thyroid abnormalities.

Differential diagnoses

- Identify important causes of weight gain including excess calorie intake, inadequate exercise, diseases such as hypothyroidism and Cushing's syndrome and drugs which may cause weight gain (anticonvulsants, antidepressants, antipsychotics, oral corticosteroids).
- Regarding weight loss, consider nutritional deficiency, eating disorders, low mood, IBD, hyperthyroidism, coeliac disease and cancer.

Investigations

- Describe important bedside, laboratory and radiological investigations including blood pressure monitoring, FBC, LFTs, TFTs, vitamin levels, calprotectin, blood lipids and coeliac screen.

Management

- Explain approach to management (depending on cause) and include lifestyle advice, nutritional assessment, medication review and referral as appropriate.

General Medicine / Metabolic issues

11. Acid-base abnormalities

By the end of the block students should be able to:

History

- Take a history of symptoms including vomiting, diarrhoea, increasing confusion, breathing problems as well as medication history and past medical history.

Examination

- Carry out an examination eliciting key clinical signs which may help develop appropriate differential diagnoses for acidosis and alkalosis

Differential diagnoses

- Describe the causes of respiratory alkalosis / acidosis and causes of metabolic alkalosis / acidosis along with an understanding of the homeostatic control of pH.

Investigations

- Describe bedside, clinical, laboratory and radiological investigations to investigate a patient with acid-base abnormalities including U& Es, ABG, pH and interpretation.

Management

- Describe the initial management of patients with specific acid base imbalances.

12. Allergies / Anaphylaxis

By the end of the block students should be able to:

History

- Take a history of symptoms - onset, duration, triggers, rash, cough, wheeze, facial swelling and GI symptoms, as well as past medical history and family history of atopy.

Examination

- Carry out a general examination for rashes, swelling, facial oedema and also do a respiratory examination for signs of respiratory distress including stridor and wheeze.

Differential diagnoses

- Identify important differential causes for allergy including anaphylaxis, allergic rhinitis, eczema, adverse drug reactions, angioedema, bites / stings, coeliac disease, contact dermatitis.
- Evaluate other possible differentials for anaphylaxis including idiopathic urticaria, flushing, acute respiratory distress, asthma and vocal cord dysfunction.

Investigations

- Describe important investigations including Tryptase blood tests for anaphylaxis (and the timing that this should be done), skin prick testing, tests for hereditary angioedema, and tests also to diagnose GI conditions such as coeliac disease.

Management

- A-E assessment of the unwell patient.
  Explain initial emergency management for anaphylaxis including adrenaline (or epi-pen), IV fluids, steroids and antihistamines, Explain initial management for allergies including creams, antihistamines, oral steroids and avoiding triggers. Consideration of antibiotics for bites or stings.

13. Deteriorating patient / Sepsis

By the end of the block students should be able to:

History

- Take a history including onset of symptoms, duration, progression, medication and past medical history. Recognise neutropenic sepsis as a medical emergency.

Examination

- Consider A – E assessment. Recognise criteria for sepsis. Examine a deteriorating or septic patient for key features including general examination for signs of infection, shock, and examination of key organ systems (e.g. respiratory, neurological, abdominal and urinary)

Differential diagnoses

- Identify important differential diagnoses including sepsis of chest, urinary or abdominal origin and sepsis of unknown origin.

Investigations

- Describe important bedside, laboratory and radiological investigations including FBC, ABG/VBG, renal and liver function tests, C-reactive protein, lactate, blood cultures, CXR, USS or CT scan.

Management

- Describe the principles of management including rapid antibiotic treatment and IV fluids. Know the Sepsis 6 (Oxygen, IV access and bloods + blood cultures, lactate, IV Abx, IVF, urine monitoring). Escalate as appropriate and recognise complications such as septic shock.

14. Fever

By the end of the block students should be able to:

History

- Take a history including nature of symptoms, associated symptoms such as rigors and specific systemic complaints (e.g. cough, dysuria, abdominal pain, diarrhoea and vomiting)

Examination

- Examine a patient with fever including general examination (temp, pulse, BP, O_2 saturation) and specific examination for abnormal findings that might be present such as reduced air entry to the chest, abdominal tenderness, exudates on tonsils. Examine for source of infection.

Differential diagnoses

- Identify important differential diagnoses including acute phase infection but also polymyalgia rheumatica, SLE, rheumatoid arthritis, drug reactions, and malignancies (haematological, solid tumours – renal, liver colon). Understand the pathophysiology of thermoregulation and pyrexia of unknown origin.

Investigations

- Describe bedside, laboratory and radiological investigations including FBC, CRP, LFTs, U+Es, urinalysis/culture, blood cultures and chest x ray.

Management

- Explain the principles of management including antibiotic therapies, antipyretics and managing the unwell patient symptomatically.

Neurology

15. Dizziness

By the end of the block students should be able to:

History

- Take a history including neurological symptoms, relevant cardiovascular symptoms, medications, and red flags (such as loss of consciousness, weakness and speech disturbance)

Examination

- Carry out a general and neurological examination including cranial nerves examination. Cardiovascular exam where appropriate.

Differential diagnoses

- Identify important differential causes for dizziness including vasovagal attack, orthostatic hypotension, brady/tachyarrhythmia, posterior stroke, hypoglycaemia, partial seizure, migraine variants, hyperventilation and anxiety.

Investigations

- Describe bedside, clinical, laboratory and radiological investigations including blood glucose, ECG, CT scan, MRI brain and their interpretation.

Management

- Explain initial management including medications, lifestyle advice and safety netting.

16. Headache

By the end of the block students should be able to:

History

- Take a history of a patient with headaches including characterising the pain, definitive features and red flags for acute vs chronic headache.

Examination

- Examine a patient with chronic headache (including neurological examination) and explain the findings.

Differential diagnoses

- Identify important differential diagnoses including migraine, tension headache, cluster headache, trigeminal neuralgia, GCA, medication / analgesia headache and sinusitis.

Investigations

- Describe important bedside, laboratory and radiological investigations e.g. CT brain, MRI and their interpretation

Management

- Drug and non-drug management including lifestyle factors.

17. Fits and seizures

By the end of the block students should be able to:

History

- Take a history including symptoms before and after seizure, witness accounts of the event, memory loss, weakness, head injury, tongue biting and loss of bowel/bladder control.

Examination

- Carry out a general examination including assessment of tongue bite, other injuries during seizure, loss of bowel or bladder control and neurological examination including cranial nerve examination. Also examine for injuries from seizure.

Differential diagnoses

- Identify important causes including epilepsy, trauma/bleed to the brain, hypoglycaemia, electrolyte abnormality, migraine and non-epileptic episodes.

Investigations

- Important bedside, laboratory and radiological investigations including head CT, MRI brain, EEG, U+E, blood glucose and FBC.

Management

- Undertake initial management for seizures including A-E assessment (particularly basic airway management) and consideration of medications (e.g. benzodiazepine) if indicated.

18. Stroke

By the end of the block students should be able to:

History

- Take a history of anterior and posterior stroke symptoms, including risk factors such as hypertension, diabetes, smoking, hypercholesterolaemia, carotid stenosis and TIA.

Examination

- Carry out a general and neurological examination including cranial nerves examination and be able to describe key features.

Differential diagnoses

- Identify important differential diagnoses including delirium, syncope, space occupying lesion and demyelination. Relate history and examination findings to the anatomy of the brain to identify areas of the brain affected.

Investigations

- Describe bedside, clinical, laboratory and radiological investigations including CT head, CT angiography, MRI, carotid USS and swallow investigation.

Management

- Understand management principles including thrombolysis medication like alteplase, antiplatelet drugs such as aspirin, and specialist care on stroke units.

Renal and Urinary

19. Acute Kidney Injury / Renal failure

By the end of the block students should be able to:

History

- Take a history of acute kidney injury and renal failure including loin pain, oliguria, diet and fluids, excessive exercise, fatigue, medication history, and possible risk factors.

Examination

- Demonstrate key features of renal disease including fluid status, skin changes, oedema (legs / ankles / feet) and signs of associated conditions like diabetes.

Differential diagnoses

- Describe the physiology involved in AKI and classify causes as pre-renal, renal or post renal.
- Identify important differential diagnoses including pre-renal (severe blood loss, burns, severe hypotension, heart failure), renal (glomerulonephritis, diabetes, infection, drugs – chemotherapy / antibiotics, medication nepropathy) or post-renal (obstruction).

Investigations

- Describe relevant investigations including U+Es, CK, blood glucose, renal USS and renal biopsy.

Management

- Understand principles of management including medications (e.g. diuretics, potassium-lowering drugs, calcium supplements), nutrition, dialysis and referral.

20. Chronic Kidney Disease / Proteinuria

By the end of the block students should be able to:

History

- Take a history of symptoms of chronic kidney disease including swelling, fatigue, skin changes and features of proteinuria including urinary symptoms.

Examination

- Demonstrate general examination as well as key features of the exam including fluid status assessment, skin changes and blood pressure monitoring.

