University of Leicester

LEICESTER MEDICAL SCHOOL

MBChB Phase II

Curriculum Document

Cohort entering phase 2 in 2014

Introduction

This course document describes the second part of the Leicester Medical Curriculum. - phase 2. When you have completed phase 2 you will begin your career as a doctor in a Foundation School. We have worked closely with the Foundation School and the General Medical Council to ensure that you will enter the next phase of your medical education properly equipped to prosper and progress. This document spells out the aims and outcomes of the curriculum, its philosophy, approach and structure, the ways in which you will need to work and learn, and how you will be monitored and assessed. It should be read with the suite of other documents that describe aspects of phase 2 in more detail, and which are referred to in the sections that follow. The Outcomes that follow are those defined by the General Medical Council, in its document 'Tomorrow's Doctors' (2009), which apply to all medical schools in the UK.

Aim

The broad aim of Leicester Medical School is that new graduates should have the clinical competence to work as Foundation Doctors combined with the potential to develop along the continuum of medical education into humane and rational doctors. In accordance with the GMC document '*Good Medical Practice*', graduates will make the care of patients their first concern, applying their knowledge and skills in a competent and ethical manner and using their ability to provide leadership and to analyse complex and uncertain situations.

Outcomes

The doctor as a scholar and a scientist

The graduate will be able to apply to medical practice biomedical scientific principles, method and knowledge relating to: anatomy, biochemistry, cell biology, genetics, immunology, microbiology, molecular biology, nutrition, pathology, pharmacology and physiology. The graduate will be able to:

a) Explain normal human structure and functions.
b) Explain the scientific bases for common disease presentations.
c) Justify the selection of appropriate investigations for common clinical cases.
d) Explain the fundamental principles underlying such investigative techniques.
e) Select appropriate forms of management for common diseases, and ways of preventing common diseases, and explain their modes of action and their risks from first principles.
f) Demonstrate knowledge of drug actions: therapeutics and pharmacokinetics; drug side effects and interactions, including for multiple treatments, long-term conditions and non-prescribed medication; and also including effects on the population, such as the spread of antibiotic resistance.
g) Make accurate observations of clinical phenomena and appropriate critical analysis of clinical data.

Apply psychological principles, method and knowledge to medical practice.

a) Explain normal human behaviour at an individual level.
b) Discuss psychological concepts of health, illness and disease.
c) Apply theoretical frameworks of psychology to explain the varied responses of individuals, groups and societies to disease.
d) Explain psychological factors that contribute to illness, the course of the disease and the success of treatment.

e) Discuss psychological aspects of behavioural change and treatment compliance.
f) Discuss adaptation to major life changes, such as bereavement; comparing and contrasting the abnormal adjustments that might occur in these situations.
g) Identify appropriate strategies for managing patients with dependence issues and other demonstrations of self-harm.

Apply social science principles, method and knowledge to medical practice.

a) Explain normal human behaviour at a societal level.
b) Discuss sociological concepts of health, illness and disease.
c) Apply theoretical frameworks of sociology to explain the varied responses of individuals, groups and societies to disease.
d) Explain sociological factors that contribute to illness, the course of the disease and the success of treatment − including issues relating to health inequalities, the links between occupation and health and the effects of poverty and affluence.
e) Discuss sociological aspects of behavioural change and treatment compliance.

Apply to medical practice the principles, method and knowledge of population health and the improvement of health and healthcare.

a) Discuss basic principles of health improvement, including the wider determinants of health, health inequalities, health risks and disease surveillance.
b) Assess how health behaviours and outcomes are affected by the diversity of the patient population.
c) Describe measurement methods relevant to the improvement of clinical effectiveness and care.
d) Discuss the principles underlying the development of health and health service policy, including issues relating to health economics and equity, and clinical guidelines.
e) Explain and apply the basic principles of communicable disease control in hospital and community settings.
f) Evaluate and apply epidemiological data in managing healthcare for the individual and the community.
g) Recognise the role of environmental and occupational hazards in ill-health and discuss ways to mitigate their effects.
h) Discuss the role of nutrition in health.
i) Discuss the principles and application of primary, secondary and tertiary prevention of disease.
j) Discuss from a global perspective the determinants of health and disease and variations in healthcare delivery and medical practice.

Apply scientific method and approaches to medical research.

a) Critically appraise the results of relevant diagnostic, prognostic and treatment trials and other qualitative and quantitative studies as reported in the medical and scientific literature.
b) Formulate simple relevant research questions in biomedical science, psychosocial science or population science, and design appropriate studies or experiments to address the questions.

c) Apply findings from the literature to answer questions raised by specific clinical problems.
d) Understand the ethical and governance issues involved in medical research.

The doctor as a practitioner

The graduate will be able to carry out a consultation with a patient:

a) Take and record a patient's medical history, including family and social history, talking to relatives or other carers where appropriate.
b) Elicit patients' questions, their understanding of their condition and treatment options, and their views, concerns, values and preferences.
c) Perform a full physical examination.
d) Perform a mental-state examination.
e) Assess a patient's capacity to make a particular decision in accordance with legal requirements and the GMC's guidance.
f) Determine the extent to which patients want to be involved in decision-making about their care and treatment.
g) Provide explanation, advice, reassurance and support.

Diagnose and manage clinical presentations.

a) Interpret findings from the history, physical examination and mental-state examination, appreciating the importance of clinical, psychological, spiritual, religious, social and cultural factors.
b) Make an initial assessment of a patient's problems and a differential diagnosis. Understand the processes by which doctors make and test a differential diagnosis.
c) Formulate a plan of investigation in partnership with the patient, obtaining informed consent as an essential part of this process.
d) Interpret the results of investigations, including growth charts, x-rays and the results of the diagnostic procedures in Tomorrow's Doctors 2009.
e) Synthesise a full assessment of the patient's problems and define the likely diagnosis or diagnoses.
f) Make clinical judgements and decisions, based on the available evidence, in conjunction with colleagues and as appropriate for the graduate's level of training and experience. This may include situations of uncertainty.
g) Formulate a plan for treatment, management and discharge, according to established principles and best evidence, in partnership with the patient, their carers, and other health professionals as appropriate. Respond to patients' concerns and preferences, obtain informed consent, and respect the rights of patients to reach decisions with their doctor about their treatment and care and to refuse or limit treatment.
h) Support patients in caring for themselves.
i) Identify the signs that suggest children or other vulnerable people may be suffering from abuse or neglect and know what action to take to safeguard their welfare.
j) Contribute to the care of patients and their families at the end of life, including management of symptoms, practical issues of law and certification, and effective communication and team-working.

Communicate effectively with patients and colleagues in a medical context.

a) Communicate clearly, sensitively and effectively with patients, their relatives or other carers, and colleagues from the medical and other professions, by listening, sharing and responding.
b) Communicate clearly, sensitively and effectively with individuals and groups regardless of their age, social, cultural or ethnic backgrounds or their disabilities, including when English is not the patient's first language.
c) Communicate by spoken, written and electronic methods (including medical records), and be aware of other methods of communication used by patients. The graduate should appreciate the significance of non-verbal communication in the medical consultation.
d) Communicate appropriately in difficult circumstances, such as when breaking bad news, and when discussing sensitive issues, such as alcohol consumption, smoking or obesity.
e) Communicate appropriately with difficult or violent patients.
f) Communicate appropriately with people with mental illness.
g) Communicate appropriately with vulnerable patients.
h) Communicate effectively in various roles, for example, as patient advocate, teacher, manager or improvement leader.

Provide immediate care in medical emergencies.

a) Assess and recognise the severity of a clinical presentation and a need for immediate emergency care.
b) Diagnose and manage acute medical emergencies.
c) Provide basic first aid.
d) Provide immediate life support.
e) Provide cardio-pulmonary resuscitation or direct other team members to carry out resuscitation.

