



Undergraduate syllabus for Medical
School curricula

Acute Internal Medicine

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November 2023

<https://www.acutemedicine.org.uk/>

Version 1 (December 2023)

Review date December 2028

Society for Acute Medicine undergraduate syllabus for Acute Internal Medicine

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Introduction

This syllabus is intended to act as a guide for students and their instructors in medical schools. It describes the range of clinical presentations that they should be able to recognize and the underlying conditions that they should know how to treat. It also includes knowledge of the practice of Acute Internal Medicine (AIM) and systems of care. The appropriate level of knowledge is that which would be expected of a non-specialist Foundation year doctor.

It is expected that students will have a working knowledge of anatomy, physiology, pathophysiology, pharmacology and therapeutics. It would also be useful to have an understanding of clinical skills, diagnostic reasoning and potential cognitive bias.

Many of the items in this syllabus can be delivered in a variety of acute care settings, e.g., the Emergency Department (ED), medical specialties, and the Intensive Therapy Unit (ITU), but attachment to an Acute Medical Unit (AMU) provides an ideal opportunity to see the delivery of acute care in this specific context.

The AMU

The AMU is defined as 'a dedicated facility within a hospital that acts as the focus for AIM care for patients that have presented as medical emergencies to hospitals or who have developed an acute medical illness while in hospital'.

The AMU remains the area in the hospital to focus the work done by AIM teams, with the multiple facets of care delivered there by the whole multidisciplinary workforce.

The precise roles of the AMU can vary from hospital to hospital but 'core functions' include:

- 1) The assessment, investigation, and stabilisation of patients with an acute medical 'need' referred from the community or ED
- 2) The onwards referral of patients to an appropriate speciality bed base/team for ongoing specialist care (including Internal Medicine)
- 3) Continuing care of patients with an expected length of inpatient care no greater than 72 hours
- 4) Enhanced medical care (i.e., level 1 - 1.5) as outlined in the ICS document from 2021 which may include the delivery of Non-invasive Respiratory support (e.g., High Flow Nasal Oxygen, Non-invasive ventilation or Continuous positive pressure ventilation).
- 5) Same Day Emergency Care (SDEC, or Rapid Ambulatory Care in Scotland) – as described in the NHS England / Royal College of Physicians of Edinburgh /SAM documentation these areas are often embedded or adjacent to the AMU - AIM teams look after a large proportion of those treated by SDEC pathways

A patient admitted to the AMU will receive care that will include the necessary investigations and management required until the patient is discharged, stabilised or transferred to a higher level of care. This means having at least level 1 care facilities in the AMU and immediate access to level 2 (e.g., HDU) care when this is required.

Currently it is estimated that at least 60% of all people admitted to UK hospitals for non-elective care needs are treated at some point by AIM teams.

Generic aspects of Acute Internal Medicine (AIM)

Students should be able to describe the following concepts:

The role of AIM and the Acute Medical Unit (AMU)
The organization and overall management of the acute medical take
The process of diagnostic reasoning including appropriate use of radiology and laboratory services
Assessment of the acutely ill patient using the ABCDE approach
Principles of resuscitation including: <ul style="list-style-type: none">• Ceilings of Therapy• Escalation and enhanced care• The role of the Medical Emergency Team (MET)
The interfaces between AIM and other specialties <ul style="list-style-type: none">• Emergency Medicine• Intensive Care Medicine• Medical specialties including Internal Medicine• Palliative Care• Primary Care• Psychiatry
Ambulatory Care including Same Day emergency Care (SDEC) and Rapid Ambulatory Care (Scotland)

Principles of patient flow

Discharge planning

Ethical and legal aspects of acute care including:

- Ceilings of therapy
- Deprivation of liberty (DoLs)
- Documentation and record keeping End of life care (EoLC) and Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) decisions
- Resource allocation and prioritization

Prescribing in acute care, including:

- Blood products
- Medications
 - Analgesics
 - Antibiotics
 - Antiemetics
- Fluids

Acute care for special populations including

- Patients with immunocompromise
- Patients who are perioperative
- Patients who are pregnant
- Patients who are returning travellers

Presentations and conditions in Acute Internal Medicine

Adapted from the Joint Royal Colleges of Physicians Training Board curriculum for Internal Medicine (Stage 1) https://www.jrcptb.org.uk/sites/default/files/IM_Curriculum_Sept2519.pdf

NB: This list is not exhaustive

Presentations: Students should be able to describe an appropriate diagnostic strategy and produce a justified differential diagnosis of the following clinical presentations.