Differential diagnoses

- Identify important differential diagnoses of CKD and proteinuria including renal (glomerulonephritis, diabetes, amyloidosis, SLE, infection, interstitial nephritis), non-renal (burns, severe hypertension, heart failure) and transient proteinuria (vigorous exercise, febrile illness, cold exposure).

Investigations

- Describe relevant investigations including U+Es, urinalysis, blood glucose, renal USS/Doppler and renal biopsy.

Management

- Understand principles of management including medications (e.g. diuretics, blood pressure lowering drugs, calcium / Vit D supplements), nutrition, dialysis and referral.

21. Fluid and electrolyte abnormalities

By the end of the block students should be able to:

History

- Take a history including nature of symptoms, any neurological symptoms, fatigue, diet and fluid history and also associated symptoms such as rigors and systemic complaints (for example, dysuria, abdominal pain, diarrhoea and vomiting).

Examination

- Examine a patient with dehydration or fluid overload including looking for signs of fluid imbalance- whether hyper or hypovolaemic (e.g. skin turgor, dry mucous membranes, JVP).

Differential diagnoses

- Identify common causes of fluid imbalance including dehydration and fluid overload.
- Identify important differential diagnoses including hypo and hypernatraemia, hypo and hyperkalaemia, and what may cause these- including excessive diuretic therapy, acute diarrhoea/vomiting, oliguric renal failure, cardiac failure, SIADH, drugs (anticonvulsants, antidepressants, psychotropics).
- Identify common presentations of hypo and hypercalcaemia and understand what may cause these.

Investigations

- Describe bedside, laboratory and radiological investigations including U&Es, bone profile, plasma osmolality, urine osmolality, CXR and CT brain, and their interpretation.

Management

- Including IV/oral fluids for dehydration and diuretics for fluid overload, supplements for hyponatraemia and hypokalaemia, and emergency initial management of hyperkalaemia.

Respiratory

22. Acute upper respiratory symptoms / Sore throat

By the end of the block students should be able to:

History

- Describe features in a patient presenting with a sore throat **/** upper respiratory symptoms including associated symptoms such as weight loss and fever, red flags and demographics.

Examination

- Carry out a general examination checking for pyrexia, exudates, lymphadenopathy and a respiratory examination.

Differential diagnoses

- Identify important differential diagnoses for upper respiratory symptoms/sore throat including viral and bacterial infections and peritonsillar abscess. Consider use of FeverPAIN score where indicated.

Investigations

- Describe investigations for upper respiratory symptoms / sore throat including FBC and CRP and screening for infectious mononucleosis as appropriate.

Management

- Explain initial management including advice about airway compromise, antibiotic treatment if needed (bacterial) or safety netting / advice if treatment not needed (viral).

23. Breathlessness (non-cardiac)

By the end of the block students should be able to:

History

- Take a history of a patient with breathlessness (non-cardiac cause) including characterisation of symptoms, risk factors, smoking history and past medical history.

Examination

- Carry out a general examination (reduced oxygen saturations, cyanosis), and a respiratory examination eliciting abnormal findings which may be present, including wheeze and crepitations.

Differential diagnoses

- Describe important differential diagnoses for non-cardiac causes of acute breathlessness (including epiglottitis, acute bronchitis, acute asthmatic attack, pneumonia, ARDS, pneumothorax, PE) and chronic breathlessness (asthma, COPD, pleural effusion, bronchiectasis, lung cancer, interstitial lung disease and cystic fibrosis).

Investigations

- Describe the investigations for breathlessness of non-cardiac origin including ABG, FBC, CXR, PEFR, lung function test, ECG, and their interpretation.

Management

- Explain the principles of management (drug and non-drug) for common respiratory conditions (asthma, COPD, pneumonia, pulmonary embolism). Explain to a patient how to use a peak flow meter and keep a diary.

24. Cough (+/- wheeze)

By the end of the block students should be able to describe:

History

- Take a history of a patient with cough and/or wheeze including aggravating and relieving factors, change in voice, history of atopy or GORD, smoking, social and occupational history as well as red flags.

Examination

- Carry out a respiratory examination of a patient with cough (+/-wheeze) including oxygen saturations, breath sounds, and other chest findings.

Differential diagnoses

- Identify important differential diagnoses including asthma and COPD, TB, allergies and GORD.

Investigations

- Describe bedside, laboratory and radiological investigations including CXR, peak flow and spirometry and their interpretation. Consider more specialist investigations, as required,

Management

- Explain the principles of drug and non-drug management including lifestyle factors for the differential diagnoses above.

25. Haemoptysis

By the end of the block students should be able to:

History

- Take a history including onset of symptoms, duration, progression, travel history, associated respiratory symptoms, lifestyle and risk factors / red flags.

Examination

- Carry out general and respiratory examination. Describe key features of the examination including pink tinge frothy sputum of left ventricular failure, deep red flecks in bronchial carcinoma and pulmonary embolism, and the rusty colour sputum in pneumococcal pneumonia.

Differential diagnoses

- Identify important differential diagnoses including acute bronchitis (viral or bacterial bronchitis), exacerbation of chronic bronchitis, bronchial carcinoma, pulmonary embolism, pulmonary tuberculosis, pneumonia, and bronchiectasis.

Investigations

- Important bedside, laboratory and radiological investigations including U&Es, FBC, CRP, chest x ray, infection screen. Consider other specialist investigations.

Management

- Explain the principles of management including antibiotics and specialist referral.

26. Pain on inspiration

By the end of the block students should be able to:

History

- Take a respiratory history including nature of the chest pain (pain on inspiration), associated symptoms such as haemoptysis, VTE risk factors, travel history and red flags.

Examination

- Carry out general, respiratory, and cardiovascular examination including breath sounds, crepitations, oxygen saturations and associated signs like leg oedema, Wells score/PERC score.

Differential diagnoses

- Identify important differentials including pulmonary embolus, pneumonia, pneumothorax and pleurisy.

Investigations

- Describe important bedside, laboratory and radiological investigations including D-Dimer, CXR, CTPA as well as FBC and CRP.

Management

- Understand the principles of management including analgesia, oxygen and treatment of the underlying cause.

Surgery Block Presentations and Learning Outcomes

Below is a list of common and important presentations you should cover during the surgery block in CCE. The presentations are not an exhaustive list; it is to give you an idea of the common conditions that students are expected to come across in the clinical environment.

Breast	**Musculoskeletal**
1. Breast lump; breast tenderness / pain	16. Acute joint pain / swelling, bone pain / swelling
Ear, Nose and Throat	17. Back pain and sciatica
2. Ear Pain	18. Lower limb disorders
3. Epistaxis / Nasal obstruction	19. Upper limb disorders
4. Hearing loss	
5. Hoarseness and voice change	**Ophthalmology**
6. Vertigo	20. Acute change in or loss of vision
	21. Red eye / eye pain
Gastrointestinal / Colorectal	
7. Abdominal distension, mass and ascites	**Urology**
8. Acute abdominal pain	22. Groin / Scrotal swellings and pain
9. Bleeding from the GI tract / Melaena	23. Haematuria, Dysuria / Abnormal urinalysis
10. Change in bowel habit / Diarrhoea and vomiting	24. Urinary symptoms / retention
11. Chronic abdominal pain	**Vascular**
12. Jaundice	25. Limb claudication
13. Swallowing problems / Dysphagia	26. Shock
General	
14. Lump in the neck	
15. Lymphadenopathy	

The key learning outcomes are:

- To take an adequate history and understand relevant differentials.
- Carry out necessary examinations and investigations.
- To understand initial management plans for such conditions.

Breast

1. Breast lump, breast tenderness / pain

By the end of the block students should be able to:

History

- Take a history of a patient with breast lump including characterisation of breast lump, location, pain, associated symptoms and skin changes.

Examination

- Examine the breast for tenderness, erythema, warmth, nipple changes, discharge, etc. as well as understand the anatomy of the breast.

Differential diagnoses

- Identify important differential causes including fibroadenoma, fibrocystic change, breast cancer, breast abscess and fat necrosis.
- Identify skin and subcutaneous lesions such as epidermoid cysts and lipomata that may occur in the breast.

Investigations

- Describe relevant investigations including breast USS, mammography, fine needle aspiration, core biopsy

Management

- Explain screening programme for breast cancer and referral to specialist as appropriate.

Ear, Nose and Throat

2. Ear Pain

By the end of the block students should be able to:

History

- Take a history including onset, duration, pain, radiation, neurological symptoms, systemic symptoms of infection, medication history, and red flags.

Examination

- Carry out ear examination including otoscopy and mastoid tenderness to distinguish otitis media / externa from mastoiditis.

Differential diagnoses

- Identify important causes of ear pain including local causes (otitis media, otitis externa, mastoiditis) and referred pain including tonsillitis, dental abscess (via the auriculo-temporal branch of the trigeminal nerve), temporo-mandibular arthritis, Herpes / Ramsey Hunt syndrome (via the facial nerve), and carcinoma base of tongue (via the glossopharyngeal nerve).

Investigations

- Describe appropriate investigations in patients with a painful ear.

Management

- Explain initial management including advice, analgesia, and other medications as appropriate

3. Epistaxis / Nasal obstruction

By the end of the block students should be able to:

History

- Take a history in a patient with nosebleed (epistaxis) and nasal obstruction including red flags like persistent bleeding, airway obstruction and anticoagulation.