Prescribe drugs safely, effectively and economically.

a) Establish an accurate drug history, covering both prescribed and other medication.
b) Plan appropriate drug therapy for common indications, including pain and distress.
c) Provide a safe and legal prescription.
d) Calculate appropriate drug doses and record the outcome accurately.
e) Provide patients with appropriate information about their medicines.
f) Access reliable information about medicines.
g) Detect and report adverse drug reactions.
h) Demonstrate awareness that many patients use complementary and alternative therapies, and awareness of the existence and range of these therapies, why patients use them, and how this might affect other types of treatment that patients are receiving.

Carry out practical procedures safely and effectively.

a) Be able to perform a range of diagnostic procedures, as listed in Tomorrow's Doctors 2009 and measure and record the findings.
b) Be able to perform a range of therapeutic procedures, as listed in Tomorrow's Doctors 2009.
c) Be able to demonstrate correct practice in general aspects of practical procedures, as listed in Tomorrow's Doctors 2009.

Use information effectively in a medical context.

a) Keep accurate, legible and complete clinical records.
b) Make effective use of computers and other information systems, including storing and retrieving information.
c) Keep to the requirements of confidentiality and data protection legislation and codes of practice in all dealings with information.
d) Access information sources and use the information in relation to patient care, health promotion, giving advice and information to patients, and research and education.
e) Apply the principles, method and knowledge of health informatics to medical practice.

The doctor as a professional

The graduate will be able to behave according to ethical and legal principles. The graduate will be able to:

a) Know about and keep to the GMC's ethical guidance and standards including *Good Medical Practice*, the 'Duties of a doctor registered with the GMC' and supplementary ethical guidance which describe what is expected of all doctors registered with the GMC.
b) Demonstrate awareness of the clinical responsibilities and role of the doctor, making the care of the patient the first concern. Recognise the principles of patient-centred care, including self care, and deal with patients' healthcare needs in consultation with them and, where appropriate, their relatives or carers.
c) Be polite, considerate, trustworthy and honest, act with integrity, maintain confidentiality, respect patients' dignity and privacy, and understand the importance of appropriate consent.
d) Respect all patients, colleagues and others regardless of their age, colour, culture, disability, ethnic or national origin, gender, lifestyle, marital or parental status, race, religion or beliefs, sex, sexual orientation, or social or economic status. Graduates will respect patients' right to hold religious or other beliefs, and take these into account when relevant to treatment options.
e) Recognise the rights and the equal value of all people and how opportunities for some people may be restricted by others' perceptions.
f) Understand and accept the legal, moral and ethical responsibilities involved in protecting and promoting the health of individual patients, their dependants and the public − including vulnerable groups such as children, older people, people with learning disabilities and people with mental illnesses.
g) Demonstrate knowledge of laws, and systems of professional regulation through the GMC and others, relevant to medical practice, including the ability to complete relevant certificates and legal documents and liaise with the coroner or procurator fiscal where appropriate.

Reflect, learn and teach others.

a) Acquire, assess, apply and integrate new knowledge, learn to adapt to changing circumstances and ensure that patients receive the highest level of professional care.
b) Establish the foundations for lifelong learning and continuing professional development, including a professional development portfolio containing reflections, achievements and learning needs.

c) Continually and systematically reflect on practice and, whenever necessary, translate that reflection into action, using improvement techniques and audit appropriately – for example, by critically appraising the prescribing of others.
d) Manage time and prioritise tasks, and work autonomously when necessary and appropriate.
e) Recognise own personal and professional limits and seek help from colleagues and supervisors when necessary.
f) Function effectively as a mentor and teacher including contributing to the appraisal, assessment and review of colleagues, giving effective feedback, and taking advantage of opportunities to develop these skills.

Learn and work effectively within a multi-professional team.

a) Understand and respect the roles and expertise of health and social care professionals in the context of working and learning as a multi-professional team.
b) Understand the contribution that effective interdisciplinary team-working makes to the delivery of safe and high-quality care.
c) Work with colleagues in ways that best serve the interests of patients, passing on information and handing over care, demonstrating flexibility, adaptability and a problem-solving approach.
d) Demonstrate ability to build team capacity and positive working relationships and undertake various team roles including leadership and the ability to accept leadership by others.

Protect patients and improve care.

a) Place patients' needs and safety at the centre of the care process.
b) Deal effectively with uncertainty and change.
c) Understand the framework in which medicine is practised in the UK, including: the organisation, management and regulation of healthcare provision; the structures, functions and priorities of the NHS; and the roles of, and relationships between, the agencies and services involved in protecting and promoting individual and population health.
d) Promote, monitor and maintain health and safety in the clinical setting, understanding how errors can happen in practice, applying the principles of quality assurance, clinical governance and risk management to medical practice, and understanding responsibilities within the current systems for raising concerns about safety and quality.
e) Understand and have experience of the principles and methods of improvement, including audit, adverse incident reporting and quality improvement, and how to use the results of audit to improve practice.
f) Respond constructively to the outcomes of appraisals, performance reviews and assessments.
g) Demonstrate awareness of the role of doctors as managers, including seeking ways to continually improve the use and prioritisation of resources.
h) Understand the importance of, and the need to keep to, measures to prevent the spread of infection, and apply the principles of infection prevention and control.
i) Recognise own personal health needs, consult and follow the advice of a suitably qualified professional, and protect patients from any risk posed by own health.
j) Recognise the duty to take action if a colleague's health, performance or conduct is putting patients at risk.

Practical procedures for graduates

Diagnostic procedures

1. *Measuring body temperature.* - Using an appropriate recording device
2. *Measuring pulse rate and blood pressure.* - Using ,manual techniques and automatic electronic devices
3. *Trans-cutaneous monitoring of oxygen saturation*. - Applying and talking readings from an electronic device which measures the amount of oxygen in a patient's blood
4. *Venepuncture*. - Inserting a needle into a patient's vein to take a sample of blood for testing or to give an injection into the vein.
5. *Managing blood samples correctly.* - Making d sure that blood samples are placed in the correct containers, and that these are labelled correctly and sent to the laboratory promptly and in the correct way. Taking measures to prevent spilling and contamination.
6. *Taking blood cultures*. - Taking samples of venous blood to test for the growth of infectious organisms in the blood. Requires special blood containers and laboratory procedures.
7. *Measuring blood glucose*. - Measuring the concentration of glucose in the patient's blood at the bedside, using appropriate equipment and interpreting the results.
8. *Managing an electrocardiograph (ECG) monitor.* - Setting up a continuous recording of the electrical activity of the heart. Ensuring the recorder is functioning correctly, and interpreting the tracing.
9. *Performing and interpreting a 12-lead electrocardiograph*. - Recording a full, detailed tracing of the electrical activity of the heart, using a(ECG) machine recorder (electrocardiograph). Interpreting the recording for signs of heart disease.
10. *Basic respiratory function tests.* - Carrying out basic tests to see how well the patient's lungs are working (for example, how much air they can breathe out in one second).
11. *Urinalysis using Multistix.* - Testing a sample of urine for abnormal contents, such as blood or protein. The urine is applied to a plastic strip with chemicals which change colour in response to specific abnormalities.
12. *Advising patients on how to collect a mid-stream urine specimen*. - Obtaining a sample of urine from a patient, usually to check for the presence of infection, using a method which reduces the risk of contamination by skin bacteria.
13. *Taking nose, throat and skin swabs.* - Using the correct technique to apply sterile swabs to the nose, throat and skin.
14. *Nutritional assessment.* - Making an assessment of the patient's state of nutrition. This includes an evaluation of their diet; their general physical condition; and measurement of height, weight and body mass index.
15. *Pregnancy testing* . - Performing a test of the urine to detect hormones which indicate that the patient is pregnant.

Therapeutic procedures

16. *Administering oxygen.* - Allowing the patient to breathe a higher concentration of oxygen than normal, via a face mask or other equipment.
17. *Establishing peripheral intravenous access and setting up an infusion; use of infusion devices.* - Puncturing a patient's vein in order to insert an indwelling plastic tube (known as a 'cannula'), to allow fluids to be infused into the vein (a 'drip'). Connecting the tube to a source of fluid.

