

The Physician of Tomorrow

Curriculum for Core Medical Training and
Acute Care Common Stem (Medicine)
(Acute Medicine Level One)

Federation of the Royal Colleges of Physicians



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**Curriculum for Core Medical Training and
Acute Care Common Stem (Medicine)**

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How to Use This Curriculum

This curriculum is for doctors training in physicianly specialties, their tutors and Educational Supervisors during core training (Core Medical Training (CMT) or Acute Care Common Stem (Medicine) (ACCS (M))). For the latter group this document must be used in association with the training manual for ACCS that has been developed by a joint working group supervising the development of ACCS programmes. Trainees entering all core training programmes must have successfully completed a Foundation Programme, or equivalent, and attained the core competencies outlined in the Foundation Curriculum¹.

The outcome of the training programme will be a clinician equipped with a broad grounding in acute medicine, who is able to go on to specialist training in a physicianly speciality.

This curriculum is set out as follows:

Section 1 - Rationale

This section describes the background to the development of the curriculum, the structure of training, and the purpose of the curriculum in medical training.

Section 2 – Content of Learning

This is the syllabus section of the curriculum, describing the knowledge, skills and attitudes that trainees need to learn.

Section 3 – The Learning Process

This section discusses the model of learning and the learning experiences for the training programme.

Section 4 – Assessment Strategy

This section outlines the systems for assessment of competencies for the curriculum.

Section 5 – Trainee Supervision and Feedback

This section recommends how a trainee should be supervised during the training programme and how feedback on learning should be given.

Section 6 – Curriculum Implementation

This section discusses how the management and implementation of the curriculum within training programmes will be achieved.

Section 7 – Curriculum Review

It is intended that the curriculum is a fluid document and will evolve as feedback is offered from trainers, trainees and laypersons. In this section the plans for curriculum review, evaluation and monitoring is laid out.

Section 8 – Equality and Diversity

This section describes how the curriculum complies with anti-discriminatory practice.

This curriculum was provisionally approved by PMETB in July 2006. Small changes may occur prior to full approval, but this is unlikely to affect Section 2. Therefore, this curriculum is still a draft.

Section 1 - Rationale

This curriculum defines the Level 1 medical competencies, that trainees must acquire to deliver the effective practice of General Internal Medicine in the 21st century, with emphasis on the acute setting. These competencies are transferable, if required, to pursue other postgraduate training pathways, in accordance with the principles of Modernising Medical Careers.

1.1 – What is General Internal Medicine (Acute Medicine) [GIM (Acute)]?

Acute medicine has been defined as ‘that part of General (Internal) Medicine concerned with the immediate and early specialist management of adult patients with a wide range of medical conditions who present in hospital as emergencies’². The specialty will concentrate on the early phase of care of the acutely ill, typically the initial 24 to 72 hours, but the competencies needed by acute physicians will be broader and will include many of the skills of the ‘general physician’ as well as the generic competencies expected of all physicians. This will apply both to those trained exclusively in acute medicine and to those trained in acute medicine with another specialty. However as **all** physicians should develop Level one competencies in acute medicine it has been determined that all core programmes should deliver these competencies.

The General Internal Medicine (Acute Medicine) curriculum has been divided into 3 competency levels. This document deals with the level one GIM (Acute) competencies that are required of all physicianly specialties and must be acquired before progression to ST3. MRCP (Part 1) is the knowledge based assessment of all core programmes (core medical training (CMT) or Acute Care Common Stem (medicine) (ACCS(M))). All trainees will need to have passed at least part 1 of the MRCP to enable progression to ST3.

1.2 - Background

The acute hospital working environment has changed markedly in recent years. The older firm-based apprenticeship system has given way to working and learning in teams, with an emphasis on shared responsibilities of care and clinical governance. Previously, most doctors wishing to pursue a career in a medical specialty needed to compete for entry level SHO posts, with a requirement to pass the MRCP(UK) examination to progress to a Specialist Registrar post in a medical specialty. This training period was of variable length, lacked assessment, and many trainees did not proceed into Specialty Training.

Modernising Medical Careers (MMC) was introduced to create a more focused postgraduate training with specific outcomes related to NHS service needs. The publication of ‘Unfinished Business’ defined aspirations for a Foundation Programme that delivered doctors equipped with core competencies in good patient care, safety, management and communication³.

The reform was motivated by a desire to deliver care using more effective teamwork and a multi-disciplinary approach, with more efficient and flexible training pathways. Furthermore, the European Working Time Directive has also impinged

on older apprentice-style training and education methods. The principles outlined in 'Unfinished Business' were as follows:

- An outcome-based education process
- Defined competence
- Assessment of competence
- Promotion of lifelong learning

The structure, implementation, competencies and assessments for the Foundation Programme are defined in the Foundation Curriculum¹. These competencies reflect the desire to give trainees, early in their careers, the values and attitudes necessary to allow good interaction with patients, carers and families. Trainees completing these programmes will also be able to assess and initiate management of the acutely ill patient and have the skills to work in the modern NHS. The Foundation Programme commenced in August 2005.

There is now the need to bring the postgraduate training programme in all physician specialties into line with the aspirations of MMC. The physicians' curricula build on the Foundation Programme and describe the training pathways through postgraduate medical training to the completion of specialist training and the award of a CCT. The first part of this training pathway is the acquisition of level 1 general internal medicine (acute medicine) competencies.

1.3 - Curriculum Development

A curriculum group, made up of members of the Federation of the Royal Colleges of Physicians and the Education Department of the Royal College of Physicians of London, was established in 2005 to define the competencies that must be acquired during the phases of training in general internal medicine (acute medicine). The members of this group had a broad UK representation and included trainees and lay persons. All clinical members of the committee were teachers or trainees in General Internal Medicine (Acute Medicine). The main work of the group involved the definition of the style of the curriculum, the learning and assessment methods to be used, and the competencies to be achieved during training. As acquisition of level 1 competencies in General Internal Medicine (Acute Medicine) is the first element in training for UK physicians it was important that the draft curriculum was circulated to trainees' representatives, and medical Specialists Advisory Committees (SACs) for their input.

Every opportunity has been taken to involve key stakeholders in the development of the GIM (acute) curriculum at several stages prior to implementation.

Examples include:

- Discussion at College Committees (Education, Training and Examinations Board, Council), all of which include trainee and lay representation
- Presentations to the Colleges' Specialist Advisory Committee (SAC) Chairs
- Discussions with trainee representative groups
- Feedback from information gathered via College newsletters and other written documents

This curriculum is trainee-centred, and outcome-based. As this curriculum is to be followed through core training a spiral approach has been adopted, as in the Foundation Programme. A spiral curriculum describes a learning experience that revisits topics and themes, each time expanding the sophistication of the knowledge, attitudes and decision-making regarding that topic⁴. This approach aids reinforcement of principles, the integration of topics, and the achievement of higher levels of competency.

This revisiting of topics is key to ensuring deep learning. This principle underpins the ethos of a spiral curriculum and effective life-long learning beyond Specialty Training. In this way an individual progresses from being 'competent' to becoming 'expert'.

1.4 - Training Structure

Entry into GIM (Acute) training is possible following successful completion of a Foundation Programme.

The training in GIM (Acute) is divided into three levels: all trainees entering physician training will complete level 1

Level 1: Core Medical Training (CMT) or Acute Care Common Stem (Medicine) ACCS(M) – together termed Core Training

These are two-year training programmes consisting of 4-6 month placements in mainly acute medicine and medical specialties. Trainees completing core training will have a solid platform in GIM (Acute) from which they can continue into Specialty Training. Successful attainment of core training competencies will be required in order to be eligible for entry into Specialty Training in any of the medical specialties.

Level 2 competencies will be achieved by those trainees in acute specialties who plan to take part in the acute medical take in their consultant working lives. Level 3 competencies will usually only be achieved by those wishing to obtain a CCT in GIM (acute) and practice as a specialist acute physician. These competencies are described in other documents available on the websites of the PMETB and Joint Royal Colleges Physicians Training Board (JRCPTB).

1.5 - Generic Competencies

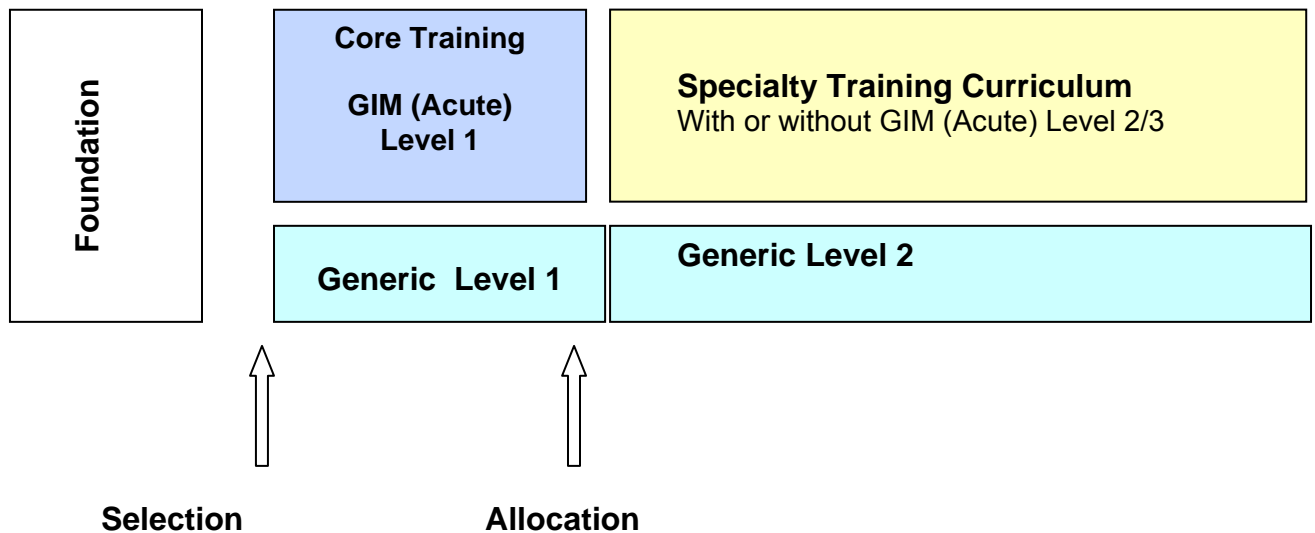
Every physician in training needs to acquire a professional, moral and legal framework for practice, as described by the GMC's *Good Medical Practice*⁵. These competencies apply to all medical specialties and are therefore termed 'Generic Competencies'.

Generic competencies are defined in a separate document, the *Generic Curriculum for the Medical Specialties*, which complements the competencies of Core Medical Training, Specialist Training in GIM (Acute), and all medical specialties. This has avoided repetition of these values and competencies in each of the separate curricula.

Attainment of the competencies defined in the *Generic Curriculum for the Medical Specialties* will be essential for the award of a CCT in any of the medical specialties.

1.6 - Relationship of Postgraduate Medical Curricula

The following diagram explains the relationship between different postgraduate medical training programmes and curricula. The *Generic Curriculum for Medical Specialties* spans training from entry into Core Medical Training, to the award of a CCT in a medical specialty, and so runs in conjunction with other medical curricula.



1.7 – Rotations

Core training: Core training for acute medicine can be obtained as part of a core medical training (CMT) programme or acute care common stem ([medicine](#)) programme (ACCS(M)). These two-year core training programmes will consist of 4 or 6 month placements in a variety of medical or critical care specialties and must include experience in Acute Medicine. This should take the form of at least 6 months direct involvement in the acute unselected medical take with ongoing exposure to unselected medical patients in an in-patient and out-patient environment. The programmes should be structured to fit the needs of the trainee, both in terms of training needs and career aspirations. In addition to the 6 months experience of unselected medical take it is recommended that a further six months should be spent in a specialty that provides experience of care of the acutely ill patient.

Section 2 – The Content of Learning

This section lists the specific knowledge, skills, attitudes and behaviours to be attained throughout training in GIM (Acute) and specifically in core training programmes.

An explanation of the levels of training is provided in section 1.4: Training Structure.

Each stage of learning in the curriculum has defined the competencies to be attained by the trainee, which are defined within the domains of knowledge, skills and attitudes. The physician undertaking a core training programme must acquire level 1 competencies to progress to the next phase of training. The competencies are presented in four parts:

Part 2.1 - Symptom Competencies - define the knowledge, skills and attitudes required for each level of learning for different problems with which a patient may present. These symptoms are further broken down in to emergency presentations; top 20 presentations and other presentations. The top 20 presentations are listed together to emphasise the frequency with which these problems are encountered in clinical practice, and are based on medical admission unit audit data.

‘Surgical Presentations’ – Symptoms such as haematuria, rectal bleeding, and abdominal pain are traditionally managed by surgical teams. The reason that these symptoms appear in this curriculum is to recognise that often a physician is called upon to perform the initial assessment of these patients. These presentations frequently occur in the context of long-term medical illness and as a complication of medical illness. Also, the hospital-at-night team structure leads to physicians at all levels of training taking temporary responsibility for surgical in-patients.

In these situations the physician is expected to stabilise the patient as necessary, to perform initial investigations and management if urgently required, and to make a referral to the appropriate surgical team for a specialist opinion in a timely manner.

Part 2.2 - System specific competencies - define competencies to be attained by the end of core training for each body system, and also lists the conditions and basic science of which the trainee must acquire knowledge.

Part 2.3 - Investigation competencies - lists investigations that a trainee must be able to describe, order, and interpret by the end of core training.

Part 2.4 – Procedural competencies - lists procedures that a trainee should be competent in by the end of core training.