Examination

- Carry out examination of the nose including signs of nasal discharge, nasal blockage

Differential diagnoses

- Identify common and important causes of nosebleed and nasal obstruction including nasal trauma, rupture of mucosa vessels in Little's area, allergic / non-allergic rhinitis, sinusitis, nasal polyps and deviated septum (in nasal obstruction).

Investigations

- Describe relevant investigation including using nasal endoscopy to view the nose

Management

- Explain first aid management of nosebleed and principles of further management of nosebleed. Understand initial management of the common causes of nasal blockage.

4. Hearing loss

By the end of the block students should be able to:

History

- Take a history including nature and onset of hearing loss, one or both ears, other neurological symptoms, medications, and red flags (such as loss of consciousness, weakness and speech disturbance).

Examination

- Examine a patient with hearing loss including Weber / Rinne's test, neurological examination, cranial nerves, and cerebellar signs

Differential diagnoses

- Identify common causes of conductive hearing loss including cerumen or earwax, foreign bodies, infection or otosclerosis. Also consider congenital abnormalities and sensorineural hearing loss including congenital, infection, cerebellar-pontine tumour, vascular, and ototoxic drugs.

Investigations

- Describe relevant investigations including audiometry, blood glucose, viral titres, MRI brain, CT scan and their interpretation

Management

- Explain principles of management of common and important differentials and referral to specialist as appropriate.

5. Hoarseness and voice change

By the end of the block students should be able to:

History

- Take a history in a patient with hoarseness of voice including smoking, alcohol, family history, past medical history and red flags such as weight loss and neck lumps.

Examination

- Demonstrate key features in the examination for hoarseness including the anatomical location of the larynx in the neck, neck lumps, cranial nerves and lymph node examinations.

Differential diagnoses

- Describe causes of hoarseness including acute laryngitis, acid reflux, allergies, smoking, vocal overuse, thyroid problems, benign vocal cord cyst or polyps, recurrent laryngeal nerve injury and laryngeal cancer.

Investigations

- Describe appropriate investigations in a patient with hoarseness / voice change e.g. laryngoscopy, fibreoptic scope, and their interpretation

Management

- Explain initial management of differential diagnoses of hoarseness including referral as appropriate.

6. Vertigo

By the end of the block students should be able to:

History

- Take a history of a patient with vertigo including neurological symptoms, medications, and red flags (such as loss of consciousness, weakness and speech disturbance)

Examination

- Demonstrate key features including examination of the ears, examination of the eyes for nystagmus and neurological examination

Differential diagnoses

- Describe important differentials including vestibular neuronitis, benign paroxysmal positional vertigo, labyrinthitis, Meniere's disease, acoustic neuroma, drug ototoxicity, and brainstem disorders.

Investigations

- Describe relevant bedside, clinical, laboratory and radiological investigations including blood glucose, ECG, CT scan, MRI brain, and their interpretation.

Management

- Explain management including medications, lifestyle advice and safety netting

Gastrointestinal / Colorectal

7. Abdominal distension, mass and ascites

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, alcohol history, possibility of pregnancy and red flags.

Examination

- Carry out general examination, abdominal examination (including signs of liver disease) and rectal examination.

Differential diagnoses

- Describe important differential causes for abdominal distension (6 F's): Fat (obesity); Flatus (obstruction, pseudo-obstruction); Faeces (obstruction); Fluid (ascites, distended bladder), Foetus; and Functional (bloating e.g. IBS)
- Explain the physiology involved in abdominal distension and the mechanisms by which ascites may occur.

Investigations

- Describe bedside, clinical, laboratory and radiological investigations including LFTs, abdominal ultrasound, abdominal CT scan and abdominal paracentesis.

Management

- Explain the principles of management including medical or non-medical management as appropriate

8. Acute abdominal pain (see example on CCE pages)

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, location, duration, characterisation of pain, radiation, any alcohol history and possibility of pregnancy and red flags.

Examination

- General examination plus careful examination of abdomen for tenderness, rigidity, organomegaly, guarding and bowel sounds.

Differential diagnoses

- Describe important differentials including appendicitis, biliary disease, pancreatitis, peptic ulcer disease and a 'surgical sieve' approach to differential diagnoses.

Investigations

- Describe relevant investigations including FBC, U & Es, CRP, LFTs, amylase, abdominal ultrasound and abdominal CT.

Management

- Explain management including analgesia, IV fluids and referral as appropriate.

9. Bleeding from the GI Tract / Melaena

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, pain, type of bleeding, red flags and risk factors.

Examination

- Carry out a general examination including blood pressure, signs of anaemia and liver disease plus a full abdominal examination

Differential diagnoses

- Describe important differential causes for upper GI bleeding (peptic ulcer disease, gastritis/duodenitis, malignancy, Mallory-Weiss tear, oesophageal varices) and associated risk factors (e.g. NSAIDs and aspirin).
- Describe important differential causes for lower GI bleeding including diverticular disease, colorectal cancer, haemorrhoids, AVM, perianal disease and inflammatory bowel disease.

Investigations

- Describe relevant investigations including upper GI endoscopy, sigmoidoscopy, colonoscopy, CT angiography, H. Pylori testing, and understand their interpretation.

Management

- Explain management including IV fluids, blood products if appropriate, medication and referral to specialist care.

10. Change in stool, bowel habit / Diarrhoea and vomiting

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, characterisation of the change in bowel habit, vomiting, red flags such as rectal bleeding, weight loss and aggravating / relieving factors as well as the Bristol stool chart (if appropriate).

Examination

- Carry out a general examination (including lymphadenopathy), abdominal examination (distension, tenderness, bowel sounds, etc.) and rectal examination.

Differential diagnoses

- Describe important differential causes within the GI tract (irritable bowel syndrome, inflammatory bowel disease, infection, bowel cancer, malabsorption) and outside the GI tract (other types of cancer).

Investigations

- Describe relevant investigations including FBC, CRP, U+Es, endoscopy, colonoscopy and CT scan.

Management

- Explain management including fluid replacement if indicated, communication with patients about screening programmes and referral to specialist if appropriate.

11. Chronic abdominal pain

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, characterisation of pain, any change in bowel habit, associated symptoms such as vomiting, red flags such as rectal bleeding, weight loss and aggravating/relieving factors.

Examination

- Carry out a general examination (including enlarged lymph nodes), abdominal examination for distension, tenderness, ascites, and perform a rectal examination.

Differential diagnoses

- Describe important differential causes including biliary colic, peptic ulcer disease, chronic pancreatitis, constipation, inflammatory bowel disease, chronic PID, other gynaecological causes, as well as functional causes such as non-ulcer dyspepsia and IBS.

Investigations

- Describe relevant bedside, clinical, laboratory and radiological investigations including endoscopy, FBC, CRP, amylase, LFTs, abdominal USS, CT scan, and their interpretation.

Management

- Explain initial management including analgesia, laxative types, antibiotics (if required) and referral if appropriate, with safety netting.

12. Jaundice

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, progression, red flags such as painless jaundice, weight loss, ascites and social / alcohol history.

Examination

- Carry out general and abdominal examination looking for signs related to jaundice and possible abdominal causes.

Differential diagnoses

- Describe the pathophysiology associated with the development of jaundice and classify the causes of jaundice into pre-hepatic, hepatic and post-hepatic with knowledge of common examples (hepatitis, hepatic cancer, decompensated liver failure and pancreatic cancer). Distinguish between infectious and mechanical causes of biliary obstruction.

Investigations

- Describe relevant investigations in a patient with jaundice (including interpretation). Identify the components included in LFTs and understand what each represents in terms of liver function and dysfunction. Be aware of additional tests used within the liver screen to further discriminate liver pathologies (hepatitis serology, iron studies, auto-antibodies, alpha1 antitrypsin, USS abdomen). Also be aware of the importance of clotting results with regards to liver dysfunction.

Management

- Explain the principles of initial management of common and important differential diagnoses.

13. Swallowing problems / Dysphagia

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, pain on swallowing, vomiting, regurgitation, neurological symptoms and red flags such as weight loss.

Examination

- Demonstrate key features in the examination including neck tenderness, swelling, mass and lymphadenopathy, as well as any concerning neurological findings.

Differential diagnoses

- Understand that swallowing difficulties may have infective, neurological, muscular or structural causes.
- Describe important differential causes including benign (e.g. gastro-oesophageal reflux, tonsillitis, oesophageal web); malignant strictures; extrinsic compression; motility disorders (e.g. scleroderma, achalasia); myasthenia gravis and bulbar palsy

Investigations

- Describe relevant investigations including upper GI endoscopy, oesophageal manometry, barium swallow, CT head and neck, and understand their interpretation.

Management

- Explain the principles of management including medications, SALT assessment, lifestyle advice on diet / alcohol and referral to specialist if appropriate.

General

14. Lump in the neck

By the end of the block students should be able to describe:

History

- Take a history of the onset of symptoms, duration, smoking and alcohol history and red flags such as rapidly developing lump, airway issues, dysphagia, hoarseness and weight loss.