Appropriate choice of fluids and their doses. Correct use of electronic devices which drive and regulate the rate of fluid administration.

18. *Making up drugs for parenteral administration*. - Preparing medicines in a form suitable for injection into the patient's vein. May involve adding the drug to a volume of fluid to make up the correct concentration for injection.
19. *Dosage and administration of insulin and use of sliding scales.* - Calculating how many units of insulin a patient requires, what strength of insulin solution to use, and how it should be given (for example, into the skin, or into a vein). Use of a 'sliding scale' which links the number of units to the patient's blood glucose measurement at the time.
20. *Subcutaneous and intramuscular injections*. - Giving injections beneath the skin and into muscle.
21. *Blood transfusion.* - Following the correct procedures to give a transfusion of blood into the vein of a patient (including correct identification of the patient and checking blood groups). Observation for possible reactions to the transfusion, and actions if they occur.
22. *Male and female urinary catheterisation.* - Passing a tube into the urinary bladder to permit drainage of urine, in male and female patients.
23. *Instructing patients in the use of devices for inhaled medication*. - Providing instructions for patients about how to use inhalers correctly, for example, to treat asthma.
24. *Use of local anaesthetics.* - Using drugs which produce numbness and prevent pain, either applied directly to the skin or injected into skin or body tissues.
25. *Skin suturing*. - Repairing defects in the skin by inserting stitches (normally includes use of local anaesthetic).
26. *Wound care and basic wound dressing*. - Providing basic care of surgical or traumatic wounds and applying dressings appropriately.
27. *Correct techniques for 'moving and handling' including patients*. - Using, or directing other team members to use, approved methods for moving, lifting and handling people or objects, in the context of clinical care, using methods that avoid injury to patients, colleagues, or oneself.

General aspects of practical procedures

28. *Giving information about the procedure, obtaining and recording consent, and ensuring appropriate aftercare.* - Making sure that the patient is fully informed, agrees to the procedure being performed, and is cared for and watched appropriately after the procedure.
29. *Hand washing (including surgical 'scrubbing up').* - Following approved processes for cleaning hands before procedures or surgical operations.
30. *Use of personal protective equipment (gloves, gowns, masks).* - Making correct use of equipment designed to prevent the spread of body fluids or cross-infection between the operator and the patient.
31. *Infection control in relation to procedures.* - Taking all steps necessary to prevent the spread of infection before, during or after a procedure.
32. *Safe disposal of clinical waste, needles and other 'sharps'.* - Ensuring that these materials are handled carefully and placed in a suitable container for disposal.

The curriculum design

Phase 2 is a course which was designed to build on the strengths of what has gone before. It provides much more structure to clinical learning than has been usual in the past, by extending many of the very successful features of Phase 1 of the curriculum into full time clinical learning. This helps to ensure consistency of experience between students, and enable us to check that the competencies necessary for Foundation School entry have been met.

Phase 2 is not, however, phase 1. Learning must take place in the clinical environment, where the first priority is to look after patients, not students. All clinical teachers have major clinical responsibilities in addition to education, and the vagaries of clinical work will constantly compromise timetables. Learning must remain, as it always has been largely opportunistic, depending upon the clinical activity going at any time, and as students you will have to take huge responsibility for your own learning by seeking out and utilising clinical experience wherever you can find it in an environment that will not always be sympathetic to you or your needs. This cannot be avoided.

The only way to become a good doctor is to gain extensive experience working with patients and doctors in clinical practice. Students who recognise this and actively seek out learning will prosper. Those who hide in the corner and wait to be taught will fail. **The Medical School cannot and will not take responsibility for lack of initiative on your part.**

We have however, tried to give you good guidance on how to hunt for experience and what to hunt for, and to provide means of recording that experience that you will find useful.

Blocks & Themes

Phase 2 is made up of a series of clinical attachments ('blocks') which are arranged in groups. First, there is the 'junior rotation', made up of six seven week blocks each with a separate focus and a three week Student Selected component. There is then the first main summative assessment the 'Intermediate Professional Examination', followed by a second series of blocks – the 'senior rotation'. This consists of six seven week blocks each with a different focus, and another period of Student Selected component ('SSC'), where you choose what to study. The senior rotation is followed by another main summative assessment – the 'Final professional Examination'. There is then a seven week elective period, followed by a period of preparation for Foundation School.

All the blocks other than SSC have a defined focus, sometimes on a system of the body, like in phase 1, sometimes on particular patterns of clinical care. The blocks are **not** organised by clinical specialty, and most span several. Across the curriculum however, you will have experience of all areas of clinical practice appropriate for undergraduate education.

The topics are:

Junior Rotation:

- Clinical method
- Peri-operative care
- Musculo-skeletal care
- Cardio-respiratory care
- Gastrointestinal Care
- Mental Health care

Senior rotation

- Acute care
- Older persons
- Cancer care

- Special senses
- Reproductive health
- Child Health

In the senior rotation there is a three-week period for SSC between the third and fourth block of the rotation. In addition the 'cancer care' and 'special senses' blocks each have a period allocated within them for SSC, and all blocks contain activities where you will choose what to study, so there is considerable choice as you progress through the course.

Each of the twelve blocks has its own learning outcomes which collectively amplify the overall outcomes defined above, and describe the detailed outcomes of the course as a whole. Learning within each block will be structured by workbooks similar to those you have used in Phase 1, but modified for the clinical environment. The workbooks specify a minimum range of learning activities and allow both you and us to monitor progress as the course proceeds.

In addition to the block structures there are 'longitudinal themes' which appear to a greater or lesser extent in all blocks, and allowing you to link your developing understanding into a coherent whole. These are

- *Basic sciences*: prompts to revisit, revise and expand material encountered in phase 1 of the course
- *Pathological processes*: developing an integrated understanding of disease processes to inform your clinical work
- *Infection:* developing an integrated understanding of infectious disease, infection control and treatment of infections
- *Imaging:* linking together your understanding of anatomy and disease processes
- *Pharmacology & therapeutics*: extending your understanding of the rational use of drugs in clinical practice
- *Public Health:* developing and integrating understanding of health and disease in populations, and the psychological and social factors influencing health & illness
- *Professionalism:* facilitating your acquisition of attitudes and behaviours appropriate for a medical practitioner
- *Team working:* assuring that you will be able to work in multi-professional health care teams.

Your workbooks will emphasise material that relates to these themes, but the ultimate responsibility for pulling material together is yours.