Part 2.1: Symptom Based Competencies

Emergency Presentations

Cardio-Respiratory Arrest

The trainee will have full competence in the assessment and resuscitation of the patient who has suffered a cardio-respiratory arrest, as defined by the UK Resuscitation Council			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Causes of cardio-respiratory arrest	Rapidly assess the collapsed patient in terms of ABC, airway, breathing and circulation	Recognise and intervene in critical illness promptly to prevent cardiac arrest such as peri-arrest arrhythmias, hypoxia
	Recall the ALS algorithm for adult cardiac arrest	Perform Basic Life Support competently as defined by Resuscitation Council (UK): effective chest compressions, airway manoeuvres, bag and mask ventilation	Maintain safety of environment for patient and health workers
	Outline indication and safe delivery of drugs used in cardiac arrest scenarios: adrenaline, atropine, amiodarone, buffers	Competently perform further steps in advanced life support: IV drugs; safe DC shocks when indicated; identification and rectification of reversible causes of cardiac arrest	Participate in UK Resuscitation Council approved ALS course (MANDATORY REQUIREMENT) Succinctly present clinical details of situation to senior doctor Consult senior and seek anaesthetic team support

Shocked Patient

The trainee will be able to identify a shocked patient, assess their clinical state, produce a list of appropriate differential diagnoses and initiate immediate management			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Identify physiological perturbations that define shock	Recognise significance of major physiological perturbations	Exhibit calm and methodical approach to assessing critically ill patient
	Identify principle categories of shock (i.e. cardiogenic, circulatory)	Perform immediate (physical) assessment (A,B,C)	Adopt leadership role where appropriate
	Elucidate main causes of shock in each category (e.g. MI, heart failure, PE, blood loss, sepsis)	Institute immediate, simple resuscitation (oxygen, iv access, fluid resuscitation)	Involve senior and specialist (e.g. critical care outreach) services promptly
	Define sepsis syndromes	Arrange simple monitoring of relevant indices (oximetry, arterial gas analysis) and vital signs (BP, pulse & respiratory rate, temp, urine output)	
		Order, interpret and act on initial investigations appropriately: ECG, blood cultures, blood count, electrolytes	

Unconscious Patient

The trainee will be able to promptly assess the unconscious patient to produce a differential diagnosis, establish safe monitoring, investigate appropriately and formulate an initial management plan, including recognising situations in which emergency specialist investigation or referral is required			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Identify the principal causes of unconsciousness (metabolic, neurological)	Make a rapid and immediate assessment including examination of coverings of nervous system (head, neck, spine) and Glasgow Coma Scale	Recognise need for immediate assessment and resuscitation
	Recognise the principal sub causes (drugs, hypoglycaemia, hypoxia; trauma, infection, vascular, epilepsy, raised intra-cranial pressure, reduced cerebral blood flow, endocrine)	Initiate appropriate immediate management (A,B,C, cervical collar, administer glucose)	Assume leadership role where appropriate
	List appropriate investigations for each	Take simple history from witnesses when patient has stabilised	Involve senior staff promptly
	Outline immediate management options	Prioritise, order, interpret and act on simple investigations appropriately	Involve appropriate specialists to facilitate immediate assessment and management (e.g. imaging, intensive care, neurosurgeons)
		Initiate early (critical) management (e.g. control fits, manage poisoning) including requesting safe monitoring	

Anaphylaxis

The trainee will be able to identify patients with anaphylactic shock, assess their clinical state, produce a list of appropriate differential diagnoses, initiate immediate resuscitation and management and organise further investigations			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Identify physiological perturbations causing anaphylactic shock	Recognise clinical consequences of acute anaphylaxis	Exhibit a calm and methodical approach
	Elucidate causes of anaphylactic shock	Perform immediate physical assessment (laryngeal oedema, bronchospasm, hypotension)	Adopt leadership role where appropriate
	Define follow-up pathways after acute resuscitation	Institute resuscitation (adrenaline, oxygen, IV access, fluids)	Involve senior and specialist allergy services promptly
		Arrange monitoring of relevant indices	
		Order, interpret and act on initial investigations (tryptase, C1 esterase inhibitor etc.)	

'The Top 20' – Common Medical Presentations

Abdominal Pain

The trainee will be able to assess a patient presenting with abdominal pain to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the different classes of abdominal pain and how the history and clinical findings differ between them	Elicit signs of tenderness, guarding, and rebound tenderness and interpret appropriately	Exhibit timely intervention when abdominal pain is the manifestation of critical illness or is life-threatening, in conjunction with senior and appropriate specialists
	Identify the possible causes of abdominal pain, depending on site, details of history, acute or chronic	Order, interpret and act on initial investigations appropriately: blood tests; radiographs; ECG; microbiology investigations	Recognise the importance of a multi-disciplinary approach including early surgical assessment when appropriate
	Define the situations in which urgent surgical, urological or gynaecological opinion should be sought	Initiate first line management: the diligent use of suitable analgesia; 'nil by mouth'; IV fluids; resuscitation	Display sympathy to physical and mental responses to pain
	Determine which first line investigations are required, depending on the likely diagnoses following evaluation		Involve other specialties promptly when required

Acute Back Pain

The trainee will be able to assess a patient presenting with back pain to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall the causes of acute back pain	Perform examination and elicit signs of spinal cord / cauda equina compromise	Involve neurosurgical unit promptly in event of neurological symptoms or signs
	Specify abdominal pathology that may present with back pain	Practise safe prescribing of analgesics / anxiolytics to provide symptomatic relief	Ask for senior help when critical abdominal pathology is suspected
	Outline the features that raise concerns as to a sinister cause ('the red flags') and lead to consideration of a chronic cause ('the yellow flags')	Order, interpret and act on initial investigations appropriately: blood tests, myeloma screen, radiographs	Recognise the socio-economic impact of chronic lower back pain
	Recall the indications of an urgent MRI of spine		Participate in multi-disciplinary approach: physio, OT
	Outline indications for hospital admission		

Blackout / Collapse

The trainee will be able to assess a patient presenting with a collapse to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also 'Syncope' and 'Falls')			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall the causes for sudden loss of consciousness (LOC)	Elucidate history to establish whether event was LOC, fall without LOC, vertigo (with eye witness account if possible)	Recognise impact episodes can have on lifestyle particularly in the elderly
	Differentiate the causes depending on the situation of collapse, associated symptoms and signs, and eye witness reports	Assess patient in terms of ABC and degree of consciousness and manage appropriately	Recognise recommendations regarding fitness to drive in relation to undiagnosed blackouts
	Outline the indications for temporary and permanent pacing systems	Perform examination to elicit signs of cardiovascular or neurological disease and to distinguish epileptic disorder from other causes	
		Order, interpret and act on initial investigations appropriately: ECG, blood tests inc. glucose	
		Manage arrhythmias appropriately as per ALS guidelines	
		Institute external pacing systems when appropriate	

Breathlessness

The trainee will be able to assess a patient presenting with breathlessness to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Specify the common cardio-respiratory conditions that present with breathlessness	Interpret history and clinical signs to list appropriate differential diagnoses: esp. pneumonia, asthma, COPD, PE, pulmonary oedema, pneumothorax	Exhibit timely assessment and treatment in the acute phase
	Explain orthopnoea and paroxysmal nocturnal dyspnoea	Differentiate between stridor and wheeze	Recognise the distress caused by breathlessness and discuss with patient and carers
	Identify non cardio-respiratory factors that can contribute to or present with breathlessness	Order, interpret and act on initial investigations appropriately: routine blood tests, oxygen saturation, arterial blood gases, chest radiograph, ECG, PEFr, spirometry	Recognise the impact of long term illness
	Define basic pathophysiology of breathlessness	Initiate treatment in relation to diagnosis, including safe oxygen therapy, early antibiotics for pneumonia	Consult senior when respiratory distress is evident
	List the common and serious causes of wheeze and stridor	Perform chest aspiration and chest drain insertion	Involve Critical Care team promptly when indicated
		Recognise disproportionate dyspnoea and hyperventilation	Exhibit non-judgemental attitudes to patients with a smoking history
	Recognise other causes of dyspnoea in patients with wheeze (e.g. pneumothorax) and manage appropriately		
	Evaluate and advise on good inhaler technique		

Chest Pain

The trainee will be able to assess a patient with chest pain to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Characterise the different types of chest pain, and outline other symptoms that may be present	Interpret history and clinical signs to list appropriate differential diagnoses: esp. for cardiac pain & pleuritic pain	Perform timely assessment and treatment of patients presenting with chest pain
	List the common causes for each category of chest pain and associated features: cardiac, pleuritic, musculoskeletal, upper GI	Order, interpret and act on initial investigations in the context of chest pain appropriately: such as ECG, blood gas analysis, blood tests, chest radiograph, cardiac enzymes	Involve senior when chest pain heralds critical illness or when cause of chest pain is unclear
	List respiratory causes of chest pain	Commence initial emergency treatment including coronary syndromes, pulmonary embolus and aortic dissection	Recognise the contribution and expertise of specialist cardiology nurses and technicians
	Define the pathophysiology of acute coronary syndrome and pulmonary embolus	Elect appropriate arena of care and degree of monitoring	
	Identify the indications and limitations of cardiac enzymes and d dimer analysis	Formulate initial discharge plan	
	Outline emergency treatments for PTE		

Confusion, Acute

The trainee will be able to assess an acutely confused patient to formulate a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	List the common and serious causes for acute confusion	Examine to elicit cause of acute confusion	Recognise that the cause of acute confusion is often multi-factorial
	Outline important initial investigations, including electrolytes, cultures, full blood count, ECG, blood gases, thyroid	Perform mental state examinations (abbreviated mental test and mini-mental test) to assess severity and progress of cognitive impairment	Contribute to multi-disciplinary team management
	Recognise the factors that can exacerbate acute confusion e.g. change in environment, infection	Recognise pre-disposing factors: cognitive impairment, psychiatric disease	Recognise effects of acutely confused patient on other patients and staff in the ward environment
	List the pre-existing factors that pre-dispose to acute confusion		

Cough

The trainee will be able to assess a patient presenting with cough to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	List the common and serious causes of cough	Order, interpret and act on initial investigations appropriately: blood tests, chest radiograph and PFT	Contribute to patients understanding of their illness
	Identify risk factors relevant to each aetiology including precipitating drugs		Exhibit non-judgmental attitudes to patients with a history of smoking
	Outline the different classes of cough and how the history and clinical findings differ between them		Consult seniors promptly when indicated
	State which first line investigations are required, depending on the likely diagnoses following evaluation		Recognise the importance of a multi-disciplinary approach

Diarrhoea

The trainee will be able to assess a patient presenting with diarrhoea to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Specify the causes of diarrhoea (secretory, infective, etc)	Evaluate nutritional and hydration status of the patient	Seek a surgical and senior opinion when required
	Correlate presentation with other symptoms: such as abdominal pain, rectal bleeding, weight loss	Assess whether patient requires hospital admission	Exhibit sympathy and empathy when considering the distress associated with diarrhoea and incontinence
	Outline the pathophysiology of diarrhoea for each aetiology	Perform rectal examination as part of physical examination	Demonstrate awareness of infection control procedures
	Describe the investigations necessary to arrive at a diagnosis	Initiate investigations: blood tests, stool examination, endoscopy and radiology as appropriate	
	Identify the indications for urgent surgical review in patients presenting with diarrhoea		

Falls

The trainee will be able to assess a patient presenting with a fall and produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also 'Syncope' and 'Blackout/Collapse')			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Describe causes of falls and risk factors for falls, including drug and neurovascular causes	Define the significance of a fall depending on circumstances, and whether recurrent, to distinguish when further investigation is necessary	Recognise the psychological impact to an older person and their carer after a fall
	Outline the assessment of a patient with a fall and give a differential diagnosis	Identify possible secondary complications of falls	Contribute to the patients understanding as to the reason for their fall
	State conditions that may present as a fall	Commence appropriate treatment including pain relief and bone prophylaxis	Discuss with seniors promptly and appropriately
	Outline the relationship between falls risk and fractures		Relate the possible reasons for the fall and the management plan to patient and carers
	Outline secondary risks of falls, such as loss of confidence, infection		

Fever

The trainee will be able assess a patient presenting with fever to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the physiology of developing a fever	Recognise the presence of septic shock in a patient, commence resuscitation and liaise with senior colleagues promptly	Adhere to local antibiotic prescribing policies
	Recall the broad causes of fever: infection, malignancy, inflammation	Order, interpret and act on initial investigations appropriately: blood tests, cultures, CXR	Highlight importance of nosocomial infection and principles for infection control
	Define Pyrexia of Unknown Origin	Identify the risk factors in the history that may indicate an infectious disease e.g. travel, sexual history, IV drug use, animal contact, drug therapy	Consult senior in event of septic syndrome
	Recall the role of anti-pyretics		Discuss with senior colleagues and follow local guidelines in the management of the immunosuppressed e.g. HIV, neutropenia
	Differentiate features of viral and bacterial infection	Commence appropriate empirical antibiotics when an infective source of fever is deemed likely in accordance with local prescribing policy	Promote communicable disease prevention: e.g. immunisations, anti-malarials, safe sexual practices
	Outline indications for LP in context of fever		

Fits / Seizure

The trainee will be able to assess a patient presenting with a fit, stabilise promptly, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the causes for seizure	Recognise and manage a patient presenting with status epilepticus	Recognise need for urgent referral in case of uncontrolled recurrent loss of consciousness or seizures
	Recall the common epileptic syndromes	Obtain collateral history from witness	
	List the essential initial investigations following a 'first fit'	Promptly recognise and treat precipitating causes: metabolic, infective, malignancy	Recognise the principles of safe discharge, after discussion with senior colleague
	Recall the indications for a CT head		Recognise importance of Epilepsy Nurse Specialist
	Describe the indications, contraindications and side effects of the commonly used anti-convulsants		Recognise the psychological and social consequences of epilepsy
	Differentiate seizure from other causes of collapse		