Examination

- Examine the neck, demonstrating the anatomy of the neck (particularly relating to thyroid gland, lymph nodes and other neck structures) and how to describe neck lumps and lymph nodes.

Differential diagnoses

- Describe common and important differential causes of neck lumps such as cervical lymphadenopathy, goitre, salivary gland disease, branchial cyst, cystic hygroma, thyroglossal cyst and epidermal cyst.

Investigations

- Describe relevant investigations including neck ultrasound, lump biopsy and barium swallow.

Management

- Explain the principles of management of neck lumps including referral as appropriate.

15. Lymphadenopathy

By the end of the block students should be able to:

History

- Take a history timing of lump development, pain and red flags such as weight loss

Examination

- Carry out an examination of the lymphatic drainage system differentiating between generalised lymphadenopathy (presence of palpable lymph nodes in three or more chains) and localised lymphadenopathy.

Differential diagnoses

- Describe possible differential diagnoses for generalised lymphadenopathy including lymphoma, leukaemia, collagen vascular disorders, systemic bacterial, viral, and protozoal infection.

Investigations

- Describe bedside, clinical, laboratory and radiological investigations appropriate to investigate a patient with enlarged lymph node(s) and distinguish between reactive and malignant causes of lymphadenopathy

Management

- Explain the principles of management of common and important differential diagnoses

Musculoskeletal

16. Acute joint pain / swelling, bone pain and swelling

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, characterisation of pain, trauma, and history of autoimmune conditions, as well as any systemic symptoms.

Examination

- Carry out an examination of the joint including tenderness, erythema, warmth, range of movement and systemic signs

Differential diagnoses

- Describe joint anatomy and demonstrate understanding that joint swelling / pain may arise from periarticular structures (bursae, tendons, muscles) or the joint (synovitis, effusion) and may involve one or more joints.
- Describe important differentials including bursitis, tendinopathies, septic arthritis, trauma (haemarthrosis), crystal arthropathy (gout, pseudo-gout), reactive arthritis, seronegative spondylarthropathies, bone cancer and secondaries.

Investigations

- Describe relevant investigations including joint X-ray, USS, joint aspiration, bloods (WCC, ESR, CRP, ACPA, autoimmune screens) and their interpretation.

Management

- Explain the principles of management including analgesia, DMARDS and referral if appropriate.

17. Back pain / Sciatica

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, characterisation of pain, trauma, past medical history and red flags such as saddle anaesthesia, incontinence, foot drop and weakness.

Examination

- Demonstrate key features in the examination of the back including tenderness, swelling, erythema, warmth, range of movement, etc. Do a full upper and lower lib examination, including plantar reflexes and PR.

Differential diagnoses

- Describe the anatomy of the spine and the mechanisms by which back pain and radicular pain (sciatica) may occur
- Describe important differential causes for back pain including mechanical back pain, disc herniation, lumbar spine stenosis, vertebral trauma / fracture, spondyloarthropathies (inflammatory), spinal tumour, spinal infection, spondylolisthesis and cauda equina syndrome.

Investigations

- Describe relevant investigations including spine X-ray / MRI, USS, Bloods (WCC, ESR, CRP) and their interpretation

Management

- Explain initial management including analgesia, physiotherapy and lifestyle advice.

18. Lower limb disorders

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration and progression in patients suffering from hip or knee problems including pain, weakness, limitation of movement, etc.

Examination

- Demonstrate important findings in the examination of the hip and knee joints which help differentiate between causes

Differential diagnoses

- Describe the anatomy of the lower limb including the vascular and nerve supply
- Describe differential diagnoses for lower limb disorders including soft tissue injuries, bony injuries, tendon injuries and neurovascular causes including diabetic neuropathy.

Investigations

- Describe relevant investigations including X-Rays, doppler ultrasound and nerve conduction studies.

Management

- Explain the principles of management in patients with hip and knee problems including analgesia, physiotherapy and lifestyle advice.

19. Upper limb disorders

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration and progression in patients suffering from shoulder or elbow problems including pain, weakness, limitation of movement, neck pain, muscle strength along the whole upper limb, including grip strength.

Examination

- Demonstrate important findings in the examination of the neck, shoulder and elbow joints which help differentiate between causes.

Differential diagnoses

- Describe the anatomy of the upper limb including the vascular and nerve supply
- Describe differential diagnoses for upper limb disorders including soft tissue, bony, nerve, tendon and vascular injuries and nerve compression.

Investigations

- Describe relevant investigations including X-Rays, doppler ultrasound and nerve conduction studies.

Management

- Explain the principles of management in patients with shoulder and elbow problems including analgesia, physiotherapy and lifestyle advice.

Ophthalmology

20. Acute change in or loss of vision

By the end of the block students should be able to:

History

- Take a history of a patient with acute change in or loss of vision including onset, duration, progression, presence or absence of pain, neurological symptoms and history of trauma.

Examination

- Demonstrate examination of the eye including the anatomy and physiology of the orbit, ophthalmoscopy and neurological examination.

Differential diagnoses

- Describe common and important differential diagnoses such as retinal detachment, optic neuritis, retina haemorrhage, central retina vascular occlusion, and attacks of acute narrow angle glaucoma.
- Understand which of these are ophthalmological emergencies.

Investigations

- Describe relevant investigations in a patient with acute change in or loss of vision

Management

- Explain the principles of management of visual loss including referral to ophthalmology

21. Red eye / Eye pain

By the end of the block students should be able to:

History

- Take a history of a patient with red eye, eye pain and discomfort including associated features, trauma, infective symptoms, past medical history and medications.

Examination

- Demonstrate examination of the eye including the anatomy and physiology of the orbit, ophthalmoscopy (eliciting corneal and pupillary reflexes) and neurological examination.

Differential diagnoses

- Describe common differentials including acute conjunctivitis, herpetic eye disease, acute iritis, corneal abrasion, narrow angle glaucoma, ocular hypertension, trauma and allergy. Understand which of these could be sight-threatening.

Investigations

- Describe relevant investigations in a patient with red eye or eye pain

Management

- Explain the principles of management of common causes of red eye and eye pain including referral to ophthalmology.

Urology

22. Groin / Scrotal swellings and pain

By the end of the block students should be able to describe:

History

- Take a history of the onset of symptoms, duration, progression, pain, and red flags

Examination

- Carry out abdominal and genital examination including tenderness, reducibility and cremasteric reflex. Note the lie of the testicle, check for erythema and swelling and feel for any knots in the spermatic cord.

Differential diagnoses

- Describe important differential causes for groin swellings including hernias, lymph nodes, and scrotal swelling (inguinal hernia, hydrocoele, varicocoele, testicular tumours, epididymal cyst), scrotal pain (testicular torsion, epidiymo-orchitis, strangulated hernia).
- Explain the anatomy and embryology of the inguinal canal and scrotum

Investigations

- Describe relevant investigations including urinalysis, abdominal / scrotal ultrasound and abdominal CT.

Management

- Explain initial management including pain relief, surgical referral when appropriate e.g. testicular torsion as an emergency

23. Haematuria, Dysuria and Abnormal Urinalysis

By the end of the block students should be able to:

History

- Take a history of the symptoms including pain during or after urination, presence of blood, risk factors and red flags as well as other causes of red urine like menstrual blood, food and medications (beetroot, rifampicin, clofazimine, anticoagulants)

Examination

- Describe key features in the examination including abdominal / renal angle tenderness, rectal examination and pelvic examination in women.

Differential diagnoses

- Describe important differential causes of haematuria (UTI, tumours – renal / bladder cancers; stones – renal / ureteric; renal disease – Goodpasture's syndrome, post-streptococcal glomerulonephritis; trauma – kidney / urethra; iatrogenic – catheterisation, prostate – BPH, cancer) and dysuria (including lower urinary tract infection, inflammation – cystitis, urethritis).

Investigations

- Describe relevant investigations including urinalysis, urine culture, cytology, USS KUB, cystoscopy, CT urogram and their interpretation

Management

- Explain the principles of management including medications for pain relief, antibiotics and referral as appropriate.

24. Urinary symptoms and retention

By the end of the block students should be able to:

History

- Take a history of type, onset, duration of urinary symptoms, fluid intake, red flags such as haematuria, weight loss and risk factors for urinary retention

Examination

- Describe key features of the examination including abdominal, pelvic, and prostate examination where appropriate.

Differential diagnoses

- Explain the mechanisms by which urinary retention occurs: obstruction of the urethra, weakened bladder muscle and innervation problem.
- Describe common and important causes of urinary retention including BPH, urethral stricture, medication (e.g. anticholinergics, tricyclic antidepressants, calcium channel blocker), damage to the nervous system (e.g. Parkinson's, multiple sclerosis and Alzheimer's disease). In women consider large cystocele, pregnancy, fibroid or ovarian cyst obstructing the urethra.

Investigations

- Describe relevant investigations including bladde scan for volume, urinalysis / culture, urine cytology, pelvic / rectal / KUB USS, PSA, cystoscopy and CT urogram.

Management

- Explain the principles of management of urinary retention including catheterisation and treatment of underling cause

Vascular

25. Limb claudication

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, exercise tolerance, progression, smoking history, cardiac disease and medication history.