Clinical skills

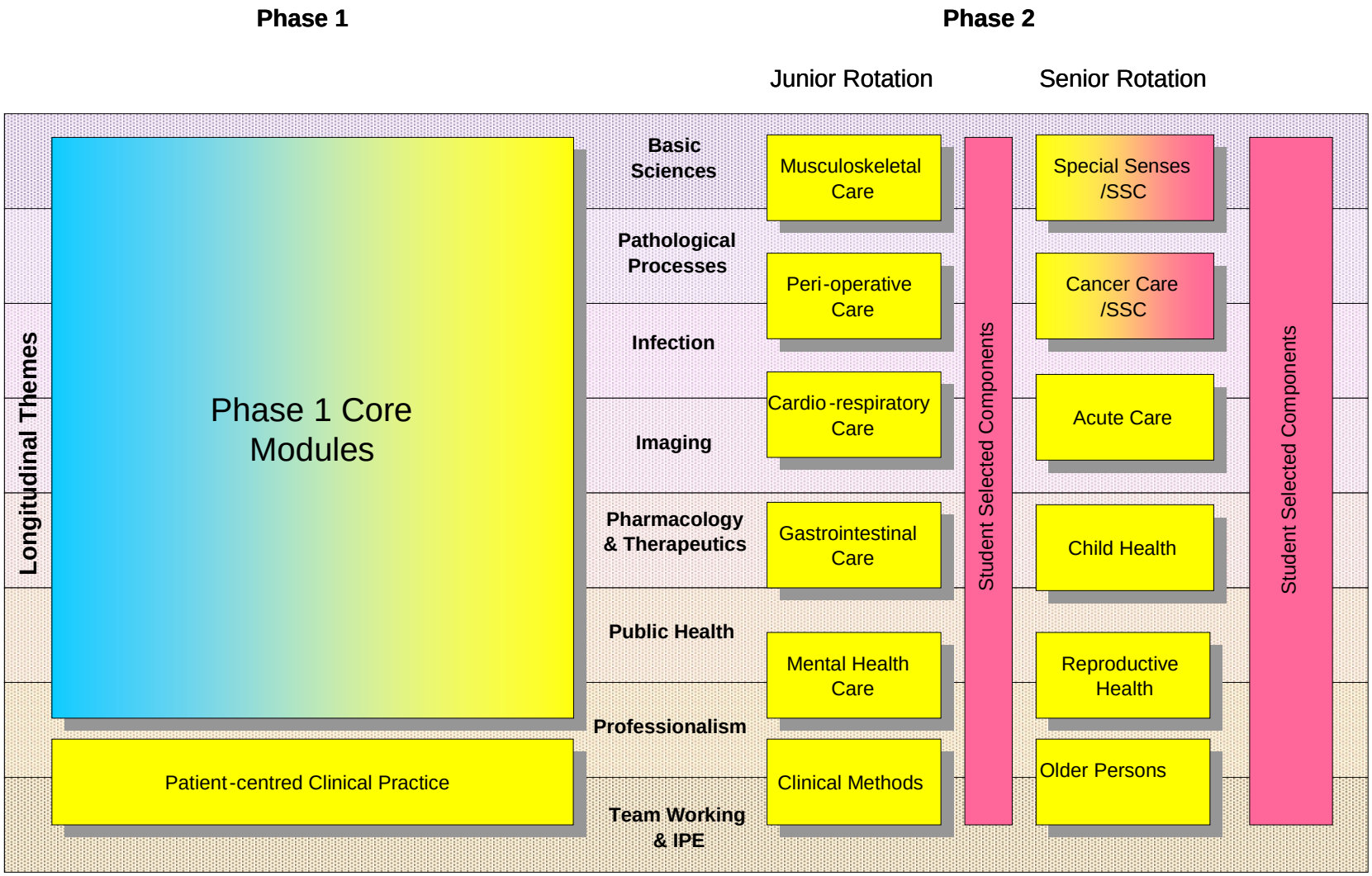
The ultimate longitudinal theme is clinical competence, as that is what the whole course is about. This comprises first, **consultation skills**, the ability to take a history from a patient, examine them, and use problem solving skills to make a diagnosis so as to plan and implement appropriate management. Second is **procedural skills** that you will need to be competent in as a foundation doctor, and third the professional **attitudes and behaviours** necessary for effective practice.

"The essential unit of medical practice is the consultation and all else in the practice of medicine derives from it." This statement was made by a paediatrician, Sir James Spence in 1963 and despite all the technological changes in medicine remains as true today as it was then.

This philosophy informs the standard model of consultation skills utilised throughout the curriculum. You are already familiar with the basic features of this model from your learning in Phase 1. It emphasises an approach requiring focused history taking and examination informed by developing hypotheses about the underlying clinical problem and the effective negotiation of management plans with the patient. The competencies

required to conduct such a consultation are laid out precisely, and you will be judged against them when your consultations are observed in assessments, including the Intermediate and Final Professional Examinations. The component competences are listed in the box below. During the Clinical Methods block you will be given further specific teaching about those competences. You will build on that in all the other blocks to improve your consultation skills.

Procedural skills will be learned in every block according to a coordinated programme which will ensure that all necessary skills defined by the General Medical Council (see above)are signed off and we will be able to confirm to your Foundation School that you can perform them competently. Professional attitudes will be developed and assessed in every block, and will be coordinated though the 'Personal & Professional Development' programme.


Phase 1
Phase 2
Junior Rotation
Senior Rotation
Longitudinal Themes
Phase 1 Core Modules
Patient-centred Clinical Practice
Basic Sciences
Pathological Processes
Infection
Imaging
Pharmacology & Therapeutics
Public Health
Professionalism
Team Working & IPE
Musculoskeletal Care
Peri-operative Care
Cardio-respiratory Care
Gastrointestinal Care
Mental Health Care
Clinical Methods
Student Selected Components
Special Senses /SSC
Cancer Care /SSC
Acute Care
Child Health
Reproductive Health
Older Persons
Student Selected Components

Clinical Methods

Block type:	Core
Block duration	Seven weeks
Rotation	Junior
Block leader	Dr Anil Sood

Aim of the Block

This Block aims to enable students to develop further the consultation competencies underpinning clinical learning and practice across the curriculum, and provide a sound foundation for clinical practice in all settings.

Learning outcomes for the block

As this block embodies the approach to consultation across the curriculum, its outcomes are a staged version of those of the course as a whole. By the end of the block students should be able to:

Carry out a consultation with a patient:

- Take and record a patient's medical history, including family and social history, talking to relatives or other carers where appropriate.
- Elicit patients' questions, their understanding of their condition and treatment options, and their views, concerns, values and preferences.
- Perform a full physical examination.
- Perform a mental-state examination.
- Assess a patient's capacity to make a particular decision in accordance with legal requirements and the GMC's guidance.
- Determine the extent to which patients want to be involved in decision-making about their care and treatment.
- Provide explanation, advice, reassurance and support.

Diagnose and manage clinical presentations:

- Interpret findings from the history, physical examination and mental-state examination, appreciating the importance of clinical, psychological, spiritual, religious, social and cultural factors.
- Make an initial assessment of a patient's problems and a differential diagnosis. Understand the processes by which doctors make and test a differential diagnosis.
- Formulate a plan of investigation in partnership with the patient, obtaining informed consent as an essential part of this process.
- Interpret the results of investigations, including growth charts, x-rays and the results of the diagnostic procedures in Tomorrow's Doctors 2009.
- Synthesise a full assessment of the patient's problems and define the likely diagnosis or diagnoses.
- Make clinical judgements and decisions, based on the available evidence, in conjunction with colleagues and as appropriate for the graduate's level of training and experience. This may include situations of uncertainty.

- Formulate a plan for treatment and management, according to established principles and best evidence, in partnership with the patient, their carers and other health professionals as appropriate. Respond to patients' concerns and preferences, obtain informed consent, and respect the rights of patients to reach decisions with their doctor about their treatment and care and to refuse or limit treatment.
- Support patients in caring for themselves.
- Identify the signs that suggest children or other vulnerable people may be suffering from abuse or neglect and know what action to take to safeguard their welfare.
- Contribute to the care of patients and their families at the end of life, including management of symptoms, practical issues of law and certification, and effective communication and team-working.

Communicate effectively with patients and colleagues in a medical context:

- Communicate clearly, sensitively and effectively with patients, their relatives or other carers, and colleagues from the medical and other professions, by listening, sharing and responding.
- Communicate clearly, sensitively and effectively with individuals and groups regardless of their age, social, cultural or ethnic backgrounds or their disabilities.
- Communicate by spoken, written and electronic methods (including medical records), and be aware of other methods of communication used by patients. The graduate should appreciate the significance of non-verbal communication in the medical consultation.
- Communicate appropriately in difficult circumstances, such as when breaking bad news, and when discussing sensitive issues, such as alcohol consumption, smoking or obesity.
- Communicate appropriately with difficult or violent patients.
- Communicate appropriately with people with mental illness.
- Communicate appropriately with vulnerable patients.
- Communicate effectively in various roles, for example, as patient advocate, teacher, manager or improvement leader.

Provide immediate care in medical emergencies:

- Assess and recognise the severity of a clinical presentation and a need for immediate emergency care.