Haematemesis & Melaena

The trainee will be able to succinctly assess the patient with an upper GI haemorrhage to determine significance; resuscitate appropriately; and liaise with endoscopist effectively			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Detail the anatomy of the upper GI tract	Recognise shock or impending shock and resuscitate rapidly and appropriately	Seek senior help and endoscopy or surgical input in event of significant GI bleed
	Specify the causes of upper GI bleeding, with associated risk factors	Distinguish upper and lower GI bleeding	Observe safe practices in the prescription of blood products
	Outline methods of assessing the significance and prognosis of an upper GI bleed and how this impacts on importance of urgent endoscopy e.g. Rockall score	Demonstrate ability to site large bore IV access	
	Outline the principles of choice of IV access, fluid choice and speed of fluid administration	Perform assessment to postulate cause of bleeding: in particular detect the presence of liver disease	
	Broadly outline endoscopic methods of haemostasis	Safely prescribe drugs indicated in event of a likely upper GI variceal bleed: broad spectrum antibiotics, vasoconstrictor agents, acid suppression	

Headache

The trainee will be able to assess a patient presenting with headache to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	<p>Recall the common and life-threatening causes of acute new headache, and how the nature of the presentation classically varies between them</p> <p>Understand the pathophysiology of headache</p> <p>Define the indications for urgent CT/MRI scanning in the context of headache</p> <p>Define clinical features of raised intra-cranial pressure</p>	<p>Recognise important diagnostic features in history</p> <p>Perform a comprehensive neurological examination, including eliciting signs of papilloedema, temporal arteritis, meningism and head trauma</p> <p>Order, interpret and act on initial investigations</p> <p>Perform a successful lumbar puncture when indicated with minimal discomfort to patient observing full aseptic technique</p> <p>Interpret basic CSF analysis: cell count, protein, gram stain and glucose</p> <p>Initiate prompt treatment when indicated: appropriate analgesia; antibiotics; anti-virals; steroids</p>	<p>Recognise the nature of headaches that may have a sinister cause and assess and treat urgently</p> <p>Liaise with senior doctor promptly when sinister cause is suspected</p> <p>Involve neurosurgical team promptly when appropriate</p>

Jaundice

The trainee will be able to assess a patient presenting with jaundice to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the pathophysiology of jaundice in terms of pre-hepatic, hepatic, and post-hepatic	Take a thorough history and examination to arrive at a valid differential diagnosis	Exhibit non-judgmental attitudes to patients with a history of alcoholism or substance abuse
	List causes for each category of jaundice with associated risk factors	Recognise the presence of chronic liver disease or fulminant liver failure	Consult seniors and gastroenterologists promptly when indicated
	Describe the need for careful prescribing in a patient with jaundice	Interpret basic investigations to establish aetiology: blood tests and abdominal ultrasound scanning	Contribute to the patient's understanding of their illness
	Outline basic investigations to establish aetiology	Recognise complications of jaundice: sepsis and renal impairment	Recognise the importance of a multi-disciplinary approach
	Describe medical, surgical and radiological treatments		

Limb Pain & Swelling

The trainee will be able to assess a patient presenting with limb pain or swelling to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall the causes of unilateral and bilateral limb swelling in terms of acute and chronic presentation	Perform a full examination including assessment of viability and perfusion of limb and differentiate pitting oedema; cellulitis; venous thrombosis; compartment syndrome	Liaise promptly with surgical colleagues in event of circulatory compromise (eg compartment syndrome)
	Summarise the different causes of limb pain in terms of leg, arm and hand		
	Outline the pathophysiology for pitting oedema, non-pitting oedema and thrombosis	Recognise compartment syndrome and critical ischaemia and take appropriate timely action	Recognise importance of thrombo-prophylaxis in high risk groups
	State the risk factors for the development of thrombosis	Order, interpret and act on initial investigations appropriately: blood tests, Doppler studies, urine protein	
	Outline the indications, contraindications and side effects of diuretics and anti-coagulants	Practise safe prescribing of initial treatment as appropriate (anti-coagulation therapy, antibiotics etc)	
	Differentiate the features of limb pain and/or swelling pain due to cellulitis and DVT	Prescribe appropriate analgesia	

Palpitations

The trainee will be able to assess a patient presenting with palpitations to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall basic cardiac electrophysiology	Elucidate nature of patient's complaint	Consult senior colleague promptly when required
	Define the term palpitations	Order, interpret and act on initial investigations appropriately: ECG, blood tests	Advise on lifestyle measures to prevent palpitations/arrhythmias when appropriate
	Define common causes of palpitations e.g. anxiety, drugs, thyrotoxicosis)	Recognise and commence initial treatment of arrhythmias being poorly tolerated by patient (peri-arrest arrhythmias) as per UK Resuscitation Council Guidelines	
	List the categories of arrhythmia		
	State common arrhythmogenic factors including drugs	Ensure appropriate monitoring of patient on ward	
	Outline the indications, contraindications and side effects of the commonly used anti-arrhythmic medications		

Poisoning

The trainee will be able to assess promptly a patient presenting with deliberate or accidental poisoning, initiate urgent treatment, ensure appropriate monitoring and recognise the importance of psychiatric assessment in episodes of self harm			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall indications for gastric lavage, activated charcoal and whole bowel irrigation	Recognise critically ill overdose patient and resuscitate as appropriate	Contact senior promptly in event of critical illness or patient refusing treatment
	Define parameters used to give clues to type of poisoning: pupils, pulse and respiration, blood pressure, temperature, glucose, seizure, coma, renal function, osmolar and anion gap	Take a full history of event, including collateral if possible	Recognise the details of poisoning event given by patient may be inaccurate
	Outline presentation and management of poisoning with: paracetamol, aspirin, opiates, alcohol, benzodiazepines, beta blockers, digoxin, carbon monoxide, anti-coagulants, tricyclic anti-depressants, SSRIs, amphetamines and cocaine	Examine to determine nature and effects of poisoning	Show compassion and patience in the assessment and management of those who have self-harmed
	Recognise importance of accessing TOXBASE and National Poisons Information Service	Commence poison-specific treatments	
		Order, interpret and act on initial investigations appropriately: biochemistry, arterial blood gas, glucose, ECG, and drug concentrations	
		Ensure appropriate monitoring in acute period of care	

Rash

The trainee will be able assess a patient presenting with an acute-onset skin rash and common skin problems to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Define the characteristic lesions found in the acute presentation of common skin diseases	Take a thorough focussed history & conduct a detailed examination, including the nails, scalp and mucosae to arrive at appropriate differential diagnoses	Demonstrate sympathy and understanding of patients' concerns due to the cosmetic impact of skin disease
	Outline basic investigations to establish aetiology	Recognise the importance of a detailed drug history	Engage the patient in the management of their condition particularly with regard to topical treatments
	Identify risk factors, particularly drugs, infectious agents and allergens	Recognise that anaphylaxis may be a cause of an acute skin rash	Reassure the patient about the long term prognosis and lack of transmissibility of most skin diseases
	Describe possible medical treatments	Order, interpret and act on initial investigations appropriately to establish aetiology	

Vomiting and Nausea

The trainee will be able to assess a patient with vomiting and nausea to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall the causes and pathophysiology of nausea and vomiting	Elicit signs of dehydration and take steps to rectify	Involve surgical team promptly in event of GI obstruction
	List commonly used anti-emetics and differentiate the indications for each	Recognise and treat suspected GI obstruction appropriately: nil by mouth, NG tube, IV fluids	Respect the impact of nausea and vomiting in the terminally ill and involve palliative care services appropriately
	Outline alarm features that make a diagnosis of upper GI malignancy possible	Practise safe prescribing of anti-emetics Order, interpret and act on initial investigations appropriately: blood tests, radiographs	

Weakness and Paralysis

The trainee will be able to assess a patient presenting with motor weakness to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also 'Speech Disturbance' and 'Abnormal Sensation (Paraesthesia and Numbness)')			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	<p>Broadly outline the physiology and neuroanatomy of the components of the motor system</p> <p>Recall the myotomal distribution of nerve roots, peripheral nerves, and tendon reflexes</p> <p>Define the clinical features of upper and lower motor neurone, neuromuscular junction and muscle lesions</p> <p>Outline the common and important causes for lesions at the sites listed above</p> <p>Recall the Bamford classification of stroke, and its role in prognosis</p> <p>Outline investigations for acute presentation, including indications for urgent head CT</p>	<p>Elucidate speed of onset and risk factors for neurological dysfunction</p> <p>Perform full examination to elicit signs of systemic disease and neurological dysfunction and identify associated deficits</p> <p>Describe likely site of lesion in motor system and produce differential diagnosis</p> <p>Order, interpret and act on initial investigations for acute motor weakness appropriately</p> <p>Recognise when swallowing may be unsafe and manage appropriately</p> <p>Detect spinal cord compromise and investigate promptly</p> <p>Perform tests on respiratory function and inform senior appropriate</p>	<p>Recognise importance of timely assessment and treatment of patients presenting with acute motor weakness</p> <p>Consult senior and acute stroke service, if available, as appropriate</p> <p>Recognise patient and carers distress when presenting with acute motor weakness</p> <p>Consult senior when rapid progressive motor weakness or impaired consciousness is present</p> <p>Involve speech and language therapists appropriately</p> <p>Contribute to multi-disciplinary approach</p>

Other Important Presentations

Abdominal Mass / Hepatosplenomegaly

The trainee will be able to assess a patient presenting with an abdominal mass to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
Knowledge		Skills	Attitudes and Behaviour
Competency Level 1	Define the different types of abdominal mass in terms of aetiology, site, and clinical characteristics (e.g. mitotic, inflammatory)	Elicit associated symptoms and risk factors for the presence of diseases presenting with abdominal mass, hepatomegaly and splenomegaly	Recognise the anxiety that the finding of an abdominal mass may induce in a patient
	Describe relevant investigations related to clinical findings: radiological, surgical, endoscopy	Elicit and interpret important clinical findings of mass to establish its likely nature	Participate in multi-disciplinary team approach
	Identify the causes of hepatomegaly and splenomegaly	Order, interpret and act on initial investigations appropriately: blood tests, imaging	

Abdominal Swelling & Constipation

The trainee will be able to undertake assessment of a patient presenting with abdominal swelling or distension to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Define the causes of abdominal swelling and their associated clinical findings	Examine to identify the nature of the swelling, including a rectal examination, and elicit co-existing signs that may accompany ascites	Recognise the multi-factorial nature of constipation, particularly in the elderly
	Outline the common causes of constipation, including drugs		Recognise the importance of multi-disciplinary approach
	Outline the pathophysiology of portal hypertension and bowel obstruction	Identify risk factors for the development of ascites and constipation, including initial blood tests	
	Outline important steps in the diagnosis of the cause of ascites, including imaging and the diagnosis of spontaneous bacterial peritonitis and malignancy	Order, interpret and act on initial investigations	
	Define alarm features that raise suspicion of colorectal malignancy	Perform a safe diagnostic and therapeutic ascitic tap with aseptic technique with minimal discomfort to the patient	
	Identify mode of action and side effects of the commonly used laxatives	Interpret results of diagnostic ascitic tap	
		Institute initial management as appropriate to the type of swelling	

Abnormal Sensation (Paraesthesia and Numbness)

The trainee will be able to assess a patient with abnormal sensory symptoms to arrive at a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Broadly outline the physiology and neuroanatomy of the sensory components of the nervous system	Take a full history, including drugs, lifestyle, trauma	Recognise the distress chronic paraesthesia can cause
	Recall the dermatomal distribution of nerve roots and peripheral nerves	Perform full examination including all modalities of sensation to elicit signs of nervous system dysfunction	Consult senior and acute stroke service, if available, as appropriate
	List common and important causes of abnormal sensation and likely site of lesion in nervous system (e.g. trauma, vascular)	Describe likely site of lesion: central, root, mononeuropathy, or polyneuropathy	Contribute to multi-disciplinary approach
	Outline the symptomatic treatments for neuropathic pain		
	Outline indications for an urgent head CT		

Aggressive / Disturbed Behaviour

The trainee will be competent in predicting and preventing aggressive and disturbed behaviour; using safe physical intervention and tranquillisation; investigating appropriately and liaising with the mental health team			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Elucidate the factors that allow prediction of aggressive behaviour: personal history, alcohol and substance misuse, delirium	Ensure appropriate arena for nursing patient with disturbed behaviour	Involve senior colleague and mental health care team promptly
	Define acute psychosis and list its predominant features and causes	Ensure sufficient support is available	Advocate practice outlined in national guidelines (e.g. NICE) on managing violence
	Recall indications, contraindications and side effects of tranquillisers	Assess patient fully including mental state examination to produce a valid differential diagnosis	
	Outline the legal framework authorising interventions in the management of the disturbed or violent patient	Order, interpret and act on initial investigations appropriately when possible	
		Practise safe rapid tranquillisation if indicated as defined in national guidelines e.g. NICE	
		Recognise warning signs of incipient violent behaviour	
		Ensure close monitoring following tranquillisation	

Alcohol and Substance Dependence

The trainee will be able to assess a patient seeking help for substance abuse, and formulate an appropriate management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the pathophysiology of withdrawal syndromes	Take a detailed medical and psychiatric history to identify physical or psychological dependence	Recognise the aggressive patient and manage appropriately
	Describe the medical, psychiatric and socio-economic consequences of alcohol and drug misuse	Examine patient to elicit complications of alcohol and substance misuse	Seek specialist advice when appropriate e.g. gastroenterology, intensive care, psychiatry
	Outline the measures taken to correct features of malnutrition, including vitamin and mineral supplementation	Obtain collateral history if possible	
	Recall effects of alcohol and recreational drugs on cerebral function	Investigate as appropriate	
		Practise safe prescribing of sedatives for withdrawal symptoms	
		Detect and address other health issues: liver disease, malnutrition, Wernicke's encephalopathy	

Anxiety / Panic disorder

The trainee will be able to assess a patient presenting with features of an anxiety disorder and reach a differential diagnosis to guide investigation and management			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall the main features of anxiety disorder	Assess a patient to detect organic illness	Recognise the chronicity of anxiety syndromes and the distress and disability they cause
	Be familiar with national guidelines (e.g. NICE) on management of anxiety	Evaluate patient's mental state to categorise cause of symptoms as per national guidelines (e.g. NICE) on Anxiety	
	Elucidate the main categories of anxiety disorder: panic, generalised anxiety, phobias		
	Recognise the role of depression in anxiety symptoms		
	Recall organic disorders and medications that can mimic some features of anxiety disorder		
	Outline broad treatment strategies for anxiety disorders		