Systems: Students should be able to describe how the anatomy, physiology, and pathophysiology of the organ systems listed below related to the following conditions.

Conditions: Students should be able to explain the pathophysiology and treatment options for the conditions listed below.

Presentations	System	Conditions
Abdominal mass / swelling	Gastroenterology	Ascites Malignancy
Abdominal pain	Gastroenterology / Gynaecology / Urology	Bladder outflow obstruction Functional disorders Gallstone disease Gastrointestinal malignancy Gynaecological disorders Pancreatitis Peptic ulcer disease Renal stones
Acute kidney injury	Renal Medicine	Multifactorial
Acute poisoning	Psychiatry / Therapeutics	Acute poisoning (accidental/non-accidental)
Acutely swollen joint	Infectious diseases / Rheumatology	Gout/ Calcium pyrophosphate deposition Septic arthritis
Adverse drug reactions	Therapeutics	Adverse drug reactions
Altered sensation	Neurology	Central nervous system abnormalities Peripheral nervous system abnormalities
Anaemia	Gastroenterology / Haematology	Dietary intake GI blood loss Malabsorption Menorrhagia Pernicious anaemia
Anaphylaxis	Dermatology Therapeutics	Severe allergy
Back pain	Rheumatology	Cauda Equina Syndrome Musculoskeletal pain
Bleeding/bruising	Gastroenterology / Haematology / Therapeutics	Anti-coagulant / anti-platelet therapies Bone marrow disease Liver disease
Blood glucose abnormalities	Endocrinology	Diabetes mellitus

Breathlessness	Cardiovascular / Respiratory	Anaemia Asthma Bronchiectasis Cardiac failure (incl. heart valve disease) Chronic obstructive pulmonary disease (COPD) Diffuse parenchymal lung diseases Malignant diseases of the respiratory system Metabolic Acidosis Occupational lung diseases Pneumonia Pneumothorax Pulmonary embolism
Care of the dying patient	Palliative Medicine	Analgesics Anxiolytics Management of breathlessness
Chest pain	Cardiovascular / Respiratory	Coronary heart disease Costochondritis Gastro-oesophageal reflux Pericarditis Pneumonia Pneumothorax Pulmonary embolism
Cough +/- sputum +/- haemoptysis	Respiratory	Asthma Bronchiectasis COPD Malignant diseases of the respiratory system Pneumonia Post nasal drip
Delirium	Elderly care medicine Neurology Psychiatry Therapeutics	Metabolic Primary brain pathology Sepsis Toxins
Drug and alcohol effects	Psychiatry / Therapeutics	Drugs and alcohol abuse
Dysuria	Infectious diseases / Renal Medicine	Urinary tract infection
Electrolyte disturbance	Endocrinology / Renal Medicine / Therapeutics	Adverse drug effects Acute kidney injury / Chronic kidney disease Endocrinopathies
Falls	Elderly care medicine / Therapeutics	Multifactorial
Fever	Infectious diseases / Rheumatology	Infection (typical / atypical) Inflammation
Fever in a returning traveller	Infectious diseases	Infection
Flank pain	Infectious diseases / Renal Medicine	Pyelonephritis Renal stone disease
Haematemesis	Gastroenterology	Mallory Weiss tear Oesophageal varices Peptic ulcer disease