Prescribe drugs safely, effectively and economically:

- Establish an accurate drug history, covering both prescribed and other medication.
- Plan appropriate drug therapy for common indications, including pain and distress.
- Provide a safe and legal prescription.
- Calculate appropriate drug doses and record the outcome accurately.
- Provide patients with appropriate information about their medicines.
- Access reliable information about medicines.
- Detect adverse drug reactions.
- Demonstrate awareness that many patients use complementary and alternative therapies, and awareness of the existence and range of these therapies, why patients use them, and how this might affect other types of treatment that patients are receiving.

Carry out practical procedures safely and effectively:

- Be able to perform a range of diagnostic procedures, as listed in Tomorrow's Doctors 2009 and measure and record the findings.
- Be able to perform a range of therapeutic procedures, as listed in Tomorrow's Doctors 2009.

- Be able to demonstrate correct practice in general aspects of practical procedures, as listed in Tomorrow's Doctors 2009.

Use information effectively in a medical context:

- Keep accurate, legible and complete clinical records.
- Make effective use of computers and other information systems, including storing and retrieving information.
- Keep to the requirements of confidentiality and data protection legislation and codes of practice in all dealings with information.
- Access information sources and use the information in relation to patient care, health promotion, giving advice and information to patients, and research and education.
- Apply the principles, method and knowledge of health informatics to medical practice.

The block also has specific sessions on evidence based medicine, dermatology, the clinical assessment of children and imaging, whose outcomes are:

- Understand how patients learn about disease and its treatment from the media and demonstrate an ability to explain research findings in relation to newspaper stories that patients have read.
- Be able to identify and describe the clinical symptoms and signs of common skin disease, discuss with patients the psychological, social and occupational impact of skin disease and describe the most appropriate management plans for these.
- Practice the content and process of consultations with families and children of all ages and learn how the developmental stages of children affect the process
- Explain the indications for requesting particular imaging investigations in order to address specific diagnostic questions and interpret the results in the light of the patient's presentation.

Structure of the block

At the end of the Phase 1 it is expected that all students will "be able to take a basic clinical history and perform a basic physical examination of the major body systems". This course will build on and extend the competences you acquired in Phase 1 and in the other clinical blocks undertaken by you prior to the Clinical Methods Course.

The Clinical Methods Course has the overall intention to help all students to become better doctors, irrespective of their current career preference or eventual career choice. More specifically it seeks to assist students "to recognise, adopt and develop those clinical skills and values that are fundamental to the practice of rational and humane clinical medicine, whatever the clinical setting". Our intention is to concentrate on the principles of, and the concepts underlying, sound clinical method in its broadest sense, and provide guidance on how its many components need to be integrated and then applied in clinical practice for the benefit of patients.

Monday, Tuesday, Wednesday

You will receive teaching in the setting of general practice, generally from a GP clinical teacher directly observing your consultations with patients and providing you with feedback on your performance. This will be supplemented by a small number of sessions during which you will observe the work of other primary care professionals. You will also be provided with teaching in small groups of students, drawn from neighbouring teaching practices in localities, in which the main means of instruction will be analysis of video recorded consultations in group discussion facilitated by a GP clinical teacher.

Thursday, Friday

You will take part in a variety of teaching sessions including lecture presentations, small group discussion and student presentations. This teaching will focus on:

- Clinical Problem Solving
- Patient-centred consultations
- The Clinical Assessment of Children
- Interpreting and explaining topical health issues to patients in relations to the published scientific literature
- The recognition and treatment of skin disease
- Clinical pharmacology of drugs commonly used in primary care
- Choice of diagnostic imaging

Links to overarching themes

This block will link with several of the overarching themes.

- Basic sciences and pathological processes underpin the hypothesis generation that is a key feature of taking a focussed history and performing an appropriate physical examination.
- The diagnosis and management of infections in primary care is a major feature of the block
- There are specific sessions in the block relating to the ordering of investigations such as imaging, and the use of drugs in Primary Care, including a 'Desert Island drugs' session.
- Public health issues pervade practice in primary care, and students will have several opportunities to explore them.

Assessment of the Block

At the end of the block a report will be made to the Medical School as to whether each student has:

- attended all clinical placement sessions in their allocated practice
- contributed to locality teaching sessions in a satisfactory manner.
- attended all teaching sessions on Thursday and Friday of each week.
- completed satisfactorily two case studies in a standard format and written a reflective essay on the ethical issues of confidentiality.
- performed to a satisfactory level in five observed consultations judged according to the competencies defined for consultation across the curriculum, and specified in the Code of Practice for assessment in Phase 2.
- behaved in a professional manner throughout the block
- achieved competence in the examination of the fundus of the eye using an ophthalmoscope

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Perioperative Care

Block type: *Core*
Block duration*:* *7 Weeks*
Rotation *Junior*
Block Leaders *Mr Akhtar Nasim, Dr Mamta Chauhan, Dr Mike Norwood*

Aims of the block

This block aims first to ensure that students have a sound understanding of the patient journey through an elective surgical procedure, including the principles of acute care in the perioperative period. Second, to expose students to patients with the common acute surgical problems, learn the management principles of these problems, specifically gastrointestinal perforation, haemorrhage, obstruction, peritonitis; complications of abdominal aortic aneurysms and limb ischaemia. Third to enable students to recognise and deal with "the acute abdomen". Fourth, the block will provide an introduction to airway management and other practical skills, patient monitoring and equipment.

Learning outcomes for the block

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

- Explain the principles of pre-operative assessment of patients
- Identify the high risk surgical patients
- Participate in the preoperative preparation and planning of high risk patients
- Describe the preoperative management of the diabetic patient
- Describe the general principles of anaesthesia, and the use of common anaesthetic agents
- Identify in broad terms the level of care that a patient will require postoperatively
- List the common postoperative problems with the nature of presentation and treatment.
- Write prescriptions for strong, intermediate and minor analgesics in the postoperative period having regard to the operation and to appropriate doses, routes of administration, side effects and contra- indications.
- Manage a patient receiving patient controlled analgesia or epidural analgesia
- Assess a Critically ill patient using a standard approach and initiate basic resuscitation including patients with acute renal, acute respiratory failure and acute confusional state.
- Calculate the daily fluid requirements for children and adults allowing for the effect of disease, surgery and trauma
- Organise a safe and appropriate blood transfusion
- Recognise the need for invasive central and arterial monitoring and the associated complications
- Use and interpret pulse oximetry
- Recognise and manage airway obstruction
- Perform basic airway skills.
- Identify and management the patient with "an acute abdomen"
- describe the common benign and malignant conditions of the gastrointestinal tract
- Describe the principles of vascular surgery, including bypass surgery and aortic aneurysm surgery

Structure of the Block

Week 1 *Structured presentations on*:

- Preoperative Assessment
- Pain management for medical students
- Postoperative problems
- Assessment of the Critically Ill patient and introduction to the Early Warning Scoring system
- Issues around end of life/ dying patient
- Management of the hypotensive patient
- Management of the blue and breathless patient
- Management of the oliguric patient
- Fluid management and blood
- History of surgery & careers in surgery
- Lumps, bumps & herniae
- Surgical infections
- Nutrition
- The acute abdomen
- Principles of vascular surgery
- Benign & malignant disorders of the gastrointestinal tract
- Overview of plastic and reconstructive surgery
- Overview of maxillofacial surgery

Weeks 2-7 *Structured Clinical experience*

- Attendance at clinic and theatre
- Attendance on Surgical Admissions Unit, clerking of emergency patients and observation of emergency operations
- Observation of the following operative procedures:
    - Emergency laparotomy
    - Elective laparotomy
    - Laparoscopy
    - Fibreoptic Endoscopy (upper or lower)
- Structured clinical skills
- Structured patient studies
- Working with recovery nurses

Links to overarching themes

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

- Physiology of pain
- Cardiovascular physiology
- Respiratory physiology
- Renal physiology

- Physiology of nausea and vomiting

Pathology

Pharmacology & therapeutics

- Pharmacology of pain relief
- Pharmacology of cardiac drugs
- Pharmacology of drugs used in respiratory disease