Bruising

The trainee will be able to assess a patient presenting with easy bruising to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the different types of easy bruising	Order, interpret and act on initial investigations appropriately including blood tests, radiographs, microbiology investigations	Recognise the importance of a multidisciplinary approach
	Identify the possible causes of easy bruising, depending on the site, age of the patient and details of the history, particularly in relation to prescribed medication		Acknowledge anxiety caused by possible diagnosis of a serious blood condition
	State which first line investigations are required, depending on the likely diagnosis	Initiate first line management in consultation with senior clinicians	Consult senior if there is concern bruising is manifestation of critical illness
	State the common clinical presentations of coagulation disorders		Recognise that trauma is an important cause of bruising and that bruising is a common problem in the elderly

Chance Findings

The trainee will be able to construct a management plan for patients referred by colleagues due to asymptomatic abnormal findings			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall asymptomatic abnormal findings that may precipitate discussion with medical team: abnormal radiograph; accelerated hypertension; deranged blood tests (anaemia, calcium, urea and electrolytes, full blood count, clotting); proteinuria; microscopic haematuria; abnormal ECG; drug interactions and reactions	Elucidate finding and place it in context of particular patient	Refer non-urgent cases to either GP or appropriate specialist for out-patient review or investigation
	State asymptomatic findings that warrant immediate assessment, admission and management	Decide whether immediate assessment of patient is required, after discussion with senior colleague if uncertain Formulate an appropriate management plan for each scenario Order, interpret and act on further initial investigations appropriately Manage common metabolic presentations appropriately (hyper/hypokalaemia, hyper/hyponatraemia)	Recognise the non-specific modes by which serious illness may present Seek specialist advice when appropriate

Dialysis

The trainee will be aware of the principles, indications, and complications of Renal Replacement Therapy (RRT)			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the methods of RRT	Demonstrate ability to assess a patient on long term dialysis presenting to hospital to arrive at a valid differential diagnosis	Recognise importance of prompt senior and Renal Unit input in the management of patients on RRT
	Elucidate the common complications of long term haemodialysis	Order, interpret and act on initial investigations appropriately, recognising importance of full septic screen	Recognise the valuable insight patients on long term RRT have into the nature of their symptoms
	Recall the importance of sepsis in patients on RRT	Commence initial management of patient if appropriate	

Dyspepsia

The trainee will be able to assess a patient presenting with heartburn to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Define dyspepsia and recall principle causes	Identify alarm symptoms indicating urgent endoscopy referral	Respect findings of previous endoscopy when patients have exacerbation of symptoms
	Recall the lifestyle factors that contribute to dyspepsia	Investigate as appropriate: H pylori testing, endoscopy	
	State the indications for endoscopy as stated in national guidelines (e.g. NICE)		
	Recall indications, contraindications and side effects of acid suppression and mucosal protective medications		
	Recall the role of H Pylori and its detection and treatment		
	Define alarm symptoms of upper GI malignancy		

Dysuria

The trainee will be able to assess a patient presenting with dysuria to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall anatomy of the genito-urinary tract	Take a full history, including features pertaining to sexual health	Recognise the need for specialist genito-urinary input when appropriate
	Elucidate the causes of dysuria in males and females	Initiate appropriate treatment if appropriate	Participate in sexual health promotion
	Outline the pathophysiology of infective causes of urethritis	Order, interpret and act on initial investigations	Use microbiology resources in the management of patients with dysuria when appropriate
	Outline the principles of management		

Genital Discharge and Ulceration

The trainee will be able to assess a patient presenting with genital discharge or ulceration to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	List the disorders that can present with genital discharge	Take a full history that includes associated symptoms, sexual, menstrual and contraceptive history and details of previous STDs	Recognise the re-emergence of sexually transmitted diseases (STDs)
	List the disorders that can present with genital ulceration	Perform full examination including inguinal lymph nodes, scrotum, male urethra, rectal examination, speculum	Recognise the importance of contact tracing
	Outline the investigations necessary: urinalysis; urethral smear and culture in men; high vaginal and endo-cervical swab in women, genital skin biopsy	Be able to pass a speculum competently and sensitively without discomfort to the patient	Promote safe sexual practices Advocate the presence of a chaperone during assessment

Haematuria

The trainee will be able to assess a patient with haematuria to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall the anatomy of the urinary tract	Perform a focussed examination, including a rectal examination	Involve renal unit when rapidly progressive glomerulonephritis is suspected
	Outline the causes of microscopic and macroscopic haematuria	Demonstrate when a patient needs urological assessment and investigation	
	Determine whether a glomerular cause is likely, and indications for a nephrology opinion	Order, interpret and act on initial investigations such as: urine culture, cytology and microscopy; blood tests	

Haemoptysis

The trainee will be able to assess a patient presenting with haemoptysis to produce valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Identify the common and life threatening causes of haemoptysis: bronchitis, pneumonia, PE and carcinoma	Perform a detailed history and physical examination to determine an appropriate differential diagnosis	Involve seniors and respiratory physicians as appropriate
	Describe initial treatment including fluids and oxygen management	Order, interpret and act on initial investigations appropriately: routine bloods, clotting screen, chest radiograph and ECG, sputum tests Initiate treatment including indications for starting or withholding anticoagulants and antibiotics	

Head Injury

The trainee will be able to assess a patient with traumatic head injury, stabilise, admit to hospital as necessary and liaise with appropriate colleagues, recognising local and national guidelines (e.g. NICE)			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall the pathophysiology of concussion	Instigate initial management: ABC, cervical spine protection	Recognise advice provided by national guidelines on head injury (e.g. NICE)
	Outline symptoms that may be present	Assess and classify patient in terms of GCS and its derivative components (E,V,M)	Ask for senior and anaesthetic support promptly in event of decreased consciousness
	Outline the indications for hospital admission following head injury	Take a focused history and a full examination to elicit signs of head injury and focal neurological deficit	Involve neurosurgical team promptly in event of CT scan showing structural lesion
	Outline the indications for urgent head CT scan as per national guidelines (e.g. NICE)	Manage short term complications, with senior assistance if required: seizures, airway compromise	Recommend indications for repeat medical assessment in event of discharge of patient from hospital
	Recall short term complications of head injury	Advise nurses on appropriate frequency and nature of observations	Participate in safe transfer procedures if referred to tertiary care

Hoarseness and Stridor

The trainee will be able to assess a patient presenting with symptoms of upper airway pathology to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also 'wheeze')			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Explain the mechanisms of hoarseness and stridor	Differentiate hoarseness, stridor and wheeze	Involve senior and anaesthetic team promptly in event of significant airway compromise
	List the common and serious causes for hoarseness and stridor	<p>Assess severity: cyanosis, respiratory rate and effort</p> <p>Perform full examination, eliciting signs that may co-exist with stridor or hoarseness e.g. bovine cough, Horner's syndrome, other neurological signs, fever</p> <p>Order, interpret and act on initial investigations appropriately: blood tests, blood gas analysis, chest radiograph, flow volume loops, FEV₁/peak flow ratio</p>	Involve specialist team as appropriate: respiratory team, ENT or neurological team

Hypothermia

The trainee will be able to assess a patient presenting with hypothermia to establish the cause, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Define hypothermia and its diagnosis	Employ the emergency management of hypothermia as per ALS guidelines	Recognise the often multi-factorial nature of hypothermia in the elderly and outline preventative approaches
	Outline perturbations caused by hypothermia, including ECG and blood test interpretation	Correct any predisposing factors leading to hypothermia	Recognise seriousness of hypothermia and act promptly to re-warm
	List the causes of hypothermia	Request appropriate monitoring of the patient	Recognise that death can only usually be certified after re-warming
	List complications of hypothermia		

Immobility

The trainee will be able to assess a patient with immobility to produce a valid differential diagnosis, investigate appropriately, and produce a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Describe the risk factors and causes of immobility	Take appropriate and focussed collateral history from carers/family/GP	Recognise the importance of a multidisciplinary approach and specialist referral as appropriate
	Explain the role of multidisciplinary team	Construct problem list following assessment	Display ability to discuss plans with patients and or carers
	Define the basic principles of rehabilitation	Discuss the role of the multidisciplinary team in management of these patients	Recognise the anxiety and distress caused to patient and carers by underlying condition and admission to hospital
	Describe the conditions causing immobility which may be improved by treatment and or rehabilitation	Formulate appropriate management plan including medication, rehabilitation and goal setting. Identify conditions leading to acute presentation to hospital	
		Order, interpret and act on relevant initial investigations appropriately to elucidate a differential diagnosis	

Involuntary Movements

The trainee will be able to assess a patient presenting with involuntary movements to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Differentiate and outline the differential diagnoses of Parkinsonism and tremor: be aware of myoclonus, and other less common movement disorders	Assess including a full neurological examination to produce a valid differential diagnosis	Exhibit empathy when considering the impact on quality of life of patient and carers that movement disorders can have
	Outline the main drug groups used in the management of movement disorders		Recognise importance of multi-disciplinary approach to management Recognise the importance of specialist referral

Joint Swelling

The trainee will be able to assess a patient presenting with joint pain or swelling to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the generic anatomy of the different types of joint	Recognise the importance of history for clues as to diagnosis	Recognise that monoarthritis calls for timely joint aspiration to rule out septic cause
	Differentiate mono-, oligo-, and polyarthritis and list principle causes for each	Perform a competent physical examination of the musculo-skeletal system using both the GALS screening examination and the regional examination technique (REMS)	Recognise and facilitate the need for surgical intervention in septic arthritis
	Elucidate the importance of co-morbidities in the diagnosis of joint swelling	Elicit and interpret extra-articular signs of joint disease	Recognise importance of multi-disciplinary approach to joint disease: physio, OT, social services
	Outline treatment options for chronic arthritides: disease modifying drugs, analgesia, physiotherapy	Order, interpret and act on initial investigations appropriately: blood tests, radiographs, joint aspiration, cultures	
		Perform knee aspiration using aseptic technique causing minimal distress to patient	
		Interpret plain radiographs of swollen joints	
		Practise safe prescribing of analgesics for joint disease	

Lymphadenopathy

The trainee will be able to assess a patient presenting with lymphadenopathy to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the anatomy and physiology of the lymphatic system	Elicit associated symptoms and risk factors for the presence of diseases presenting with lymphadenopathy	Recognise patient concerns regarding possible cause for lymphadenopathy
	Recall the causes of generalised and local lymphadenopathy in terms of infective, malignant, reactive and infiltrative	Examine to elicit the signs of lymphadenopathy and associated diseases	Recognise the need for senior and specialist input
	Outline the investigations indicated when tuberculosis is considered	Order, interpret and act on initial investigations appropriately	Recognise the association of inguinal lymphadenopathy with STDs, assess and refer appropriately
		Initiate treatment if appropriate	

Loin Pain

The trainee will be able to assess a patient presenting with loin pain to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	List the common and serious causes of loin pain and renal colic	Elucidate risk factors for causes of loin pain	Involve senior and renal team if there is associated renal impairment
	Outline other symptoms that may classically accompany loin pain and renal colic	Perform full examination to elicit signs of renal pathology	Involve urology team as appropriate
	Outline indications and contraindications for an urgent IVU	Order, interpret and act on initial investigations appropriately: blood tests, urinalysis, urine culture and microscopy, radiographs, ultrasound	Recognise local guidelines in prescribing antibiotics
		Prescribe appropriate analgesia safely	
		Commence appropriate antibiotics when infective cause is likely	
		Recognise co-existing renal impairment promptly	

Medical Complications During Acute Illness and Following Surgical Procedure

The trainee will be able to assess, investigate and treat medical problems arising post-operatively and during acute illness and recognise importance of preventative measures			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	List common medical complications occurring in post-operative and unwell patients and how they present	Recognise critically ill patient and instigate resuscitative measures	Recognise importance of thrombo-embolic complications and prophylaxis during acute illness and in post-operative period
	Explain reasons for medical problems frequently presenting atypically post-operatively	Assess patient with history and examination to form differential diagnosis	Recognise the importance of measures to prevent complications: DVT prophylaxis, effective analgesia, nutrition, physiotherapy, gastric protection
	Recall investigations indicated in different scenarios: short of breath, chest pain, respiratory failure, drowsiness, febrile, collapse, GI bleed	Initiate treatment when appropriate in consultation with the surgical team Institute measures for thrombosis prophylaxis when appropriate, as per national or local guidelines	Call for senior help when appropriate Respect opinion of referring surgical team

Medical Problems in Pregnancy

The trainee will be competent in the assessment, investigation and management of the common and serious medical complications of pregnancy			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the normal physiological changes occurring during pregnancy	Recognise the critically ill pregnant patient, initiate resuscitation measures and liaise promptly with senior and obstetrician	Recognise the importance of thrombo-embolic complication of pregnancy
	List the common medical problems occurring in pregnancy	Take a valid history from a pregnant patient	Communicate with obstetric team throughout the diagnostic and management process
	Identify the unique challenges of diagnosing medical problems in pregnancy	Examine a pregnant patient competently	Discuss case with senior promptly
	Recall safe prescribing practices in pregnancy	Produce a valid list of differential diagnoses	Seek timely gastroenterology opinion in cases of significant jaundice
		Initiate treatment if appropriate	

Memory Loss (Progressive)

The trainee will be able to assess a patient with progressive memory loss to determine severity, differential diagnosis, investigate appropriately, and formulate management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Define the clinical features of dementia that differentiate from focal brain disease, reversible encephalopathies, and pseudo-dementia	Take an accurate collateral history wherever possible	Demonstrate a patient sensitive approach to interacting with a confused patient and their carers
	List the principle causes of dementia	Perform a full examination looking for reversible causes of cognitive impairment and neurological disease	Recognise that a change of environment in hospital can exacerbate symptoms and cause distress
	Recall factors that may exacerbate symptoms: drugs, infection, change of environment, biochemical abnormalities, constipation	Demonstrate ability to use tools measuring cognitive impairment at the bedside	Recommend support networks to carers
		Order, interpret and act on initial investigations appropriately to determine reversible cause such as: blood tests, cranial imaging, EEG	Participate in multi-disciplinary approach to care: therapists, elderly care team, old age psychiatrists, social services
	Detect and rectify exacerbating factors	Recognise need for specialist involvement and opportunities for treatment	