Examination

- Carry out a general examination and limb examination including peripheral pulses and ankle brachial pressure index.

Differential diagnoses

- Describe the arterial supply to the lower limb and understand epidemiology of peripheral arterial disease and risk factors.

Investigations

- Describe relevant investigations to investigate a patient with peripheral arterial disease including an Ankle Brachial Pressure Index (ABPI), USS Doppler, limb angiography, and their interpretation.

Management

- Explain the principles of management of peripheral arterial disease including lifestyle, medications and surgical interventions

26. Shock

By the end of the block students should be able to:

History

- Key features of the history in a patient with shock- including the types of shock

Examination

- Carry out the examination of a patient with shock including A-E assessment demonstrating the understanding of shock as a clinical syndrome characterised by inadequate systemic and tissue perfusion.

Differential diagnoses

- Describe common / important causes of shock including hypovolaemic (haemorrhage and other fluid losses), cardiogenic (MI, arrhythmias, etc.), obstructive (tension pneumothorax, cardiac tamponade), and distributive shock (anaphylactic and neurogenic shock).
- Understand the categories of hypovolaemic shock,

Investigations

- Describe relevant investigations including FBC, Group and save, X-match, blood cultures, serum lactate, chest x-ray, ultrasound, echocardiogram, and CT scan – all depending upon presentation

Management

- Explain the principles of management of different types of shock including Sepsis 6 bundle (oxygen, IV fluids, blood cultures, IV antibiotics, lactate/bloods and urine output). Always give blood in hypovolaemic shock. Be aware of the massive haemorrhage protocol.

Specialties Block Presentations and Learning Outcomes

Below is a list of common and important presentations you should cover during medicine block in CCE. The presentations are not an exhaustive list; it is to give you an idea of the common conditions that students are expected to come across in the clinical environment.

Child health

1. Development in the healthy child / developmental delay
2. Fever in a child
3. Newborn screening / assessment

Care of the elderly

4. Frailty / Impact of chronic disability
5. Falls

Dermatology

6. Pruritus / Acute and chronic rashes
7. Skin infections and skin ulcers
8. Skin lesion / Skin lump

Haematology

9. Anaemia / Pallor
10. Bruising and bleeding tendency / Hypercoagulability

Mental health

11. Acute Confusion / Delirium
12. Anxiety, Phobias, OCD
13. Low mood / Elated mood / Hallucinations
14. Memory loss, chronic confusion
15. Substance misuse and addiction

Other

16. Acute and chronic pain management

Rheumatology

17. Chronic joint pain and stiffness

Women's health: Gynaecology

18. Cervical screening / Cervical smear
19. Contraception request / advice
20. Genital discharge / Genital ulcers and warts
21. Menopausal problems
22. Menstrual problems

Women's health: Obstetrics

23. Antenatal care, screening / risk assessment
24. Labour
25. Normal pregnancy / physiology of pregnancy
26. Puerperium and difficulty in breast feeding

The key learning outcomes are:

- To take an adequate history and understand relevant differentials
- Carry out necessary examinations and investigations
- To understand initial management plans for such conditions

Child Health

1. Development in the healthy child / developmental delay

By the end of the block students should be able to:

History

- Take a developmental history covering normal developmental domains / milestones such as vision, hearing, speech, social interaction and walking, as well as social history and safeguarding.

Examination

- Demonstrate key features of the examination to assess normal development.

Differential diagnoses

- Identify failure to thrive, its common causes and other reasons for developmental delay.

Investigations

- Describe the relevant investigations to investigate a child with developmental delay.

Management

- Explain the principles of management of important differential diagnoses of developmental delay.

2. Fever in a child

By the end of the block students should be able to:

History

- Take a history of fever in child including onset, duration, associated symptoms, urinary output, past medical history, illness of other family members, immunisation status, recent travel, etc.

Examination

- Identify key features of the examination which help differentiate between various causes of this presentation. Understand the NICE guidance for the 'Traffic light system' for paediatric examination and the unwell child.

Differential diagnoses

- Describe important causes of fever in children (including viral infection, otitis media, tonsillitis, pneumonia, UTI, septicaemia and meningitis).
- Understand that children of different ages may need different investigations.

Investigations

- Describe investigations appropriate to investigate a child with fever e.g. septic screen (including interpretation), or where a child may not require investigations.

Management

- Explain the principles of management of fever in a child, bearing in mind most febrile children have a brief self-limiting viral infection. Know simple measures of treating a self-limiting viral infection.

3. Newborn screening and assessment

By the end of the block students should be able to:

History

- Take a pregnancy and birth history, including investigations and interventions needed.

Examination

- Understand how to carry out a routine examination of the newborn including measurement of height, weight and head circumference. Carry out a physical examination of heart, eyes, hips and testes (in males) and examine for any abnormal

features such as birthmarks. Be able to identify concerning conditions such as cyanosis, respiratory distress (grunting) and fits in the newborn.

Differential diagnoses

- Describe the screening tests carried out in the newborn including hearing test and Guthrie test (blood spot test) which tests for sickle cell disease, cystic fibrosis, congenital hypothyroidism and inherited metabolic diseases.

Investigations

- Describe the clinical, laboratory and radiological investigations appropriate to investigate a newborn baby, where appropriate.

Management

- Explain the principles of management of common conditions found in the newborn.

Care of the elderly

4. Frailty / Impact of chronic disability

By the end of the block students should be able to:

History

- Identify key features in the history relating to frailty / chronic disability that would support the development of appropriate differential diagnoses.

Examination

- Describe key features in the examination of a frail patient or patient with chronic disability.

Differential diagnoses

- Recognise the possibility of multiple sclerosis, Parkinson's disease, and motor neurone disease in patients presenting with neurological symptoms and relate the major clinical findings to the underlying pathology.
- Consider the clinical frailty scoring system (CFS) and how polypharmacy may affect the patient.

Investigations

- Describe investigations to investigate a patient presenting with symptoms of these conditions (including their interpretation).

Management

- Explain the principles of management of frailty and chronic disability and the role of the multidisciplinary team.

5. Falls

By the end of the block students should be able to:

History

- Take a history of the preceding symptoms, how the fall happened, dizziness, loss of consciousness, any injuries sustained, unsteadiness of gait, risk factors, home environment, medications, social, family, and past medical history, including previous history of falls.

Examination

- Examine a patient with falls and identify clinical features which may help develop appropriate differential diagnoses including complications such as lacerations, fractures, and head injuries.

Differential diagnoses

- Describe possible differential causes of fall including mobility/balance problems, stroke, syncope, arthritis, muscle weakness, visual impairment, cognitive impairment, depression, alcohol misuse, chronic health conditions (e.g. heart disease,

hypotension), medications (e.g. benzodiazepines), polypharmacy, and home hazards.

Investigations

- Describe relevant investigations of a patient with fall including ECG, lying and standing blood pressures, blood glucose, bloods (where relevant), X-rays, MRI scan, LFTs, including their interpretation.
- Also consider doing a CK if long lie.

Management

- Explain the principles of management of falls including, pain relief, falls risk assessment, prevention advice, medication review, occupational and physiotherapy review and social care support (home hazard assessment / adaptations).

Dermatology

6. Pruritus, Acute / Chronic Rashes

By the end of the block students should be able to:

History

- Identify the key features of the history including duration of onset (acute or chronic), triggers and occupational / other risk factors such as systemic disease.

Examination

- Examine a patient with pruritus or skin rash and describe the rash in a systematic way (site / distribution; morphology - shape, pattern); configuration (linear, grouped, annular) to generate appropriate differentials.

Differential diagnoses

- Describe the causes of severe pruritus such as scabies, urticaria, eczema, insect bites, dermatitis herpetiformis, lichen planus and generalised itching (renal, liver, haematological).
- Describe causes of acute skin rashes including erythroderma, dermatitis (contact, atopic seborrheic), drug eruptions (including Stevens-Johnson syndrome, toxic epidermal necrolysis), urticarial, infective (e.g. herpes, varicella, impetigo), and purpuric (meningococcal, septic emboli).
- Describe causes of chronic skin rashes including acne vulgaris, lichen planus, eczema, psoriasis, seborrheic warts, and also infective causes – fungal (tinea pityriasis versicolor, trichophyton, athletes foot), TB (lupus vulgaris).
- Also consider systemic causes such a coeliac disease, diabetes mellitus, chronic inflammatory condition, autoimmune disease and vasculitis.

Investigations

- Describe clinical, laboratory and radiological investigations appropriate to investigate a patient with pruritus and rash including FBC, LFT, U & Es, patch testing, skin scraping for microscopy/culture and serology for autoimmune disease.

Management

- Describe the principles of management of common skin problems such as eczema and psoriasis.

7. Skin infections and skin ulcers

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, and progression of the skin lesion/infection, including risk factors for the development of venous, arterial and neuropathic ulcers as well as pressure sores. Consider asking about contacts of infectious skin diseases.

Examination

- Examination of the skin looking for signs of venous or arterial disease as well as general examination.
- Examine a patient and describe the lesion in a systematic way (site / distribution; morphology - shape, pattern); configuration (linear, grouped, annular) to generate appropriate differentials.