Infection

- Post operative infections

Imaging

- Radiology

Ethics and Law

- Consent
- The dying patient

Procedural skills

- Venepuncture
- Basic airway manoeuvres
- Advanced airway management: airway adjuncts and laryngeal mask airway
- Arterial blood gas sampling
- Intravenous, intramuscular and subcutaneous injection
- Setting up IV fluids
- Sharps disposal
- Nasogastric tube placement
- Placement of urinary catheter

Assessment of the block

At the end of the block a report will be made to the Medical School as to whether each student has:

- Attended all compulsory timetabled sessions; and other clinical sessions as appropriate
- Completed the required tasks defined in the block workbook
- Satisfactorily completed in-block formative assessments (as appropriate for the block), including consultation skills and knowledge-based assessments.
- Demonstrated professional attitudes and behaviour

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Musculo-skeletal care

Block type: *Core*
Block duration: *7 Weeks*
Rotation *Junior*
Block Leaders *Mr Steve Williams, Dr Rebecca Neame*

Aim of the block

The aim of this block is to equip medical students with the necessary knowledge, skills and attitudes for the diagnosis and treatment of musculoskeletal disorders and to enable them to enter the foundation year training and subsequent postgraduate training programmes with the necessary skills for the basic management of patients with musculoskeletal conditions.

Learning Outcomes

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

- identify the important causes of the following symptoms
    - pain arising in multiple small joints
    - pain arising in a solitary large joint
    - pain and/or paraesthesiae arising in the spine
    - pain arising in soft tissues
    - widespread pain associated with arthralgia and/or myalgia

  by taking a history considering physical psychological and social aspects formulate appropriate diagnostic hypotheses based on sound, scientific understanding of normal and abnormal structure and function in the causation of musculoskeletal disease
- elicit selectively, normal and abnormal physical signs in the musculoskeletal system to test diagnostic hypotheses
- use investigations selectively and demonstrate an understanding of the use of haematology, biochemistry, immunology, radiology and other relevant investigations with regard to musculoskeletal disease
- Use information sources and appraise evidence as appropriate for musculoskeletal disease
- formulate and implement management plans with regard to prescribing mild, intermediate and strong analgesics as appropriate and using combinations of anti-inflammatory agents and analgesics appropriately
- offer advice for patients whose pain is not satisfactorily controlled by pharmacological agents
- communicate effectively and sensitively in dealing with patients with chronic musculoskeletal disease; and negotiate, where appropriate, alterations in lifestyle that would be in the patient's best interest
- formulate and implement a management plan for patients with inflammatory joint disease, based on an understanding of disease modifying anti rheumatic drugs (DMARDs)
- appreciate the role of other health care professionals and be aware of the wider strategies for the management of acute and chronic musculoskeletal disorders including rehabilitation, pain management, physiotherapy, occupational therapy, the role of allied healthcare professionals and social services
- With regard to Trauma, the student should be able to:

- identify the extent and severity of injury following trauma by taking an appropriate history, and by the selective use of physical signs and investigations
- perform basic first aid and resuscitative care in a patient with musculo-skeletal trauma
- use effective communication skills to outline to patients with orthopaedic trauma the consequences of that trauma and the impact both in the short and long term to lifestyle
- identify and discuss with the patient potential risk factors for further injury and the way they may be reduced
- All of the above tasks should be based on a sound basic knowledge of applied anatomy, physiology and pharmacology.

Competency Contexts the student should be able to express the above competencies in the context of::

- Musculoskeletal emergencies
- Chronic inflammatory polyarthropathy
- Autoimmune disease
- Tumours affecting bones
- Metabolic bone disease
- Low back pain, sciatica and radicular pain
- Degenerative joint disease
- Childhood musculoskeletal problems

Structure of the Block

The block structure will be based on the following principles:

- Students should learn in the workplace and learn to work as members of medical staff.
- All medical team members have something to contribute with respect to student learning.
- Other disciplines can contribute significantly to learning.
- Priority is given to learning the core skills of musculo-skeletal medicine e.g. history taking, physical examination, development of investigation plans, medical management and deciding when surgery is appropriate.
- Exposure to the most common conditions is important.
- A broad experience is desirable

Each week there will be a plenary session on the Monday. This will cover the following core topics:

i) Introduction; and history taking
ii) Anatomy of lower and upper limbs
iii) Physical examination
iv) Rehabilitation and investigations
v) Back pain
vi) Rheumatoid arthritis, ankylosing spondylitis and sero-negative inflammatory arthritis
vii) Auto-immune diseases
viii) Osteoporosis, metabolic bone disease, muscle disease
ix) Resuscitation
x) Student presentations, Quiz and feedback

The remainder of the week will contain a mix of:

i) Clinical attachments

ii) Special learning experiences

Clinical Procedural Skills

i) Backslab

Links to overarching themes

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

- Anatomy of musculoskeletal system

Pathology

- Inflammatory processes in joints

Pharmacology & therapeutics

- Pharmacology of pain relief

Infection

- Post operative infections

Imaging

- Radiology of fractures

Ethics and Law

- consent

Procedural skills

- Venepuncture
- Backslab

Assessment of the block

At the end of the block a report will be made to the Medical School as to whether each student has:

- Attended all compulsory timetabled sessions; and other clinical sessions as appropriate
- Completed the required tasks defined in the block workbook
- Satisfactorily completed in-block formative assessments (as appropriate for the block), including consultation skills and knowledge-based assessments.
- Demonstrated professional attitudes and behaviour

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Cardio-respiratory care

Block type: *Core*
Block duration: *7 Weeks*
Rotation *Junior*
Block Leaders *Dr Chandra Ohri & Dr Jon Bennett*

Aims of the Block

The aim of this block is that students should be able to recognise common conditions affecting the cardiovascular and respiratory systems, and be able to describe their investigation, treatment and prevention.

Learning outcomes for the block

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

- demonstrate their ability to identify the important cardiovascular and respiratory causes for:
    - chest pain
    - breathlessness
    - syncope
    - palpitation
    - cough
    - sputum production
    - wheeze
    - haemoptysis
    - leg pain
    - oedema

  by taking a history considering physical, psychological and social aspects, using clinical reasoning to reach an appropriate provisional diagnosis.
- elicit selectively, normal and abnormal physical signs in the cardiovascular and respiratory systems to test diagnostic hypotheses.
- use investigations selectively to confirm diagnostic hypotheses including
    - interpretation of chest X rays and other relevant imaging
    - performing and interpreting an ECG
    - perform and interpret basic pulmonary functions tests, including use of a peak flow meter
    - interpret arterial blood gas analyses
    - recognise cardiac and peri-arrest arrhythmias and their initial management
- formulate a management plan (including the use of medication), if necessary using information sources, appraise evidence and apply the conclusions, for the care of patients with common cardiovascular and respiratory diseases.
- use effective communication skills to:
    - give advice about cardiovascular risk factors

    - give advice about lifestyle changes including occupational factors to a patient who has recently suffered a myocardial infarction
    - explain the procedures of spirometry, bronchoscopy, coronary angiography, exercise testing and echocardiography
    - negotiate with a patient the pros and cons of taking anti-hypertensive medication
    - inform sensitively a patient that he/she has incurable lung disease
    - negotiate a smoking cessation plan with a patient
- describe how primary and secondary preventative strategies may reduce the burden of cardiovascular and respiratory disease on society.
- recognise the possibility of environmental and occupational factors in the causation of lung disease

Competency contexts: You should exhibit the above competencies in the following contexts:

- Angina Pectoris
- Acute Myocardial Infarction
- Hypertension
- Heart failure
- Valvular heart disease
- Arrhythmias
- Thrombo-embolic disease (including prevention)
- Peripheral vascular disease
- Airflow limitation
- Respiratory infections
- Respiratory failure
- Pleural disease
- Tuberculosis
- Lung cancer
- Restrictive Lung disease

Procedural skills

- Performing and reading ECGs
- Managing an ECG monitor
- Performing peak flow
- Administering a nebuliser

Structure of the Block

Each block comprises of a 7-week attachment to a cardiology and a respiratory team with programmed time spent on the coronary care unit and clinical decisions /acute admissions unit including time spent on call.