Micturition (Difficult)

The trainee will be able to assess a patient presenting with difficulty in micturition to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline causes of difficulty in micturating in terms of oliguria and urinary tract obstruction	Examine to elicit signs of renal disease, bladder outflow obstruction and deduce volaemic status of patient	Recognise the importance of recognising and preventing renal impairment in the context of bladder outflow obstruction
	Recall techniques that allow oliguria and bladder outflow obstruction to be differentiated	Differentiate oliguric pre-renal failure; acute renal failure and post renal failure	Liaise with senior in event of oliguria heralding incipient shock
	Recall the investigation and management of prostatic cancer	Order, interpret and act on initial investigations appropriately: urinalysis, abdominal ultrasound, bladder scanning, urine culture and microscopy	Liaise promptly with appropriate team when oliguria from bladder outflow obstruction is suspected (urology, gynaecology)
		Initiate treatment when indicated	
		Perform catheterisation using aseptic technique with minimal discomfort to patient	
		Recognise incipient shock and commence initial treatment	

Neck Pain

The trainee will be able to assess a patient presenting with neck pain to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the common and serious causes of neck pain in terms of meningism; tender mass; musculoskeletal; vascular	Take a full history, including recent trauma	Consult senior colleague promptly in the event of focal neurological signs or critical illness
		Perform a full examination to elicit signs that may accompany neck pain	
		Order, interpret and act on initial investigations appropriately: blood tests, plain radiographs, thyroid function	
		Recognise meningitis and promptly initiate appropriate investigations and treatment with consultation with senior	
		Practise appropriate prescribing of analgesia	

Physical Symptoms in Absence of Organic Disease

The trainee will be able to assess and appropriately investigate a patient to conclude that organic disease is unlikely, counsel sensitively, and formulate an appropriate management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	List symptoms that commonly have a non-organic component	Take a full history, including associated symptoms of anxiety or depression and past medical assessments	Adopt attitude that presentation has organic cause until otherwise proven, and assess and investigate as appropriate
		Perform full examination including mental state	Consult senior promptly when appropriate
		Recognise the hyperventilation syndrome	Strive to establish underlying precipitants to non-organic presentations: life stresses, hypochondriacal states
			Appreciate the implications of unnecessary tests in terms of cost and iatrogenic complications

Polydipsia

The trainee will be able to assess a patient presenting with polydipsia to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Understand mechanisms of thirst	Identify other pertinent symptoms e.g. nocturia	Sympathetically explain likely causes of polydipsia to patient
	Identify common causes of polydipsia	Order, interpret and act on initial investigations appropriately Initiate adequate initial therapy	Use appropriate aseptic techniques for invasive procedures and to minimise healthcare acquired infection.

Polyuria

The trainee will be able to assess a patient presenting with polyuria to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Define true polyuria	Identify other pertinent symptoms	Consult senior colleague as appropriate
	Outline the causes of polyuria (in terms of osmotic, diabetes insipidus etc)	Perform full examination to assess volaemic status, and elicit associated signs	
	Outline the pathophysiology of diabetes insipidus	Order, interpret and act on initial investigations appropriately	
	Elucidate the principles of treating new onset diabetes mellitus, hypercalcaemia	Calculate and interpret serum and urine osmolarity	
		Commence treatment as appropriate	

Pruritus

The trainee will be able to assess a patient presenting with itch to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall principle causes in terms of infestations, primary skin diseases, systemic diseases (e.g. lymphoma), liver disease, pregnancy	Examine to elicit signs of a cause for pruritus	Recognise the need for specialist dermatological input
	Outline the principles of treating skin conditions	Describe accurately any associated rash	Recognise the need for other specialists in pruritus heralding systemic disease
	Outline the indications of and side effects of topical steroids and differentiate their different potencies	Formulate a list of differential diagnoses	
		Order, interpret and act on initial investigations appropriately	
		Recognise the presentation of skin cancer	

Rectal Bleeding

The trainee will be able to assess a patient with rectal bleeding to identify significance differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Recall the causes of bleeding per rectum	Perform examination including rectal examination	Liaise with senior and surgical team when appropriate
	Outline indications for surgical review	Recognise and appropriately treat the shocked patient including consultation with surgical colleagues	Recognise role of IBD nurse when patient with known IBD presents
	Outline the treatments indicated in acute colitis	Order, interpret and act on initial investigations appropriately	
		Distinguish upper and lower GI bleeding	

Skin and Mouth Ulcers

The trainee will be able to assess a patient presenting with skin or mouth ulceration to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also Dermatology in Section 2 for Skin Tumour competencies)			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	List the common and serious causes of skin (especially leg) or mouth ulceration	Recognise likely skin and oral malignancy	Recognise the importance of prevention of pressure ulcers and diabetic ulcers
	Outline the classification of skin ulcers by cause	Recognise life threatening skin rashes presenting with ulcers, commence treatment and involve senior	Participate in multi-disciplinary team: nurse specialists, podiatrist
	Outline the pathophysiology, investigation and management principles of diabetic ulcers	Assess and formulate immediate management plan for diabetic foot ulceration	
	Recognise association between mouth ulceration and immunobullous disease	Order, interpret and act on initial investigations appropriately	

Speech Disturbance

The trainee will be able to assess a patient with speech disturbance to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Define dysphonia, dysarthria and dysphasia	Take a history from a patient with speech disturbance	Recognise the role of speech and language therapy input
	Recall the neuro-anatomy relevant to speech and language	Examine patient to define nature of speech disturbance and elicit other focal signs	Recognise the relationship between dysarthria and swallowing difficulties and advise patients and carers accordingly
	Differentiate receptive and expressive dysphasia	List differential diagnoses following assessment	Involve stroke team or neurology promptly as appropriate
	List causes for dysphonia, dysarthria and dysphasia	Order, interpret and act on initial investigations appropriately	

Suicidal Ideation

The trainee will be able to take a valid psychiatric history to elicit from a patient suicidal ideation and underlying psychiatric pathology; assess risk; and formulate appropriate management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the risk factors for a suicidal attempt	Take a competent psychiatric history	Liaise promptly with psychiatric services if in doubt or when high risk of repeat self harm is suspected
	Outline the common co-existing psychiatric pathologies that may precipitate suicidal ideation	Be familiar with scoring tools to assess risk of further self harm (eg Beck's score)	Recognise the role of the Self Harm Team prior to discharge
	Outline the indications, contraindications and side effects of the major groups of psychomotor medications	Elicit symptoms of major psychiatric disturbance	Ensure prompt communication is maintained with community care on discharge (GP, CPN)
	Outline the powers that enable assessment and treatment of patients following self harm or self harm ideation as defined in the Mental Health Act	Obtain collateral history when possible	
		Recognise and manage appropriately anxiety and aggression	

Swallowing Difficulties

The trainee will be able to assess a patient with swallowing difficulties to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the physiology of swallowing	Elicit valid history, detecting associations that indicate a cause: weight loss, aspiration, heartburn	Recognise importance of multi-disciplinary approach to management
	Recall the causes of swallowing problems		
	Differentiate between neurological and GI causes	Examine a patient to elicit signs of neurological disease, malignancy and connective tissue disease	
	Outline investigative options: contrast studies, endoscopy, manometry, CT	Be able to evaluate whether patient is safe to eat or drink by mouth	
	Outline the pathophysiology, staging, and therapeutic options of oesophageal malignancy		
	Define odynophagia and list causes		

Syncope & Pre-syncope

The trainee will be able to assess a patient presenting with syncope to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan (see also 'blackouts/collapse')			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Define syncope	Take thorough history from patient and witness to elucidate episode	Recognise impact episodes can have on lifestyle particularly in the elderly
	Outline the pathophysiology of syncope depending on situation (vaso-vagal, cough, effort, micturition, carotid sinus hypersensitivity)	Differentiate pre-syncope from other causes of 'dizziness'	Recognise recommendations regarding fitness to drive in relation to syncope
	Differentiate from other causes of collapse in terms of associated symptoms and signs, and eye witness reports	Assess patient in terms of ABC and degree of consciousness and manage appropriately	Recognise and act upon criteria for referral for carotid sinus hypersensitivity studies.
	Outline the indications for cardiac monitoring	Perform examination to elicit signs of cardiovascular disease	
		Order, interpret and act on initial investigations appropriately: blood tests ECG	

Unsteadiness / Balance Disturbance

The trainee will be able to assess a patient presenting with unsteadiness or a disturbance of balance to produce a valid list of differential diagnoses, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Outline the neuro-anatomy and physiology relevant to balance, coordination and movement	Take history from patient and attempt to define complaint as either pre-syncope, vertigo or unsteadiness	Recognise the importance of multi-disciplinary approach: physio, OT
	Define and differentiate types of vertigo and list causes	Perform full physical examination to elicit signs of neurological, inner ear or cardiovascular disease including orthostatic hypotension	
	Define and differentiate sensory and cerebellar ataxia and list causes	Describe an abnormal gait accurately	
		Recognise intoxication	
		Initiate basic investigations and urgent treatment with vitamins when appropriate	

Visual Disturbance (diplopia, visual field deficit, reduced acuity)

To assess the patient presenting with a visual disturbance to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	Broadly outline the basic anatomy and physiology of the eye and the visual pathways	Perform full examination including acuity, eye movements, visual fields, fundoscopy, related cranial nerves and structures of head & neck	In case of acute visual loss recognise early requirement for review by Ophthalmology team
	Define the different types of visual field defect and list common causes	Formulate differential diagnosis	Recognise rapidly progressive symptoms and consult senior promptly
	Define diplopia and list common causes	Order, interpret and act on initial investigations appropriately	Recognise anxiety acute visual symptoms invoke in patients
	List common causes for reduced visual acuity		

Weight Loss

The trainee will be able to assess a patient presenting with unintentional weight loss to produce a valid differential diagnosis, investigate appropriately, formulate and implement a management plan			
	Knowledge	Skills	Attitudes and Behaviour
Competency Level 1	List the common causes for weight loss (in terms of psychosocial, neoplasia, gastroenterological etc)	Take a valid history highlighting any risk factors for specific disorders presenting with weight loss, and a thorough social history	Recognise multi-factorial aspect of weight loss, especially in the elderly
	Outline the indications and complications for nutritional supplements, and enteral feeding including PEG/NG feeding	<p>Examine fully to elucidate signs of disorders presenting with weight loss, and also assess degree of malnutrition</p> <p>Order, interpret and act on initial screening investigations</p> <p>Initiate nutritional measures including enteral preparations when appropriate</p> <p>Pass a fine bore NG feeding tube and ensure correct positioning</p>	<p>Recognise prominence of psychosocial factors, with collateral history where possible</p> <p>Liaise with nutritional services appropriately</p>

Part 2.2: System Specific Competencies

This document has described the level 1 competencies required to practise GIM (Acute) in a patient-centred way by listing the common ways in which patients can present. In so doing, certain important competencies have not been mentioned. It is important to recognise that all physicians should have a systematic knowledge of conditions that may be seen infrequently but are important to recognise and may be assessed in some of the formal assessments that take place within the training programme. This section considers each system in turn, alphabetically, and lists the competencies, clinical conditions and clinical science required for each system. However, it is not intended that this is a description of the setting or specialties in which these competencies are to be attained. For example, experience of asthma can be gained in the community, emergency setting and many medical wards, rather than solely on a respiratory ward.

Common and / or Important Problems

Learning to manage each mode of presentation does not avoid the need for a trainee to have a solid grounding of knowledge in specific medical conditions. It is also the case that patients very often already have a 'diagnostic label', for example a GP referring 'a breathless patient with heart failure'. In the age of better patient education and patient involvement in the management of their long-term condition, today's clinician frequently needs to refer to disease-specific knowledge earlier in the consultation.

This section of the curriculum therefore aims to advise the trainee on the conditions that require detailed understanding. The list also gives a guide to the topics that will form the basis for formal summative and work-place assessments.

A framework for the knowledge required for specific conditions is set out below, and should continue to improve with time in line with the principles of a spiral curriculum:

- Definition
- Pathophysiology
- Epidemiology
- Features of History
- Examination findings
- Differential Diagnosis
- Investigations indicated

- Detailed initial management and principles of ongoing management (counselling, lifestyle, medical, surgical, care setting and follow up)
- Complications
- Prevention (where relevant to condition)

Clinical science

As trainees proceed through training they must pass formal summative assessments, the most notable of which is the MRCP(UK) examination. Part 1 of this examination in particular investigates knowledge of the science that underpins clinical medicine. This section of the curriculum defines the broad areas of clinical science that the trainee is expected to recall. This encourages a trainee's deeper learning of some of the clinical concepts that have already been described in this curriculum, and offers an insight into the content of knowledge-based assessments.