Differential diagnoses

- Recognise viral skin infections (e.g. viral warts, molluscum contagiosum, herpes simplex / zoster); bacterial infections (e.g. folliculitis, impetigo, streptococcal cellulitis) and fungal infections (e.g. candida, tinea and pityriasis versicolor).
- Understand how to differentiate between venous and arterial ulcers.

Investigations

- Describe investigations appropriate to investigate skin infections and ulcers

Management

- Describe the principles of management for the common types of skin infection and ulcer.

8. Skin lesion / Skin lump

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration and progression as well as red flags.

Examination

- Describe the anatomy of the skin and its three layers and describe skin lumps in terms of location and morphology
- Describe the examination findings in a patient with skin lump or lesion (**A**symmetry, **B**order irregularity, **C**olour variation, **D**iameter, **E**volving) to generate appropriate differentials.

Differential diagnoses

- Identify common benign skin lumps including warts (verruca), seborrheic warts, lipoma, ganglion cysts, keloids, dermatofibroma and naevi.
- Describe pre-malignant and malignant skin conditions, including basal cell carcinoma, Bowen's disease (intra-epidermal carcinoma), squamous cell carcinoma and malignant melanoma.

Investigations

- Describe relevant investigations appropriate to investigate a patient with skin lump or lesion including biopsy.

Management

- Explain the principles of management of common differential diagnoses.
- Explain the mechanisms by which ultra-violet light leads to the development of skin malignancies.

Haematology

9. Pallor / Anaemia

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration and progression including fatigue, bleeding, palpitations, chest pain, shortness of breath, diet, and red flags such as weight loss and night sweats.

Examination

- Perform a general examination of a patient eliciting clinical signs of anaemia and any other red flags such as lymphadenopathy or cachexia.

Differential diagnoses

- Describe common types of anaemia (iron deficiency, B_{12} and folate deficiency), the morphological patterns and their underlying causes. Understand the normal requirements of erythropoiesis.

Investigations

- Describe investigations appropriate to investigate a patient with anaemia including FBC, serum B_{12} and folate levels, potentially blood film, and their interpretation.

Management

- Explain the principles of management of patients with common anaemias (iron deficiency, B_{12} and folate deficiency).

10. Bruising and Bleeding tendency / Hypercoagulability

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, medications, social history, past medical history, family history, and risk factors which may help differentiate between causes of bleeding, bruising or hypercoagulability.

Examination

- Make a clinical assessment of a patient with suspected thrombo-embolic disease, and the scoring system used to evaluate risk of thromboembolism (e.g. Wells score)
- Examine for evidence of obvious bruising, pallor, lymphadenopathy and any haemarthrosis.

Differential diagnoses

- Explain the clotting pathways and identify points in the pathways associated with common bleeding and hyper-coagulation disorders.
- Explain the inheritance of common genetic bleeding (e.g. Haemophilia, von Willebrand disease) and the risk factors for hyper-coagulation disorders.

Investigations

- Describe investigations to investigate a patient with bleeding tendency (clotting screen, coagulation factor assay, VWF antigen) and those that would help identify an underlying cause for thrombo-embolism. (autoimmune screen, Factor V Leiden)

Management

- Explain at which point in the pathway common anti-coagulant drugs work; consider their risks, benefits and side effects.

Mental health

11. Acute confusion / Delirium

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration and progression in acute confusion including eliciting red flags such as neurological symptoms or head injury.
- Also consider taking a collateral history from family or NOK.

Examination

- Undertake general and neurological assessment in a patient with confusion / delirium

Differential diagnoses

- Describe common causes of delirium/confusion such as alcohol, pain, drugs (opioids, benzodiazepines, antipsychotics), hypoxia/hypercapnia, metabolic (hypo/hyperglycaemia, hyponatremia, hypercalcemia), constipation, urinary retention, infection (CNS/Non-CNS) and intracranial injury,
- Understand confusion as global impairment of mental function and delirium as an abrupt decline in cognitive function that follows a fluctuating course.

Investigations

- Describe bedside, clinical, laboratory and radiological investigations to investigate a patient with acute confusion / delirium (e.g. Confusion Assessment Method, Abbreviated Mental Test, Mini-Mental State Examination (MMSE), metabolic screen, U&Es, urinalysis, FBCS, U & Es, CRP, Calcium)

Management

- Explain the management of common causes of acute confusion and delirium.

12. Anxiety / Phobias / OCD

By the end of the block students should be able to:

History

- Take a detailed history, characterise risk factors and severity of depression/anxiety symptoms. Be able to assess capacity, and protective/non protective factors.

Examination

- Perform a mental state examination (MSE) and use screening tools for anxiety and depression (eg. GAD-7) - to give diagnosis and severity.

Differential diagnoses

- Understand the definitions of anxiety, phobias and OCD, plus epidemiological classifications and their manifestations.

Investigations

- Describe investigations appropriate to investigate a patient with anxiety, phobias and OCD (including their interpretation). For example, TFTs in a patient with anxiety.

Management

- Explain the principles of management of anxiety, phobias and OCD including the biopsychosocial model to manage generalised anxiety disorder.

13. Low mood / Affective problems / Hallucinations

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration, progression and in particular screening questions that help recognise people at risk of depression or psychosis (those who may have harmful risk factors rg. Isolation). Be aware of the social stigma of mental illness.

Examination

- Assess depression severity using commonly used tools such as PHQ 9. Be able to perform a mini mental state examination.

Differential diagnoses

- Understand that depression is a state of low mood and aversion to activity that can affect a person's thoughts, behaviour, feelings, and sense of well-being. It is a broad and heterogeneous diagnosis, which has depressed mood and/or loss of pleasure in most activities central to it.
- Understand that psychosis is a mental health problem that causes people to perceive or interpret things differently from those around them. This might involve hallucinations or delusions as well as disturbed, confused, disrupted patterns of thought and/or lack of insight
- Describe the criteria for diagnosis of depression/psychotic disorders using the DSM or ICD classification system/

Investigations

- Describe investigations useful in looking for an organic cause for psychiatric problems. Eg, TFTs for hypothyroidism

Management

- Describe the derangements in neurotransmitters in psychiatric illness
- Explain the principles of management including medication, CBT, social support and the long-term effects of psychiatric illness on physical health.

14. Memory loss, chronic confusion

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration and progression of memory loss and chronic confusion and identify features that supports the development of appropriate differential diagnoses. (eg tremor for FTD)

Examination

- Carry out a general and neurological examination of a patient with memory loss and chronic confusion.
- Do an MMSE or similar scoring system.

Differential diagnoses

- Describe common and important causes of 1) Chronic cognitive impairment (Alzheimer's, vascular disease) 2) Reversible causes (Vitamin B_{12} / folate deficiency, hypothyroidism, normal pressure hydrocephalus, neurosyphilis, Wilson's disease) and 3) Other less common causes (multiple sclerosis, Korsakoff's psychosis, Huntington's disease, frontal-temporal dementia).

Investigations

- Describe investigations appropriate to investigate a patient with memory loss / dementia including 6CIT, MRI brain, TFTs, serum B_{12} and folate, and their interpretation.

Management

- Explain the principles of management of common differential diagnoses including medication and social / home support.
- Explain dementia as a chronic progressive decline in cognitive function without disturbance of consciousness.

15. Substance misuse and addiction (including alcohol)

By the end of the block students should be able to:

History

- Describe key features in the history (including the use of CAGE and FAST questionnaires for alcohol) as well as asking for any patient symptoms of liver disease.

Examination

- Do full general, abdominal, and cardiovascular exam. Look for key features in the examination findings that would support the development of appropriate differential diagnoses of drug and alcohol abuse.

Differential diagnoses

- Explain to the patient the risks of alcohol addiction; gastritis, pancreatitis, chronic liver disease, seizures, hypertension.
- Explain to the patient the risk of drug abuse: infections – STDs, HIV, Hepatitis B&C, lung abscess; injury – thrombophlebitis, DVT; overdose – rhabdomyolysis/renal failure and respiratory failure, as well as brain abnormalities with alcohol and substance misuse.

Investigations

- Describe bedside, clinical, laboratory and radiological investigations would be appropriate to investigate a patient with drug and alcohol abuse including LFTs, GGT, amylase, drug screening, infection screen, USS, CT head and endoscopies.

Management

- Explain the principles of management of substance / alcohol abuse (including epidemiology, risk factors), prevention strategies and the support available including neurological intervention.
- Outline the psychosocial perspectives and epidemiology of illegal drugs of abuse (cannabis, heroin, cocaine, 'legal highs'), their sources, symptoms of use, and clinical impact.".
- Know where to refer for alcohol and drug misuse.

Other

16. Acute and chronic pain management

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration and progression including characterisation of pain (type, location, duration, radiation). Eg SOCRATES

Examination

- Examine a patient to characterise sources and types of pain.

Differential diagnoses

- Explain the pathophysiology of pain, including pain pathways for somatic and neuropathic pain.
- Consider potential underlying causes of pain.

Investigations

- Describe bedside, clinical, laboratory and radiological investigations for various types of pain, as appropriate.