There are a variety of teaching opportunities:

- Seminar teaching at the GGH and local DGH
- Out-patient clinic experience

- Ward based learning
- Senior-led ward rounds
- Acute emergency experience (including on-call)
- Cardio-respiratory simulation in the Clinical Skills Lab at the LRI
- Cardiovascular and respiratory system clinical examination teaching
- Multi-professional learning
- Observing specialty-specific procedures
- Private study time
- Ad hoc optional extras

The workbook provides direction for learning during this block and is divided into several key sections:

- Record of Cases: to allow reflective understanding
- Specified Clinical Cases: this section represents common cardio-respiratory presentations that students will be expected to take a history and examine a patient presenting with each of these conditions and reflect upon fundamental basic science, pathology, clinical pharmacology etc related to each case.
- Allied Medical Staff Activities: working with many different professionals including nursing staff, lab technicians, cardiac and respiratory technicians and physiotherapists to name a few. It is important to learn how these professional work together (e.g. in a multi-disciplinary team meeting) or undertaking investigations (e.g. echocardiography).
- Invasive Procedures: although not a key aim, this block will give you the opportunity of observing invasive procedures including coronary angiography and bronchoscopy.
- Tasks: performing and interpreting ECGs and peak flows, managing an ECG monitor, administering a nebulizer, interpreting blood tests and chest X-rays are fundamental to this attachment.
- Taking responsibility: observing the day-to-day management of patients in dedicated ward bay
- Additional tasks include understanding the clinical pharmacology and therapeutics related to drugs treating cardio-respiratory conditions and the writing of management plans.
- Professionalism.
- Intermediate Clinical Examination Mock. Whether this block is the 1st, 3rd or 6th, exam practice can often highlight areas for improvement before the real thing!

Seminars will be held at the GGH and locally at the DGHs for students based there. For GGH-based students, we are expecting that you will be able to attend all or almost all of the seminars. Other students are invited to attend the Cardio-Respiratory Seminar programme if available (and are close to Leicester).

GGH-Based Seminars:

Monday Lunchtime:	Microbiology with Dr Jenkins
Monday PM:	Cardio-Respiratory Seminar
Wednesday or Thursday Lunchtime:	Radiology Teaching
Friday Lunchtime:	Cardiology Teaching

Examples of cardio-respiratory seminar topics:

- Palliative care in heart failure
- Respiratory Pharmacy
- Hypertension and Heart Failure
- Pleural Disease
- Blood gases
- Recognising the critically ill patient
- Respiratory emergencies
- Haematology
- Allergies
- Bronchiectasis
- Basic Science

Links to overarching themes

All overarching themes will be linked into the block. Most often this will be as part of the ward or clinic based teaching and is reflected in the workbook. The seminar programme at the GGH will allow a number of these key themes to be developed further (i.e. palliative care, pharmacology, basic sciences, imaging and infection).

Basic Sciences

- Anatomy and physiology

Pathological sciences

- Microbiology
    - Including pneumonia, infective endocarditis, infective exacerbations of COPD / asthma

Imaging

- Chest X-ray, Cardiac MR imaging, CT imaging of the thorax

Clinical Pharmacology

- Cardiovascular and respiratory medicine are very therapeutic-dependent

Professionalism / Law and Ethics

Assessment

At the end of the block a report will be made to the Medical School as to whether each student has:

- Attended all compulsory timetabled sessions; and other clinical sessions as appropriate
- Completed the required tasks defined in the block workbook
- Satisfactorily completed in-block formative assessments (as appropriate for the block), including consultation skills and knowledge-based assessments.
- Demonstrated professional attitudes and behaviour

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Gastrointestinal & Metabolic Care

Block type:	*Core*
Block duration:	*7 Weeks*
Rotation	*Junior*
Block Leaders	*Dr Miles Levy, Dr Steve Jackson, Prof John Mayberry, Dr Paul McNally & Dr Reem Al-Jayyousi*

Aims of the Block

The aims of this block are that, students should continue to improve their skills in history taking and clinical examination, presentation, communication and clinical reasoning. Students should be able to recognise common conditions affecting the gastro-intestinal, endocrine and renal systems, and be able to describe their investigation, treatment and prevention. Students should learn about patient safety issues and clinical governance through involvement with the ward teams.

Learning outcomes for the block

By the end of phase 2 students should be able to:

- identify the important alimentary causes of the following symptoms:
    - acute and recurrent abdominal pain
    - vomiting
    - haematemesis
    - dysphagia
    - constipation
    - diarrhoea
    - rectal bleeding
    - jaundice

  by taking a history considering physical, psychological and social aspects, using clinical reasoning to reach an appropriate provisional diagnosis.
- elicit selectively normal and abnormal physical signs in the alimentary system and liver to test diagnostic hypotheses.
- use investigations selectively to confirm diagnostic hypotheses and relate the results to the underlying pathophysiology including
    - recognise radiological features of intra-peritoneal air, obstructed bowel and correct placement of nasogastric tubes
    - request appropriately abdominal ultrasound and radiographs
    - interpret liver function tests
- formulate a management plan, if necessary using information sources, appraise evidence and apply the conclusions, for the care of patients with common alimentary and liver conditions.
- use effective communications skills to:
- communicate to a patient that he/she is drinking alcohol to excess and to outline the potential consequences
- outline to a patient the management options available for oesophageal, gastric and large bowel cancer

Competency contexts*:*

The above competencies should be expressed in the following contexts:

- Benign & malignant oesophageal stricture
- Oesophageal varicies
- Peptic ulcer disease
- Gastro-oesophageal reflux disease
- Pre-hepatic, hepatic and post hepatic causes of jaundice
- Gall bladder disease
- Pancreatitis
- Bowel obstruction
- Malabsorption
- Inflammatory Bowel disease
- Bowel cancer
- Irritable bowel syndrome
- Hernia

- identify patients likely to have a diagnosis of diabetes on the basis of the clinical history
- confirm diabetes on laboratory investigation
- detect sub-clinical diabetes
- formulate a management plan, if necessary using information sources, appraise evidence and apply conclusions, for the care of patients with diabetes
- use effective communication skills to
    - give advice about lifestyle changes to a patient who has recently been diagnosed as suffering from diabetes and offer an explanation of why various treatments are required over and above simple dietary intervention
    - explain to patients the importance of good metabolic control, blood pressure control and reduction of serum lipids in reducing morbidity and mortality
    - give advice to patients on exercise, driving and occupation
    - give patients information about self-help organisations
- describe and be able to recognise long term complications of diabetes, including
    - macrovascular disease
    - eye disease
    - renal disease & hypertension
    - neuropathy & foot disease
    - lipid disease
- recognise and manage the particular differences in diabetes in those of Asian ethnic origin
- explain the role of chiropodists, dieticians, psychologists and specialist nurses in the care of diabetes
- identify patients likely to have a diagnosis of thyroid disease on the basis of clinical history, examination and appropriate investigations
- identify patients likely to have a diagnosis of adrenal disease on the basis of clinical history, examination and appropriate investigations
- identify patients likely to have a diagnosis of pituitary disease on the basis of clinical history, examination and appropriate investigations
- Explain the principles of fluid and electrolyte balance, including
    - Causes, investigations and management of hypo- and hyper-natraemia
    - Causes, investigations and management of hypo- and hyper-kalaemia
    - Use and safe prescribing of intravenous fluids
- Explain the principles of acid base balance
    - Identify and manage metabolic acidosis and alkalosis
- Identify the causes of abnormal unrinary sediment, approporaite investigations and treatment
- acute kidney injury

    - Causes
    - Prevention
    - Early recognition
    - Management
    - complications
- chronic kidney disease
    - Prevention
    - Recognition
    - Management
    - complication
    - Awareness of framework for management of chronic diseases
- communication skills
    - Principles of breaking bad news
    - Counseling patients about chronic illnesses (end stage renal failure)
    - Principles of end-of-life care in the context of renal disease

Patient safety (through inpatient care)

Hospital acquired infection
Venous thromboembolism prophylaxis
Documentation
Safe prescribing for the patient with renal disease

Structure of the Block

During the block students will be divided into groups and allocated predominantly to a team of either, gastroenterology, diabetes and endocrine or renal medicine. The expectation is that wherever a student is placed they will be able to achieve the key learning outcomes. During the block students will have the opportunity to attend specialist clinics in areas other than their main attachment to gain exposure to a broad range of the learning outcomes. In a similar way there will be local seminars arranged on key topics that all of the students in that locality will be able to attend. It is emphasized that you can achieve all your learning objectives while being pan effective member of your ward team and contributing to the care of patients on a daily basis.