Allergy

Competencies

- Recognise when specialist allergy opinion is required.
- Be aware of the management and subsequent investigation of patients presenting with immune mediated medical emergencies: anaphylaxis, laryngeal oedema, urticaria, angioedema

Common or Important Allergy Problems

- Anaphylaxis
- Recognition of common allergies; introducing occupation associated allergies
- Food, drug, latex, insect venom allergies
- Urticaria and angioedema

Clinical Science

- Mechanisms of allergic sensitisation: primary and secondary prophylaxis
- Natural history of allergic diseases
- Mechanisms of action of anti-allergic drugs and immunotherapy
- Principles and limitations of allergen avoidance

Cancer and Palliative Care

Competencies

- Take an accurate pain history
- Perform full physical examination without causing undue pain or distress to patient
- Recognise the terminally ill often present with problems with multi-factorial causes
- Recognise associated psychological and social problems
- Investigate appropriately
- Recognise when specialist oncology or palliative care opinion is needed
- Outline treatment principles with drawbacks: surgery, chemotherapy and radiotherapy
- Break bad news to patient and family with cancer in sensitive and appropriate manner
- Contribute to discussions on decisions not to resuscitate with patient, carers, family and colleagues appropriately and sensitively ensuring patients interests are paramount

- Recognise the dying phase of terminal illness
- Manage symptoms in dying patients appropriately
- Practise safe use of syringes drivers
- Recognise importance of hospital and community Palliative Care teams
- Recognise that referral to specialist palliative care is appropriate for patients with other life threatening illnesses, as well as those with cancer

Common or Important Oncology Problems:

- Hypercalcaemia
- SVC obstruction
- Spinal cord compression
- Neutropenic sepsis
- Common cancers (presentation, diagnosis, staging, treatment principles): lung, bowel, breast, prostate, stomach, oesophagus, bladder)

Common or Important Palliative Care Problems:

- Pain: appropriate use, analgesic ladder, side effects, role of radiotherapy
- Constipation
- Breathlessness
- Nausea and vomiting
- Anxiety and depressed mood

Clinical Science:

- Principles of oncogenesis and metastatic spread
- Apoptosis
- Principles of staging
- Principles of screening
- Pharmacology of major drug classes in palliative care: anti-emetics, opioids, NSAIDS, agents for neuropathic pain, bisphosphonates, laxatives, anxiolytics

Cardiovascular Medicine

Competencies

- Recognise when specialist Cardiology opinion is indicated

- Outline risk factors for cardiovascular disease
- Counsel patients on risk factors for cardiovascular disease
- Outline methods of smoking cessation of proven efficacy (see below)

Common and / or important Cardiac Problems:

- Arrhythmias
- Ischaemic Heart Disease: acute coronary syndromes, stable angina, atherosclerosis
- Heart Failure
- Hypertension – including investigation and management of accelerated hypertension
- Valvular Heart Disease
- Endocarditis
- Aortic dissection
- Syncope
- Dyslipidaemia

Clinical Science:

- Anatomy and function of cardiovascular system
- Physiological principles of cardiac cycle and cardiac conduction
- Homeostasis of the circulation
- Atherosclerosis
- Pharmacology of major drug classes: beta blockers, alpha blockers, ACE inhibitors, Angiotensin receptor blockers (ARBs), anti-platelet agents, thrombolysis, inotropes, calcium channel antagonists, potassium channel activators, diuretics, anti-arrhythmics, anti-coagulants, lipid modifying drugs, nitrates, centrally acting anti-hypertensives

Clinical Genetics

Competencies

- Recognise the organisation and role of Clinical Genetics and when to seek specialist advice
- Take and interpret a complete family history
- Recognise the anxiety caused to an individual and their family when investigating genetic susceptibility to disease
- Recognise the importance of skilled counselling in the investigation of genetic susceptibility to disease
- Recognise basic patterns of inheritance

- Mendelian disease
- Recognise the differing attitudes and beliefs towards inheritance

Common and / or Important problems:

- Down's syndrome
- Turner's syndrome
- Huntington's disease
- Haemochromatosis
- Marfan's syndrome
- Klinefelter's syndrome
- Familial cancer syndromes
- Familial cardiovascular disorders

Clinical Science:

- Structure and function of human cells, chromosomes, DNA, RNA and cellular proteins
- Principles of inheritance: Mendelian, sex-linked, mitochondrial
- Principles of pharmacogenetics
- Principles of mutation, polymorphism, trinucleotide repeat disorders
- Principles of genetic testing including metabolite assays, clinical examination and analysis of nucleic acid (e.g. PCR)

Clinical Pharmacology

Competencies

- Practise safe prescribing
 - Effects of: renal or liver impairment; old age; pregnancy
 - Outline importance of drug interactions and role CYP450 isoenzymes
 - Outline drugs requiring therapeutic monitoring
- Use national and local guidelines on appropriate and safe prescribing (BNF, NICE)
- Write a clear and unambiguous prescription
- Engage patients in discussions on drug choice, and side effects
- Recognise range of adverse drug reactions to commonly used drugs
- Use Yellow Card report scheme for adverse drug reactions
- Liaise effectively with pharmacists
- Discuss therapeutic changes with patient and discuss with GP promptly and comprehensively
- Competently formulate management plan for poisoning and adverse drug reactions
- Demonstrate appropriate use of a toxicology database (eg Toxbase)
- Calculate glomerular filtration rate

Common and / or Important problems:

- Corticosteroid treatment: short and long-term complications, bone protection, safe withdrawal of corticosteroids, patient counselling regarding avoid adrenal crises
- Specific treatment of poisoning with:
 - Aspirin,
 - Paracetamol
 - Tricyclic anti-depressants
 - Beta-blockers
 - Carbon monoxide
 - Opiates
 - Digoxin
 - Benzodiazepines

- SSRI

Clinical Science:

- Drug actions at receptor and intracellular level
- Principles of absorption, distribution, metabolism and excretion of drugs
- Effects of genetics on drug metabolism
- Pharmacological principles of drug interaction
- Outline the effects on drug metabolism of: pregnancy, age, renal and liver impairment

Dermatology

Competencies

- Accurately describe skin lesions following assessment
- Skin Tumours
 - Outline the clinical features and presentation of melanoma, squamous cell carcinoma and basal cell carcinoma
 - List diagnostic features for the early detection of malignant melanoma
 - Recognise and manage suspected skin tumours when they may be an incidental finding
 - Recognise the association between timely biopsy / excision of melanoma and survival
 - Arrange prompt skin biopsy when appropriate
 - Counsel patients on preventative strategies for skin tumours (e.g. avoiding excess UV exposure); and the diagnostic features for the early detection of malignant melanoma
- Recognise when specialist Dermatology opinion is indicated
- Recognise when a patient's presentation heralds a systemic disease
- Suspect and treat meningococcal septicaemia when a purpuric rash accompanies systemic illness

Common and / or Important Problems:

- Cellulitis
- Cutaneous drug reactions
- Psoriasis and eczema

- Skin failure: eg erythroderma, toxic epidermal necrolysis
- Urticaria and angio-oedema
- Cutaneous vasculitis
- Herpes zoster and Herpes Simplex infections
- Skin tumours (see above for more specific competencies)
- Skin infestations
- Dermatomyositis
- Scleroderma
- Lymphoedema

Clinical Science:

- Structure and function of skin, hair and nails
- Pharmacology of major drug classes: topical steroids, immunosuppressants

Diabetes & Endocrine Medicine

Competencies

- Elucidate a full diabetic medical history
- Recall diagnostic criteria for Diabetes Mellitus
- Assess diabetic patient to detect long term complications
- Formulate an appropriate management plan, including newly diagnosed and established diabetic patients to prevent short and long term complications
- Outline common insulin regimens for type 1 diabetes
- Outline drug management of type 2 diabetes: oral hypoglycaemics, glitazones, primary and secondary vascular preventative agents
- Recognise vital importance of patient education and a multidisciplinary approach for the successful long-term care of diabetes
- Recognise when specialist Endocrine or Diabetes opinion is indicated

Common and / or Important Diabetes Problems:

- Diabetic ketoacidosis
- Non-acidotic hyperosmolar coma / severe hyperglycaemia
- Hypoglycaemia

- Care of the acutely ill diabetic
- Peri-operative diabetes care

Common or Important Endocrine Problems:

- Hyper/Hypocalcaemia
- Adrenocortical insufficiency
- Hyper/Hyponatraemia
- Thyroid dysfunction
- Dyslipidaemia
- Endocrine emergencies: myxoedema coma, thyrotoxic crisis, Addisonian crisis, hypopituitary coma, pheochromocytoma crisis

Clinical Science:

- Structure and function of hypothalamus, pituitary, thyroid, adrenals, gonads, parathyroids, pancreas
- Outline the function of hormones
- Principles of hormone receptors, action, secondary messengers and feedback
- Pharmacology of major drug classes: insulin, oral anti-diabetics, thyroxine, anti-thyroid drugs, corticosteroids, sex hormones, drugs affecting bone metabolism

Gastroenterology and Hepatology

Competencies

- Understand the role of specialised diagnostic and therapeutic endoscopic procedures
- Recognise when specialist Gastroenterology or Hepatology opinion is indicated
- Recognise when a patient's presentation heralds a surgical cause and refer appropriately
- Perform a nutritional assessment and address nutritional requirements in management plan
- Outline role of specialist multi-disciplinary nutrition team

Common or Important Problems:

- Peptic Ulceration and Gastritis
- Gastroenteritis
- GI malignancy (oesophagus, gastric, hepatic, pancreatic, colonic)
- Inflammatory bowel disease

- Iron Deficiency anaemia
- Acute GI bleeding
- Acute abdominal pathologies: pancreatitis, cholecystitis, appendicitis, leaking abdominal aortic aneurysm
- Functional disease: irritable bowel syndrome, non-ulcer dyspepsia
- Coeliac disease
- Alcoholic liver disease
- Alcohol withdrawal syndrome
- Acute liver dysfunction: jaundice, ascites, encephalopathy
- Liver cirrhosis
- Gastro-oesophageal reflux disease
- Nutrition: indications, contraindications and ethical dilemmas of nasogastric feeding and PEG tubes, IV nutrition, re-feeding syndrome
- Gall stones
- Viral hepatitis
- Auto-immune liver disease
- Pancreatic cancer

Clinical Science:

- Structure and function of salivary glands, oesophagus, stomach, small bowel, colon, rectum, liver, biliary system, pancreas
- Principles of the physiology of alimentary tract: motility, secretion, digestion, absorption
- Principles of action of liver
 - Laboratory markers of liver, pancreas and gut dysfunction
 - Pharmacology of major drug classes: acid suppressants, anti-spasmodics, laxatives, anti-diarrhoea drugs, aminosalicylates, corticosteroids, immunosuppressants, infliximab, pancreatic enzyme supplements

Haematology

Competencies

- Recognise when specialist Haematology opinion is indicated
- Practise safe prescribing of blood products, including appropriate patient counselling

- Outline indications, contraindications, side effects and therapeutic monitoring of anticoagulant medications

Common and / or Important Problems:

- Bone marrow failure: causes and complications
- Bleeding disorders: DIC, haemophilia
- Thrombocytopenia
- Anticoagulation treatment: indications, monitoring, management of over-treatment
- Transfusion reactions
- Anaemia: iron deficient, megaloblastic, haemolysis, sickle cell,
- Thrombophilia: classification; indications and implications of screening
- Haemolytic disease
- Myelodysplastic syndromes
- Leukaemia
- Lymphoma
- Myeloma
- Myeloproliferative disease
- Inherited disorders of haemoglobin (sickle cell disease, thalassaemias)
- Amyloid

Clinical Science:

- Structure and function of blood, reticuloendothelial system, erythropoietic tissues
- Haemoglobin structure and function
- Haemopoiesis
- Metabolism of iron, B12 and folate
- Coagulation

Immunology

Competencies

- Recognise the role of the Clinical Immunologist

Common or Important Problems:

- Anaphylaxis (see also 'Allergy')

Clinical Science:

- Structure and function of reticuloendothelial system
- Innate and adaptive immune responses
- The Complement System: structure and function
- Principles of Hypersensitivity
- Principles of transplantation

Infectious Diseases

Competencies

- Elucidate risk factors for the development of an infectious disease including contacts, travel, animal contact and sexual history
- Recognise when specialist Microbiology or Infectious Diseases opinions are indicated
- Recognise when a patient is critically ill with sepsis, promptly initiate treatment and liaise with critical care and senior colleagues
- Outline spectrum of cover of common anti-microbials, recognising complications of inappropriate use
- Use local anti-microbial prescribing guidelines, including therapeutic drug monitoring when indicated
- Recognise importance of immunisation and Public Health in infection control, including reporting notifiable diseases
- Outline principles of prophylaxis eg anti-malarials

Common and / or Important Problems:

- Fever of Unknown origin
- Complications of sepsis: shock, DIC, ARDS
- Common community acquired infection: LRTI, UTI, skin and soft tissue infections, viral exanthema, gastroenteritis
- CNS infection: meningitis, encephalitis, brain abscess
- HIV and AIDS including ethical considerations of testing
- Infections in immuno-compromised host
- Tuberculosis
- Anti-microbial drug monitoring
- Endocarditis
- Common genito-urinary conditions: non-gonococcal urethritis, gonorrhoea, syphilis

Clinical Science:

- Mechanisms of organism pathogenesis
- Host response to infection

- Principles of vaccination
- Pharmacology of major drug classes: penicillins, cephalosporins, tetracyclines, aminoglycosides, macrolides, sulphonamides, quinolones, metronidazole, anti-tuberculous drugs, anti-fungals, anti-malarials, anti-helminthics, anti-virals

Medicine in the Elderly

Competencies

- Elucidate in older patients co-morbidities, activities of daily living, social support, drug history and living environment
- Assess mental state and tests of cognitive function
- Recognise the frequent presence of multiple factors contributing to presentation
- Recognise when specialist Medicine for the Elderly opinion is indicated
- Recognise importance of multi-disciplinary assessment
- Contribute to effective multi-disciplinary management and discharge planning
- Set realistic rehabilitation targets
- Rationalise individual drug regimens to avoid unnecessary poly-pharmacy
- Contribute to discussions on decisions not to resuscitate with patient, carers, family and colleagues appropriately, and sensitively ensuring patients interests are paramount
- Recognise the role of Intermediate Care, and practise prompt effective communication with these facilities
- Recognise the often multi-factorial causes for clinical presentation in the elderly and outline preventative approaches
- Recognise that older patients often present with multiple problems (e.g. falls and confusion, immobility and incontinence)

Common or Important Problems:

- Deterioration in mobility
- Acute confusion
- Stroke and transient ischaemic attack
- Falls
- Age related pharmacology
- Hypothermia
- Continence problems
- Dementia
- Movement disorders including Parkinson's disease
- Depression in the elderly

- Osteoporosis
- Malnutrition
- Osteoarthritis

Clinical Science:

- Effects of ageing on the major organ systems
- Normal laboratory values in older people