Management

- Describe pharmacological and non-pharmacological interventions for pain relief, and their mechanisms of action.
- Describe which analgesic approach would be most appropriate for common cases of pain using the WHO pain ladder and the principles of management of neuropathic pain.
- Identify drug classes commonly used in the management of pain: their mechanisms of action and common side effects (paracetamol, non-steroidal anti-inflammatory drugs, opiates).

Rheumatology

17. Chronic joint pain and stiffness

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration and progression including family history and past medical history of autoimmune conditions, plus any systemic symptoms (rashes, eyes etc).

Examination

- Describe key features of the examination findings including multi-system manifestations of autoimmune processes (e.g. bowel, skin and eyes) and assess severity of hip/knee degenerative changes.
- In small joint disease, explore handedness and functionality.

Differential diagnoses

- Describe common and important causes of chronic joint pain and swelling including rheumatoid arthritis (RA), osteoarthritis (OA), seronegative spondyloarthropathies (e.g. ankylosing spondylitis, psoriatic arthropathy), crystal arthropathy (chronic tophaceous gout, pseudogout), vasculitides (SLE), and systemic sclerosis.

Investigations

- Describe relevant investigations including autoantibodies (HLA-B27, rheumatoid factor, anti-nuclear antibodies etc), joint aspiration and interpret the major radiological changes of OA (hip and knee) and of RA of the hand.

Management

- Explain the principles of management including pain relief, drugs (steroids, DMARDS, Mabs), physiotherapy, occupational therapy, rehabilitation and surgery.

Women's Health: Gynaecology

18. Cervical Screening / Cervical Smear

By the end of the block students should be able to:

History

- Take a history from a patient with abnormal cervical smear result

Examination

- Understand how examination of the cervix is done

Differential diagnoses

- Describe the role of Human Papilloma Virus (HPV) in the development of abnormal cervical pathology and high-risk HPV (HPV16 and HPV18) link to cervical cancer

Investigations

- Describe the current cervical screening programme, the age group and frequency of screening. Understand the use of liquid-based cytology and the principles of colposcopy

Management

- Understand the role of HPV vaccination in protecting against high-risk HPV and the age group recommended for vaccination (12 -18 years)

19. Contraception request / advice

By the end of the block students should be able to:

History

- Identify key features in the history that would be important for consideration in the choice of contraception including social aspects and risk factors for thrombosis and cancers

Examination

- Describe examination findings which may support contraceptive choice

Differential diagnoses

- Outline the merits and disadvantages of the variety of contraceptive methods available to patients including: natural methods, barrier (male/female condom, diaphragm, caps), hormonal (combined and progesterone-only via oral, transdermal, subdermal, intramuscular routes), intrauterine contraception (copper or progestogen), sterilisation (male/female), post-coital emergency methods (progestogen, intrauterine contraceptive device).

Investigations

- Describe appropriate tests to investigate potential side effects of contraceptives (such as thrombosis, hypertension, etc.)

Management

- Demonstrate a basic knowledge of reversible, irreversible and post-coital emergency contraception including the various methods, their mode of action, efficacy, contraindications and complications.
- Understand the methods by which contraception can be achieved: gamete suppression, modulation of the cervical mucus, endometrial changes, prevention of implantation, and interruption of the communicating tubes.
- Explain why contraception is important on a national and global scale and the need to respect cultural and religious beliefs as well as sexual diversity.

20. Genital discharge / Genital ulcers and warts

By the end of the block students should be able to:

History

- Describe key features of the history (including genito-urinary / sexual history) and findings from the examination which help differentiate between causes

Examination

- Undertake genital examination with sensitivity and dignity to patients

Differential diagnoses

- Describe common and important causes of genital discharge (chlamydia, gonorrhoea, candida, bacterial vaginosis, trichomonas vaginalis) and genital ulcers (herpes, syphilis, reactive arthritis)

Investigations

- Describe relevant investigations in a patient with genital discharge and ulcers

Management

- Explain the principles of management of patients with genital discharge or ulcer including contact tracing and ways of limiting the spread of infection

21. Menopausal problems

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration and progression including recognition of the need for oestrogen replacement in the individual patient based on symptomatology and/or future risk of degenerative disorders.

Examination

- Identify key features in the examination including general, cardiovascular and thyroid examinations.

Differential diagnoses

- Discuss appropriate differentials including hyperthyroidism and explain the hypothalamic-pituitary-gonadal (HPG) axis.

Investigations

- Describe tests to investigate a patient with menopausal symptoms including oestrogen, FSH, LH, TFT, including their interpretation.

Management

- Explain the principles of management of menopausal symptoms, the indications for different types of HRT and the advantages and disadvantages of hormone replacement therapy.
- Communicate the concept of disease prevention to the patient with special reference to cardiovascular disease and osteoporosis

22. Menstrual problems

By the end of the block students should be able to:

History

- Take a history of the onset of symptoms, duration and progression including pain, heaviness of bleeding, IMB, PCB, pattern of cycle, effect on social / occupational life.

Examination

- Perform an appropriate abdominal and pelvic examination for menstrual problems.

Differential diagnoses

- Describe appropriate differential diagnoses including amenorrhoea, menorrhagia, metrorrhagia, dysfunctional uterine bleeding and postmenopausal bleeding.
- Explain the physiology of normal menstruation and common causes of abnormal menstruation

Investigations

- Describe bedside, clinical, laboratory and radiological investigations to investigate a patient with abnormal menstruation including pelvic USS, endometrial biopsy, hormonal profile – TFTs, prolactin, FSH/LH

Management

- Explain the principles of management of common causes and the concerns which a patient might have.

Women's health: Obstetrics

23. Antenatal care, screening and risk assessment

By the end of the block students should be able to:

History

- Take an obstetric history including past obstetric history and mode of delivery

Examination

- Examine the pregnant abdomen and auscultate the foetal heart beat

Investigations

- Describe routine antenatal screening tests including urine (urinalysis), blood tests (FBC, Blood Group / Rhesus type, thalassaemia), infection screen (HIV, Hepatitis B, Syphilis) and dating scan/mid-trimester anomaly scan.
- Understand when additional screening tests are needed e.g. sickle cell disease screening in at risk group and eye screening in women with diabetes.

Management

- Outline pre-conceptual care, the use of folic acid preconception and the nutritional requirements / lifestyle changes in pregnancy
- Explain the importance of 1st and 2nd trimester screening tests for congenital abnormalities and the markers used.
- Explain genetic modes of inheritance and common structural abnormalities in the foetus resulting from abnormal development.
- Describe routine vaccination in pregnancy (e.g. influenza vaccine, combined diphtheria/tetanus/polio/pertussis vaccine) and when additional vaccination is required e.g. Hepatitis B in those at risk
- Outline schedules of routine antenatal care, midwifery care for low-risk women and the use of Anti-D.
- Explain the principles of risk assessment in pregnancy, the risks of drug treatment and the risks of substance abuse in pregnancy.
- Demonstrate an awareness of the patient's autonomy (e.g. informed maternal choice) and be aware of the legal rights of pregnant women.

24. Labour

By the end of the block students should be able to:

History

- Take a good history of the key features of labour including characterisation of pain and other symptoms.

Examination

- Demonstrate the key features in the examination of the pregnant abdomen, pelvis and perineum including episiotomy cuts.

Differential diagnoses

- Describe the various stages of normal labour including anatomy of the pelvis and mechanism of normal labour.

Investigations

- Describe the clinical and laboratory investigations that would be appropriate to investigate a patient in labour.

Management

- Explain maternal and foetal wellbeing monitoring including use of the partogram and awareness of multi-professional working.
- Fully participate, assist, or conduct a normal vaginal delivery under supervision.
- Outline the principles for the choice of mode of delivery by the mother in partnership with healthcare professionals and the legal status of the foetus and the mother.
- Explain the various types of pain relief in labour, their use, limitations and / or side effects.

25. Normal pregnancy and physiology of pregnancy

By the end of the block students should be able to:

History

- Take an obstetric history including past obstetric history and mode of delivery.

Examination

- Examine the pregnant abdomen and auscultate the foetal heart beat.

Differential diagnoses

- Describe the physiological changes that happen during pregnancy including homeostatic changes, prothrombotic changes (coagulation factors, Protein C, S, etc).

- Describe the changes in body systems / organs that accompany pregnancy including cardiovascular, renal, GI and immune systems.

Investigations

- Describe relevant investigations including health checks during pregnancy, ultrasound and CTG

Management

- Explain the hormonal changes during pregnancy, sources of the hormones, their effects and the developmental processes including the feto-placental unit.
- Explain the principles of management of common conditions during pregnancy including hypertension and diabetes mellitus.

26. Puerperium and difficulty in breast feeding

By the end of the block students should be able to:

History

- Take a history during puerperium and understand the definition of puerperium as the time from the delivery of the placenta to the end of the 6th postnatal week.

Examination

- Carry out relevant examination (general, breast, abdominal, pelvic) during the puerperium.

Differential diagnoses

- Describe the physiological changes during the puerperium including uterine involution, changes in lochia, changes in plasma volume / red cell mass and lactation.

Investigations

- Describe bedside, laboratory and imaging tests which may be appropriate during puerperium.