Haematuria	Renal Medicine	Renal stone disease Tumour of urinary tract Urinary tract infection
Headache	Infectious diseases / Neurology / Rheumatology	Cervicogenic headache Cluster headache Meningitis Migraine Pressure headache Subarachnoid haemorrhage Temporomandibular joint dysfunction Tension headache
Head injury	Neurology	Epidural haemorrhage Intracerebral haemorrhage Subarachnoid haemorrhage Subdural haemorrhage
Hypertension	Cardiology / Endocrinology / Renal Medicine	Conn's syndrome Chronic renal disease Essential Hypertension Pheochromocytoma Reno-vascular disease
Isolated skin lesion	Dermatology	Cutaneous reactions to drugs Cutaneous vasculitis, connective tissue diseases and urticaria Dermatitis / eczema Infections of the skin and soft tissues Shingles
Itch	Dermatology	Cutaneous reactions to drugs Cutaneous vasculitis, connective tissue diseases and urticaria Dermatitis / eczema Infections of the skin and soft tissues Shingles
Jaundice	Gastroenterology / Haematology	Biliary problems Haemolysis (anaemia) Hepatocellular disease
Limb pain / swelling	Cardiovascular / Haematology / Infectious diseases	Cellulitis Deep venous thrombosis
Lymphadenopathy	Haematology / Infectious diseases	Haematological malignancy Infections
Medically unexplained symptoms	General Medicine / Psychiatry	Medically unexplained symptoms
Movement disorders	Elderly care medicine / Neurology	Parkinson's Disease Parkinsonism
Nausea and vomiting	Gastroenterology	Functional disorders Gastroenteritis Gallstone disease Peptic ulcer disease Systemic disease

Oedema	Cardiovascular / Gastroenterology / Renal Medicine	Cardiac failure Liver failure Lymphoedema Medication effects Nephrotic syndrome
Palpitations	Cardiovascular	Arrhythmias
Polyarthropathy	Rheumatology	Osteoarthritis Reactive arthritis Rheumatoid arthritis
Polyuria	Endocrinology / Renal Medicine	Diabetes mellitus Hypercalcaemia
Rash	Dermatology	Cutaneous reactions to drugs Cutaneous vasculitis, connective tissue diseases and urticaria Dermatitis / eczema Infections of the skin and soft tissues Shingles
Seizures	Neurology	Epilepsy and disorders of consciousness
Stroke and TIA	Elderly care medicine / Neurology	Cerebrovascular diseases
Swallowing problems	Elderly care medicine / Gastroenterology	Bulbar weakness / stroke Oesophageal dysmotility or stricture
Transient loss of consciousness	Cardiovascular / Neurological	Cardiac arrhythmias Heart valve disease Seizures Syncope and pre-syncope
Urticaria / angioedema	Dermatology / Therapeutics	Cutaneous reactions to drugs Cutaneous vasculitis, connective tissue diseases and urticaria
Weakness	Neurology	Cerebrovascular diseases Central nervous system tumours Disorders of the spinal cord
Weight loss	Endocrinology / Gastroenterology / Psychiatry	Diabetes mellitus Eating disorders Malabsorption Malignancy Thyrotoxicosis
Wheeze	Cardiovascular / Respiratory	Asthma Cardiac wheeze COPD

Emergency presentations:

Students should be able to describe the immediate management of the following conditions.

Anaphylaxis
Acute asthma
Acute coronary syndromes (ACS)
Acute poisoning – e.g., paracetamol
Adrenal insufficiency crisis
Diabetic ketoacidosis (DKA) / hyperosmolar hyperglycaemic state (HHS)
Exacerbation of COPD
Meningitis / encephalitis
Pneumothorax
Pulmonary embolism
Pulmonary oedema
Sepsis
Shock
Status epilepticus
Upper gastrointestinal haemorrhage

Skills and procedures

Observation: Indicative things to potentially see in Acute Internal Medicine (AIM)
Central line insertion
Instructing patients in the use of devices for inhaled medication.
Lumbar puncture
Observe pulmonary function tests: Peak expiratory flow rate (PEFR) / spirometry
Observation of setting up intravenous fluids
Observation of dosage and administration of diabetes medications including Subcutaneous
Observe preparation of drugs for parenteral administration
Observe setting up and monitoring a blood transfusion
Pleural-fluid examination
Point of care ultrasonography (POCUS) / echocardiography
Skills: Indicative things to potentially perform in AIM
Blood culture sampling
Capillary blood glucose measurement
Collection of urine samples and urinalysis
Managing blood samples
Peak flow measurement
Perform and interpret electrocardiograms (ECGs)