Musculoskeletal System

Competencies

- Accurately describe the examination features of musculoskeletal disease following full assessment
- Recognise when specialist Rheumatology opinion is indicated
- Outline the indications, contraindications and side effects of the major immunosuppressive drugs used in rheumatology including corticosteroids
- Recognise the need for long term review in many cases of rheumatological disease and their treatments
- Recognise importance of eg multidisciplinary approach to rheumatological disease including physio, OT
- Use local / national guidelines appropriately e.g. osteoporosis

Common or Important Problems:

- Septic arthritis
- Rheumatoid arthritis
- Osteoarthritis
- Seronegative arthritides
- Crystal arthropathy
- Osteoporosis – risk factors, and primary and secondary prevention of complications of osteoporosis
- Polymyalgia and temporal arteritis
- Acute connective tissue disease: systemic lupus erythematosus, scleroderma, poly- and dermatomyositis, Sjögren's syndrome, vasculitides

Clinical Science:

- Structure and function of muscle, bone, joints, synovium
- Bone metabolism
- Pharmacology of major drug classes: NSAIDs, corticosteroids, immunosuppressants, colchicines, allopurinol, bisphosphonates

Neurology

Competencies

- Define the likely site of a lesion within the nervous system following full assessment

- Recognise when specialist Neurology opinion is indicated
- Recognise when a patient's presentation heralds a neurosurgical emergency and refer appropriately

Common or Important Problems:

- Acute new headache
- Stroke and transient ischaemic attack
- Subarachnoid haemorrhage
- Coma
- Central Nervous System infection: encephalitis, meningitis, brain abscess
- Raised intra-cranial pressure
- Sudden loss of consciousness including seizure disorders (see also above syncope etc)
- Acute paralysis: Guillian-Barré, myasthenia gravis, spinal cord lesion
- Multiple sclerosis
- Motor neurone disease

Clinical Science:

- Structure and function of the central, peripheral and sympathetic nervous systems
- Physiology of nerve conduction
- Principles of neurotransmitters
- Structure and physiology of visual, auditory, and balance systems
- Anatomy of cerebral blood supply
- Brain death
- Pathophysiology of pain
- Speech and language
- Pharmacology of major drug classes: anxiolytics, hypnotics inc. benzodiazepines, anti-epileptics, anti-Parkinson's drugs (anti-muscarinics, dopaminergics)

Psychiatry

Competencies

- Be able to take a full medical and relevant psychiatric history
- Be able to perform a mental state examination
- Recognise when specialist Psychiatric opinion is indicated

- Recognise when a patient's presentation heralds organic illness and manage appropriately
- Recognise role of community mental health care teams

Common and /or Important Problems:

- Suicide and parasuicide
- Acute psychosis
- Substance dependence
- Depression

Clinical Science:

- Structure and function of limbic system and hippocampus
- Principles of substance addiction, and tolerance
- Principles of neurotransmitters
- Pharmacology of major drug classes: anti-psychotics, lithium, tricyclic antidepressants, mono-amine oxidase inhibitors, SSRIs, venlafaxine, donepezil, drugs used in treatment of addiction (bupropion, disulpharam, acamprosate, methadone)

Public Health & Health Promotion

Competencies

- **Smoking**
 - Outline the effects of smoking on health
 - Promote smoking cessation
 - Recognise the need for support during cessation attempts
 - Recognise and utilise specific Smoking Cessation health professionals
- **Alcohol**
 - Recall safe drinking levels
 - Recognise the health and psychosocial effects of alcohol
 - Recommend support networks for problem drinkers
 - Outline appropriate detoxification programme and methods to retain abstinence
- **Obesity**
 - Recognise medical impact of obesity

- Outline good dietary practices
- Promote regular exercise
- Recommend specialist dietician input as appropriate
- Define principles of therapeutic interventions in morbid obesity
- **Nutrition**
 - Recognise the public health problem of poor nutrition
 - Perform basic nutritional assessment
 - Identify patients with malnutrition and instigate appropriate management
 - Recognise importance of dietician input and follow-up
 - Define principles of enteral and parenteral feeding
 - Outline the ethical issues associated with nutrition
- **Sexual behaviour**
 - Promote safe sexual practices
- **Substance abuse**
 - Recognise the health and psychosocial effects of substance abuse
 - Recommend support networks
- **Social Deprivation**
 - Recognise the impact of social deprivation on health
- **Occupation**
 - Recognise the impact of occupation on health
 - Outline the role of Occupational Health consultants
- **Exercise**
 - Define the health benefits of regular exercise
 - Promote regular exercise
- **Mental Health**
 - Recognise the interaction of mental and physical health
 - Recommend appropriate treatment and support facilities

- Formulate a differential diagnosis for the patient following assessment
- Formulate and appropriate management plan
- Discuss with patient likely outcomes and prognosis of condition and requirement for long term review
- Differentiate pre-renal failure, renal failure and urinary obstruction
- Recognise when specialist Nephrology or Urology opinion is indicated
- Identify patients who are at high risk of renal dysfunction in event of illness or surgery, and institute preventative measures

Common and / or Important Problems:

- Acute renal failure
- Chronic renal failure
- Glomerulonephritis
- Nephrotic syndrome
- Urinary tract infections
- Urinary Calculus
- Renal replacement therapy
- Disturbances of potassium, acid/base, and fluid balance (and appropriate acute interventions)

Clinical Science:

- Structure and function of the renal and urinary tract
- Homeostasis of fluid, electrolytes and acid base
- Urine composition
- Measurement of renal function
- Metabolic perturbations of acute, chronic, and end-stage renal failure and associated treatments

Respiratory Medicine

Competencies

- Recognise when specialist Respiratory opinion is indicated
- Safe oxygen prescribing
- Principles of short and long term oxygen therapy

- Outline the different delivery systems for respiratory medications
- Outline methods of smoking cessation of proven efficacy
- Counsel patients in smoking cessation appropriately
- Take a thorough Occupational History to identify risk factors for lung disease

Common and / or Important Respiratory Problems:

- COPD
- Asthma
- Pneumonia
- Pleural disease: Pneumothorax, pleural effusion, mesothelioma
- Lung Cancer
- Respiratory failure and methods of respiratory support
- Pulmonary embolism and DVT
- Tuberculosis
- Interstitial lung disease
- Bronchiectasis
- Respiratory failure and cor pulmonale
- Pulmonary hypertension

Clinical Science:

- Anatomy and function of respiratory system (airways, lungs, chest wall)
- Physiology of gas exchange: ventilation, perfusion, ventilation and perfusion matching
- Acid-base homeostasis
- Principles of lung function measurement
- Pharmacology of major drug classes: bronchodilators, inhaled corticosteroids, leukotriene receptor antagonists, immunosuppressants

Part 2.3: Investigation Competencies

Listed below are the investigations that the trainee is expected to be able to outline the indications for and interpret by the end of core training. The second list on page 96 states the investigations that the trainee should know the indications for, and how the investigation is carried out. A detailed interpretation is not expected, as these investigations usually require specialist interpretation (eg histology, radiology). However, the level 1 competent trainee should be able to interpret the reports of such tests in the clinical context.

Outline the Indications for, and Interpret the Following Investigations:

Biochemistry

- Basic blood biochemistry: urea and electrolytes, liver function tests, bone biochemistry, glucose, magnesium
- Cardiac biomarkers and cardiac-specific troponin
- Creatine kinase
- Thyroid function tests
- Inflammatory markers: CRP / ESR
- Arterial Blood Gas analysis
- Cortisol and short Synacthen test
- HbA1C
- Lipid profile
- Amylase
- Drug levels: paracetamol, salicylate, digoxin, antibiotics, anti-convulsants

Haematology

- Full blood count
- Coagulation screen
- Haemolysis screen
- D dimer
- Blood film report
- Haematinics

Microbiology / Immunology

- Blood / Sputum / urine culture
- Fluid analysis: pleural, cerebro-spinal fluid, ascitic
- Urinalysis and urine microscopy
- Auto-antibodies
- H. Pylori testing

Radiology

- Chest radiograph
- Abdominal radiograph
- Joint radiographs (knee, hip, hands, shoulder, elbow, dorsal spine, ankle)

Physiological

- ECG
- Peak flow tests
- Full lung function tests

Outline Principles of the Following Investigations:

Level 1 competency includes the need for the trainee to recognise abnormal results and ask for a more senior opinion when appropriate

Biochemistry

- Urine catecholamines
- Sex hormones (FSH, LH, testosterone, oestrogen and progesterone) & Prolactin
- Specialist endocrine suppression or stimulation tests (dexamethasone suppression test; insulin tolerance test; water deprivation test, glucose tolerance test and growth hormone)

Microbiology / Immunology

- Coeliac serology screening
- Viral hepatitis serology
- Myeloma screen
- Stool testing
- HIV testing

Radiology

- Ultrasound
- Detailed imaging: Barium studies, CT, CT pulmonary angiography, high resolution CT, MRI
- Imaging in endocrinology (thyroid, pituitary, adrenal)
- Renal imaging: ultrasound, KUB, IVU, CT

Physiological

- Echocardiogram
- 24 hour ECG monitoring
- Ambulatory blood pressure monitoring
- Exercise tolerance test
- Cardiac perfusion scintigraphy
- Tilt testing
- Neurophysiological studies: EMG, nerve conduction studies, visual and auditory evoked potentials

Medical Physics

- Bone scan
- Bone densitometry
- Scintigraphy in endocrinology
- V/Q scanning

Endoscopic Examinations

- Bronchoscopy
- Upper and lower GI endoscopy
- ERCP

Pathology

- Liver biopsy
- Renal biopsy

- Bone marrow and lymph node biopsy
- Cytology: pleural fluid, ascitic fluid, cerebro-spinal fluid, sputum

Part 2.4: Procedural Competencies

The trainee is expected to be competent in performing the following procedures by the end of core training. The trainee must be able to outline the indications for these interventions. For invasive procedures, the trainee must recognise the indications for the procedure, the importance of valid consent, aseptic technique, safe use of local anaesthetics and minimisation of patient discomfort..

- Venepuncture
- Cannula insertion, including large bore
- Arterial blood gas sampling
- Lumbar Puncture
- Pleural tap and aspiration
- Intercostal drain insertion: Seldinger technique
- Ascitic tap
- Abdominal paracentesis
- Central venous cannulation
- Initial airway protection: chin lift, Guedel airway, nasal airway, laryngeal mask
- Basic and, subsequently, advanced cardiorespiratory resuscitation
- DC cardioversion
- Urethral catheterisation
- Nasogastric tube placement and checking
- Electrocardiogram
- Knee aspiration
- Temporary cardiac pacing by internal wire or external pacemaker
- Skin Biopsy (this is not mandated for all trainees but opportunities to become competent in this technique should be available especially for trainees who subsequently wish to undertake specialist dermatology training)

Section 3 – The Learning Process

This section describes how learning can be achieved to accomplish the outcomes of the curriculum.

3.1 – The Model of Learning

This section describes the model of learning appropriate to the core training element that is common to all physicians

Trainees will achieve the competencies described in the curriculum through a variety of learning methods. There will be a balance of different modes of learning from formal teaching programmes to experiential learning 'on the job'. The proportion of time allocated to different learning methods may vary depending on the nature of the attachment within a rotation.

There must be robust arrangements for quality assurance in place to ensure consistent implementation of the curriculum (see Sections 5 and 6).

Work-Based Experiential Learning - The content of work-based experiential learning is decided by the local faculty for education (defined in Section 6 of this curriculum) but includes active participation in:

- **Medical clinics including specialties**, including rapid access clinics. After initial induction, trainees will review patients in outpatient clinics, under direct supervision. The degree of responsibility taken by the trainee will increase as competency increases. As experience and clinical competence increase trainees will assess 'new' and 'review' patients and present their findings to their clinical supervisor.
- **Unselected Acute Medical takes**
- **Post-take consultant ward-rounds**
- **Personal ward rounds and provision of ongoing clinical care** on general or specialist medical ward attachments. Every patient seen, on the ward or in out-patients, provides a learning opportunity, which will be enhanced by following the patient through the course of their illness: the experience of the evolution of patients' problems over time is a critical part both of the diagnostic process as well as management. Patients seen should provide the basis for critical reading and reflection of clinical problems.
- **Consultant-led ward rounds.** Every time a trainee observes another doctor, consultant or fellow trainee, seeing a patient or their relatives there is an opportunity for learning. Ward rounds, including those post-take, should be led by a consultant and include feedback on clinical and decision-making skills.
- **Procedural teaching.** All trainees are encouraged to take a procedural skills course in the clinical skills lab setting. Further highly supervised procedural experience can be obtained through the use of simulators (where appropriate and available) and staged delivery on selected patients. As competence in specific procedural skills is gained, the level of supervision will decrease until independent practice is achieved.

Assessment of progress will involve workplace-based assessment (direct observation of procedural skills or DOPS).

- **Multi-disciplinary team meetings.** There are many situations where clinical problems are discussed with clinicians in other disciplines. These provide excellent opportunities for observation of clinical reasoning.

Some learning outcomes may be best achieved in some programmes by active participation in, or attendance at, clinics in related specialties e.g. neurology, rheumatology or dermatology.

Each local faculty for education will define the programme of learning activities.

Trainees have supervised responsibility for the care of in-patients. This includes day-to-day review of clinical conditions, note keeping, effective handover and the initial management of the acutely ill patient with referral to and liaison with clinical colleagues as necessary. The degree of responsibility taken by the trainee will increase as competency increases. There should be appropriate levels of clinical supervision throughout training with increasing clinical independence and responsibility as learning outcomes are achieved (see Section 5: Feedback and Supervision).