Management

- Explain the importance of breastfeeding / awareness of breastfeeding initiatives difficulty establishing breastfeeding and common breast problems such as nipple pain, nipple cracking, breast engorgement, mastitis.
- Be able to advise on postpartum contraception.
- Demonstrate an awareness of the roles of other healthcare professionals (e.g. midwives, health visitors, physiotherapists) during puerperium.

Learning Outcomes for GP Days in CCE

1. Apply to medical practice biomedical scientific principles, methods and knowledge

By the end of CCE students should be able to:

- Select appropriate forms of management for common diseases, and ways of preventing common diseases, and explain their modes of action and their risks from first principles
- Explain the modes of action and risks of forms of management for common diseases and ways of preventing common diseases including surgical, medical, radiotherapeutic, supportive, palliative, and preventative approaches in terms understandable by users of health services.
- Explain a plan of management in terms understandable by a health service user.
- Select appropriate forms of management relating to typical presentations of common and important conditions bearing in mind clinical data and patient perspective.
- Demonstrate how to implement appropriate risk reduction strategies for common diseases in individual patients.
- Make accurate observations of clinical phenomena and appropriate critical analysis of clinical data
- Demonstrate reaching relevant and useful conclusions about a patient's general health and progress during common illnesses or treatment using routine clinical data in real or simulated patients
- Summarise clinical observations for real and simulated patient cases
- Synthesise the results of history taking and examination together with results of tests to generate a working diagnosis and request further tests if needed.
- Accurately present the results of history taking and examination in a succinct but comprehensive way including, when necessary, the ability to prioritise the most clinically relevant data.
- Carry out a competent history and examination of a real or simulated patient including the accurate observation and recording of signs and symptoms.

2. Apply psychological principles, methods, and knowledge to medical practice

By the end of CCE students should be able to:

- Discuss psychological concepts of health, illness, and disease
- Formulate and manage the psychological components of a bio-psycho-social formulation for any individual patient's physical or mental illness
- Relate how psychological factors affect the prognosis in long-term physical illness, stress, and depression in real or simulated patient cases.

3. Apply social science principles, methods, and knowledge to medical practice

By the end of CCE students should be able to:

- Recognise the diversity of patient experiences (social and emotional aspects) and behaviour in relation to living with common health conditions
- Discuss sociological concepts of health, illness, and disease
- Use knowledge of individual patients lay beliefs in management the planning

- Discuss lay beliefs with patients
- Elicit and distinguish lay beliefs when talking to simulated or real patients.
- Recognise the importance of listening to and understanding patients' lay beliefs/knowledge and the shift towards the patient as 'expert'
- Recognise how doctor-patient relationships are affected by social forces and change over time.
- Identify the importance of patients' perspectives on illness and disability and the relevance of this to clinical practice

4. Carry out a consultation with a patient

By the end of CCE students should be able to:

- Take and record a patient's medical history, including family and social history, talking to relatives or other carers where appropriate
- Demonstrate the skills of a person-centred interview in an active clinical environment
- Practice history taking involving a third party in a controlled clinical environment
- Observe and review triadic consultations in routine clinical practice
- Elicit patient's questions, their understanding of their condition and treatment options, and their views, concerns, values, and preferences
- Demonstrate the skills of seeking questions and checking patient understanding in an active clinical environment and in controlled clinical teaching environment
- Demonstrate a structured approach to examining patients in simulated and real clinical environments
- Apply appropriate strategies to complete necessary examination in those with sensory or mobility problems and in those who have impaired understanding
- Demonstrate ability to communicate appropriately with patient while performing a physical examination; to explain what is going to be done; reassure during performance; continual observance of patient's non-verbal and verbal cues during examination
- Demonstrate a structured approach to examining the child including observation, palpation, and auscultation
- Provide explanation, advice, reassurance, and support
- Demonstrate skills in providing explanation in language and at a pace appropriate to patient; checking understanding; awareness of importance of follow-up plan and provision of contact details for appropriate support

5. Diagnose and manage clinical presentations

By the end of CCE students should be able to:

- Interpret findings from the history, physical examination, and mental-state examination, appreciating the importance of clinical, psychological, spiritual, religious, social and cultural factors
- Make an initial assessment of a patient's problems and differential diagnosis. Understand the processes by which doctors make and test differential diagnosis
- Present a series of clinical cases that demonstrate an integrated and efficient process for making an initial assessment of a patient's presentation
- Outline the hypothetico-deductive and pattern recognition methods of arriving at the likely clinical diagnoses with a consideration of important differential diagnoses with a particular emphasis on not missing potentially serious or life-threatening conditions
- Synthesise a full assessment of the patient's problems and define the likely diagnosis

- Present a comprehensive assessment of a patient's clinical problem in real clinical scenarios having obtained a full clinical history and performed a relevant detailed clinical examination including the likely clinical diagnoses and important differential diagnoses
- Make clinical judgements and decisions, based on the available evidence, in conjunction with your supervisor and as appropriate for your level of training and experience. This may include situations of uncertainty
- Support patients in caring for themselves
- Demonstrate that a treatment plan has been explained to a patient with special emphasis on self-management. This would be to manage current conditions and prevent future long-term conditions and other co-morbidities where an evidence base exists.

6. Communicate effectively with patients & colleagues in a medical context

By the end of CCE students should be able to:

- Communicate clearly, sensitively, and effectively with patients, their relatives or other carers, and colleagues from the medical and other professions, by listening, sharing and responding.
- Demonstrate the skills needed to conduct a triadic consultation e.g., with carers etc.
- Communicate appropriately in difficult circumstances, such as when breaking bad news, and when discussing sensitive issues, such as alcohol consumption, smoking or obesity.
- Demonstrate with a simulated patient or in a clinical setting a lifestyle/behaviour change/health promotion intervention
- Assess the impact of alcohol and drug consumption using appropriate frameworks such as CAGE and FRAMES.

7. Prescribe drugs safely, effectively, and economically

By the end of CCE students should be able to:

- Provide patients with appropriate information about their medicines.
- Demonstrate informing real or simulated patients about how to take their medicines including the use of common delivery devices such as inhalers
- Discuss the benefits and risks of drug therapy with patients with real or simulated patients
- Reach a shared decision with a real or simulated patient about his or her treatment considering clinical information, best evidence, and the wishes, values and preferences of the patient.
- Identify measures to improve poor adherence whether intentional or unintentional
- Make an accurate assessment of adherence to medication as part of a medical history

8. Use information effectively in a medical context

By the end of CCE students should be able to:

- Specify the data required for a specified research purpose and show how to collect, analyse, interpret, and present it for a range of purposes including audit and service development.

9. Reflect, learn, and teach others

By the end of CCE students should be able to:

- Continually and systematically reflect on practice and, whenever necessary, translate that reflection into action, using improvement techniques and audit appropriately, for example, by critically appraising the prescribing of others
- Complete an appropriate element of a clinical audit

10. Learn and work effectively within a multi-professional team

By the end of CCE students should be able to:

- Understand and respect the roles and expertise of health and social care professionals in the context of working and learning as a multi-professional team
- Describe the basic roles of key health and social care professionals involved in a person's care in primary care and community settings (HV, DN, GP, practice nurse, social care worker).

11. Protect patients and improve care

By the end of CCE students should be able to:

- Understand and have experience of the principles and methods of improvement, including audit, adverse incident reporting and quality improvement, and how to use the results of audit to improve practice.
- Understand the use of the audit as a tool to monitor/improve performance in compliance with local and national guidelines
- Develop a worked example of audit including recommendations for change in practice
- Describe common approaches used in clinical practice to assure and improve quality - including audit and adverse incident reporting
- Evaluate the success of an audit scenario
- Complete an appropriate element of a clinical audit

Learning Outcomes for Community Health (Non-GP)

Health needs assessment lecture and group

1. Evaluate and apply epidemiological data in managing healthcare for the individual and the community (25a, 25e)

    a. Explain one framework for a health needs assessment
    b. Plan a mini health needs assessment for a population
    c. Find, understand, and interpret routine information relating to health, ill health and
    d. health care in a specified population

Delivering brief interventions clinical skills

2. Demonstrate the knowledge and skills to deliver brief interventions on smoking and alcohol (10b, 25a)

    a. Identify skills that enhance behaviour change
    b. List reasons why people do not adhere to behaviour change options.
    c. Identify the domains to be considered when promoting behaviour change

Community Placement

3. Engage in induction and orientation activities, learn from experience, and feedback, and respond constructively to the outcome of performance reviews and feedback (2u)
4. Identify individual learning outcomes to be accomplished during the practice placement
5. Maintain confidentiality and respect patients' dignity and privacy (2d)
6. Apply the requirements of confidentiality and data protection and comply with local information governance and storage procedures when recording and coding patient information (19b)
7. Work effectively with peers to prepare and present a patient case review
8. Demonstrate respect and non-judgemental attitudes to patients, peers, and tutors (2e,9b)
9. Work effectively with peers to prepare and present a health needs assessment and a patient case review (9b)
10. Describe and show respect for the roles of key health care professionals working in community settings and be able to outline their roles and contribution to the multidisciplinary care of patients in community settings (9c)