Formal Postgraduate Teaching – The content of these sessions is determined by the local faculty of medical education and will be based on the curriculum. There are many opportunities throughout the year for formal teaching in the local postgraduate teaching sessions and at regional, national and international meetings. Many of these are organised by the Royal Colleges of Physicians. Suggested activities include:

- A programme of formal bleep-free regular teaching sessions to cohorts of trainees (e.g. a weekly hour of teaching within a Trust)
- Case presentations
- Research and audit projects
- Journal clubs
- Lectures and small group teaching
- Grand rounds
- Clinical skills demonstrations and teaching
- Critical appraisal and evidence based medicine and journal clubs
- Joint specialty meetings e.g. neurology, radiology, pathology, rheumatology
- Bedside teaching, such as training for the MRCP(UK) clinical exam, particularly covering problem areas identified by trainees. This may be timetabled or *ad hoc* teaching.

Attendance at training programmes organised on a deanery or regional basis, which are designed to cover aspects of the training programme outlined in this curriculum.

Independent Self-Directed Learning -Trainees will use this time in a variety of ways depending upon their stage of learning. Suggested activities include:

- Preparation for assessment and examinations
- Reading journals

- Reading, including web-based material
- Maintenance of personal portfolio (self-assessment, reflective learning, personal development plan)
- Audit and research projects
- Achieving personal learning goals beyond the essential, core curriculum

Formal Study Courses - Time to be made available for formal courses is encouraged, subject to local conditions of service. Examples include courses promoting recognition of the acutely sick patient e.g. IMPACT, recognised Acute Medicine courses, practical skills courses, appropriately structured and resourced revision courses for MRCP(UK), ALS courses.

3.2 – Learning Experiences

This section identifies the types of situations in which a trainee will learn.

Learning from Practice - Trainees will spend a large proportion of work-based experiential learning involved in supervised clinical practice in hospital and community settings. Learning will involve closely supervised clinical practice until competences are achieved. The learning environment will be in, Medical Assessment Units, General and Specialist Medical wards, Accident and Emergency and critical care environments and outpatient clinics. Opportunities for informal and formal feedback on performance should occur during and at the end of clinical sessions as part of a structured appraisal process defined in the accompanying portfolio (see Section 3.3: Work based experiential learning).

Distributed and Concentrated Practice - Training programme directors within local faculties of education will decide upon the details of clinical attachments.

Training is distributed across medical specialties with emphasis on opportunities to practise in the Acute Medicine setting.

Specialist training should include concentrated practice in Acute Medicine including direct contribution to the acute take. As the trainee acquires competence in this area of training the of emphasis of training should change such that more senior trainees take a supervisory and educational role for junior medical colleagues as well as continuing to hone their own clinical skills. These individuals should also have the opportunity to practise in high dependency and coronary care units.

Learning with Peers - There are many opportunities for trainees to learn with their peers. Local postgraduate teaching opportunities allow trainees of varied levels of experience to come together for small group learning. Examination preparation encourages the formation of self-help groups and learning sets.

Learning in Formal Situations - There are many opportunities throughout the year for formal teaching in the local postgraduate teaching sessions and at regional, national and international meetings. Many of these are organised by the Royal Colleges of Physicians.

Personal Study - Time will be provided during training for personal study. It may be possible for longer periods of private study to be offered as part of study leave.

Specific Teacher inputs - Individual units within a teaching programme will identify specific teacher inputs. These will vary from programme to programme. Recommendations for good practice are identified in the learning portfolio.

Examples are:

- Each trainee must have a clinical supervisor for each attachment for work-based experiential teaching
- Specialty teaching in a clinical environment from a recognised specialist
- Advanced Life support teaching from a recognised training provider
- Procedural skills teaching delivered by a skilled specialist in both work-based setting and on formal courses

Section 4 – Assessment Strategy

The domains of Good Medical Practice will be assessed using an integrated package of workplace-based assessments and examination of knowledge and clinical skills, which will sample across the domains of the curriculum (e.g. knowledge, skills and attitudes). The assessments will be supported by structured feedback for trainees within the training programme of GIM (Acute). Assessment tools will be both formative and summative and will be selected on the basis of their fitness for purpose.

It is likely that the workplace-based assessment tools will include mini-CEX (mini-Clinical Examination Exercise), DOPS (Direct Observation of Procedural Skills) and MSF (multi-source feedback). The Federation of the Royal Colleges of Physicians has piloted these methods and has demonstrated their validity and reliability. It is proposed that the examination and assessment of knowledge will utilise elements of the MRCP(UK) examination, relevant to the level of training.

A trainee's performance during an acute medical take will be the subject of an assessment tool still in development. This can be adapted for core training and subsequent training in physician specialties.

An assessment blueprint has been developed which maps the assessment methods on to the curriculum in an integrated way. The blueprint will ensure that there is appropriate sampling across the curriculum..

Section 5 – Trainee Supervision and Feedback

This section of the curriculum describes how trainees will be supervised, and how they will receive feedback on performance. The learning portfolio for physicians in training outlines the mechanisms for supervision and appraisal in more detail.

5.1 - Supervision

All training in GIM (Acute) should be conducted in institutions with appropriate standards of clinical governance and that meet the relevant Health and Safety standards for clinical areas. Training placements must also comply with the European Working Time Directive for trainee doctors.

Trainees must work with a level of clinical supervision commensurate with their clinical experience and level of competence. This is the responsibility of the relevant clinical supervisor after discussion with the trainee's Educational Supervisor and the designated clinical governance lead. In keeping with the principles of Good Medical Practice, trainees should know that they must limit their clinical practice to the level of their clinical competence and should seek help and support without hesitation.

The Educational Supervisor is directly responsible for the educational programme for the trainee and to ensure that the performance assessments are appropriately validated. The programme director is responsible for setting up the appropriate placements for core medical training and other higher medical training programmes. At a local level within the trust additionally consultant (clinical) supervisors may be required within each placement to ensure the training offers adequate educational experience and optimal delivery of the curriculum.

The Educational (or clinical) Supervisor, when meeting with the trainee, should discuss issues of clinical governance, risk management and any report of any untoward clinical incidents involving the trainee. The Educational Supervisor should be part of the clinical specialty team. Thus if the clinical directorate (clinical director) have any concerns about the performance of the trainee, or there were issues of doctor or patient safety, these would be discussed with the Educational Supervisor. These processes, which are integral to trainee development, must not detract from the statutory duty of the trust to deliver effective clinical governance through its management systems.

The Educational (and clinical) Supervisor are integral to the appraisal process. This is discussed in more detail in the training portfolio. A trainee appraisal with the Educational Supervisor will include feedback on performance, review of outcomes of assessments, induction to posts and career advice. The Postgraduate deaneries should recognise the active role of Educational Supervisor in training and offer appropriate support.

5.2 - Feedback

Frequent and timely feedback on performance is essential for successful work-based experiential learning. To train as a physician, a doctor must develop the ability to seek and respond to feedback on clinical practice from a range of individuals to meet the requirements of Good Medical Practice and revalidation.

The local education faculty will establish clear processes for feedback, with close liaison with designated Educational Supervisors.

Constructive feedback should be provided throughout training in both formal and informal settings. Opportunities for feedback will arise during appraisal meetings, when trainees are undergoing workplace-based assessments, in the workplace setting, and through discussions with supervisors, trainers, assessors and those within the team.

Best practice guidance for the appraisal process is provided by the Royal Colleges of Physicians in the training portfolio (in the Appraisal Section).

This guidance emphasises the need for:

- An initial appraisal meeting shortly after the start of a training placement to establish learning objectives and construct a personal development plan
- An interim appraisal meeting to discuss progress against the learning objectives
- An appraisal meeting towards the end of the training placement to reflect on the learning achievements during the attachment with reference to the initial learning objectives within the personal development plan.
- Structured written feedback from clinical supervisors
- Appropriately structured written feedback from medical colleagues and departmental staff (multi-source feedback, MSF) to include nursing staff, managerial, clerical and secretarial staff and medical staff in relevant directorates e.g. radiology, anaesthesia. This is collated by the Educational Supervisor to form the basis of a discussion with the trainee.
- Feedback on performance in recent workplace-based assessments to inform future development

It is recommended the above guidance should apply irrespective of the duration of that particular attachment. Evidence that feedback has been received and subject to reflection by the trainee will be recorded in the portfolio, and discussed at the regular appraisals with the trainee's supervisor.

Section 6 – Curriculum Implementation

This section of the curriculum provides an indication of how the curriculum is managed locally and within programmes.

6.1 - Training Programmes

The organisation of training programmes for core training, and specialist training in GIM (Acute) is the responsibility of the postgraduate deaneries.

The Deaneries are currently establishing appropriate programmes for postgraduate medical training in their regions. These schemes will be known as Schools of Medicine in England, Wales and Northern Ireland and Transitional Board Schemes in Scotland. In this curriculum, they will be referred to as local Faculties for medical education. The role of the Faculties will be to coordinate local postgraduate medical training, with terms of reference as follows:

- Oversee recruitment and induction of trainees from Foundation to core training, and from core training into Specialty Training
- Allocate trainees into particular rotations for core training, appropriate to their training needs and wishes
- Oversee the quality of training posts provided locally
- Interface with other Deanery Specialty Training faculties (General Practice, Anaesthesia etc)
- Ensure adequate provision of appropriate educational events
- Ensure curricula implementation across training programmes
- Oversee the workplace-based assessment process within programmes
- Coordinate the RITA process for trainees
- Provide adequate and appropriate career advice
- Provide systems to identify and assist doctors with training difficulties
- Provide flexible training
- Recognise the potential of specific trainees to progress into an academic career

6.2 - Intended Use of Curriculum by Trainers and Trainees

This document defines part of an integrated training programme and defines the level 1 competencies that must be acquired in General Internal Medicine by all physician trainees. It must be used in association with other documents. These include the *Generic Curriculum for Medical Specialties*, the learning portfolio defined by the Joint Royal Colleges of Physicians Training Board (JRCPTB). Trainees must recognise that they must also follow the specific curriculum document relevant to the medical specialty that they are pursuing including, for those that wish to acquire level 2 competencies in General Internal Medicine (Acute), that curriculum element. All of these are web-based documents which are available from the JRCPTB, website.

Each trainee will be given copies of the relevant curricula and portfolio upon enrolling as a trainee with the JRCPTB.

Each trainee will engage with the curriculum by maintaining a portfolio. The trainee will use the curriculum to develop learning objectives, self-assess accomplishment in disparate areas of the curriculum, and reflect on learning experiences.

6.3 - Ensuring Curriculum Coverage

The details of how the curriculum is covered in any individual training programme and training unit is the responsibility of the local faculty of education in consultation with the Federation of Royal Colleges of Physicians. The need to show how trainees are progressing in their attainment of competencies will be a strong driver in ensuring that all the curriculum objectives are met.

6.4 - Responsibilities of trainees

This curriculum puts the emphasis on learning rather than teaching. Trainees are responsible for their own learning and the utilisation of opportunities for learning throughout their training. The workplace-based assessment process is also trainee led.

6.5 - Curriculum management

Local management of the curriculum is the responsibility of the local faculty of education.

Coordination of the Curriculum at national and regional level is the joint responsibility of the Deaneries and the Federation of Royal Colleges of Physicians, with robust arrangements for quality assurance of training.

Section 7 – Curriculum Review

7.1 - Curriculum evaluation and monitoring

The Core Medical Training Committee will oversee evaluation of this curriculum, the accompanying *Generic Curriculum for Medical Specialties*, and the portfolio. The curricula should be regarded as living documents and the committee will ensure that it will be able to respond swiftly to new developments. The outcome of these evaluations will inform the future development of the curricula.

Formal evaluation will take place during the pilot stage of curriculum implementation and during the first year of full implementation. Evaluation will continue (as indicated from the early evaluations) during the first five years of GIM (Acute) Training. Evaluation will continue periodically thereafter, probably every 5 years.

Evaluation of the curriculum will seek to ascertain:

- Learner response to the curriculum
- Modification of attitudes and perceptions
- Learner acquisition of knowledge and skills
- Learner's behavioural change
- Change in organisational practice

Evaluation methods will include:

- Trainee questionnaire
- College representative and Programme Director questionnaire
- Focused discussions with Educational Supervisors, trainees, Programme Directors and Postgraduate Deans, representatives from the National Health Service

Monitoring will be the responsibility of the Programme Directors within the local faculties for education.

7.2 - Trainee involvement in Curriculum Review

Trainee involvement in curriculum review will be facilitated through:

- Involvement of trainees in local faculties of education
- Trainees involvement in the Federation of Royal Colleges of Physicians Curriculum Committee
- Informal feedback during appraisal, RITA, College meetings

Section 8 – Equality and Diversity

In the exercise of these powers and responsibilities, the Royal Colleges of Physicians will comply, and ensure compliance, with the requirements of relevant legislation, such as the:

- Race Relations (Amendment) Act 2000;
- Disability Discrimination Act 1995 and Special Educational Needs and Disabilities Act 2001
- The Disability Discrimination Act 1995 (amendment) (further and higher education) regulations 2006
- Age Discrimination Act in October 2006

The Federation of the Royal Colleges of Physicians believes that equality of opportunity is fundamental to the many and varied ways in which individuals become involved with the Colleges, either as members of staff and Officers; as advisers from the medical profession; as members of the Colleges' professional bodies or as doctors in training and examination candidates. Accordingly, it warmly welcomes contributors and applicants from as diverse a population as possible, and actively seeks to recruit people to all its activities regardless of race, religion, ethnic origin, disability, age, gender or sexual orientation.

Section 9 – Statutory Responsibilities

The Royal Colleges of Physicians will comply, and ensure compliance, with the requirements of legislation, such as the:

- Human Rights Act 1998
- Freedom of Information Act 2001
- Data Protection Acts 1984 and 1998

References

- ¹ Department of Health. Curriculum for the foundation years in postgraduate education and training (2004) www.mmc.nhs.uk/pages/foundation/Curriculum
- ² <http://www.rcplondon.ac.uk/pubs/books/AcuteMedicine/AcuteMedicineSummary.pdf>
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- ⁴ Harden RM, Stamper N. What is a spiral curriculum? *Medical Teacher* 1999; 21(2):141-143
- ⁵ GMC (2005) Good Medical Practice – formal consultation document www.gmc-uk.org/publications/draft_consultation.pdf