1. Gastrointestinal disease

There are a variety of teaching opportunities:

- Seminar teaching
- Out-patient clinic experience
- Ward based learning
- Senior-led ward rounds
- Acute emergency experience (including on-call)
- Multi-professional learning
- Observing specialty-specific procedures
- Private study time
- Ad hoc optional extras

The workbook provides direction for learning during this block and is divided into several key sections:

- Record of Cases: to allow reflective understanding
- Specified Clinical Cases: this section represents common gastrointestinal presentations that students will be expected to take a history and examine a patient presenting with each of these conditions and reflect upon fundamental basic science, pathology, clinical pharmacology etc related to each case.

- Allied Medical Staff Activities: working with many different professionals including nursing staff, lab technicians, endoscopy staff and physiotherapists to name a few. It is important to learn how these professional work together (e.g. in a multi-disciplinary team meeting) or undertaking investigations (e.g. endoscopy, imaging).
- Invasive Procedures: although not a key aim, this block will give you the opportunity of observing invasive procedures.
- Common surgical procedures. You should have seen, and be able to describe to a patient the common surgical procedures in upper and lower GI and hepato-biliary surgery
- Tasks: taking part in investigations and clinics.
- Professionalism.

Seminars will be held at UHL and locally at the DGHs for students based there. For UHL-based students, we are expecting that you will be able to attend all or almost all of the seminars.

2. Diabetes and Metabolism

Stuctured presentations

- Diagnosis and general management of diabetes mellitus
- Diabetic emergencies
- Complications of diabetes mellitus
- Pituitary disorders
- Thyroid disorders
- Adrenal disorders
- Calcium disorders
- Disorders of gonads

Structured clinical experience

- Attendance at endocrine clinics
    - General endocrine clinics
    - Specialised endocrine clinics
- Attendance at diabetic clinics
    - General diabetes clinics
    - Specialised diabetes clinics (depending on local services)
        - Foot
        - Nephrology
        - Erectile dysfunction
        - Antenatal
- Attendance on the wards
    - Patients presenting with endocrine and diabetes problems
    - Patients who have these problems as issues additional to their presenting complaint

The learning opportunities in this block include:

1. The structured teaching events
2. Clinic attendance. Many of these clinics are multidisciplinary and you will be encouraged to learn from the various members of the teams.
3. The diabetes and endocrinology wards
4. Additional educational meetings held locally

Experience

- General diabetes clinics x 3
- General endocrine clinics x 3
- Nurse led clinic or ward consultation with DSN x 1
- Joint obstetric clinic x 1
- Diabetes foot clinic x 1

Minimum evidence of competence

- Type 1 diabetes consultation
- Type 2 diabetes consultation
- Diabetes during intercurrent illness
- Diabetic foot consultation
- Thyroid disorder consultation

3. Renal disease

Patients with renal disease present often to specialties other than nephrology. You will find patients at risk of renal disease and patients affected by renal disease on your base wards. Learning about prevention of renal disease is as important as learning about treating established renal disease.

Renal experiences for students not attached to nephrology include

- Seminars on Blackboard
- Seminars during the block
- Nephrology clinics
- SpR ward teaching

Links to overarching themes

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

- Glucose homeostasis
- Control of the hypothalamo-pituitary axis
- Thyroid hormone homeostasis
- Anatomy and physiology of the GI and urinary systems
- Role of the kidney in maintenance of electrolyte and fluid balance
- Role of kidney in acid base balance
- Hormonal functions of the kidney

Pathology:

- Micro-vascular disease
- Macro-vascular disease
- Auto-immunity
- Malignancies of the gut
- Basic renal pathology related to disease presentations

Pharmacology & therapeutics

- Oral hypoglycaemics
- Insulins and their delivery devices
- Endocrine replacement
- The effect of renal function on drug metabolism
- Nephrotoxicity of drugs

Infection

- Diabetic foot
- Thyroiditis
- GI infections
- Hospital acquired infections

- Urinary tract ifections

Imaging

- Plain film and contrast imaging of the GI system
- Use of ultrasound imaging
- CT & MRI of the GI tract
- Endocrine imaging
- Vascular imaging
- Plain radiology of diabetic foot

Ethics and Law

- Diabetes and driving
- Diabetes and employment
- Ethical issue related to dialysis and transplantation
- Ethical issues related to organ donation
- Importance of good documentation

Assessment of the block

At the end of the block a report will be made to the Medical School as to whether each student has:

- Attended all mandatory timetabled sessions; and other clinical sessions as appropriate
- Completed the required tasks defined in the block workbook
- Satisfactorily completed in-block formative assessments (as appropriate for the block), including consultation skills and knowledge-based assessments.
- Demonstrated professional attitudes and behaviour

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Mental Health Care

Block type: *Core*
Block duration: *7 Weeks*
Rotation *Junior*
Block Leaders *Dr M McCartney, Dr D Kinnair and Dr E Van Diepen*

Aims of the block

This block aims to provide an opportunity to develop knowledge of, the presentation and management of common and serious mental disorders and of the structure and function of modern mental health services. Development of skills in interviewing, obtaining detailed psychiatry histories, examining mental states, assessing risk, and formulating cases using a bio-psychosocial model is emphasised. Multidisciplinary team working, often in community settings, is common in psychiatry and students will have many opportunities to observe and participate in clinical activity in a variety of settings and with a range of health and social care professionals.

Learning outcomes for the block

By the end of phase 2 students should be able to:

- Use emphatic and effective communication skills to elicit relevant information from patients to formulate a psychiatric differential diagnosis and management plan in a variety of clinical settings.
- Undertake a psychiatric history and perform a mental state examination including an examination of cognitive function.
- Coherently present the history and mental state examination.
- Recognise that various abnormal personality developments can present clinically and can also influence the presentation and management of psychiatric illness.
- Describe the prevalence and presentations and have a basic understanding of the treatment and management of the following disorders:
    - Schizophrenia and other psychoses
    - Affective disorders
    - Anxiety disorders, including panic disorder, phobias, generalised anxiety disorder, adjustment disorder, grief reaction and post-traumatic stress disorder (PTSD)
    - Obsessive compulsive disorder (OCD)
    - Substance misuse
    - Dementia
    - Acute confusional state
    - Conduct disorder in children and adolescents
    - Emotional disorders in children and adolescents
    - Psychological problems presenting with physical symptoms
- To be able to describe briefly the presentation and broad principles of the management of:
    - Eating disorders
    - Psychosexual disorders
    - Developmental disorders
    - Attention deficit disorder
    - The common psychiatric conditions in people with learning disability

- Describe appropriate investigations for each of the aforementioned disorders.
- Outline the classification methods used in psychiatry. Compare and contrast the models that exist to explain psychiatric disorder.
- Describe the treatment approaches used in psychiatry. Describe the common side effects of the treatments. Be able to justify a chosen treatment approach.
- Assess patients' risk to themselves and to others.
- Relate a patient's symptoms, problems and management to their social, cultural and ethnic background.
- Explain to patients and/or relatives the nature, causes, side effects and prognosis of the above conditions.
- Discuss management of psychiatric conditions with patients and their relatives in a sensitive manner.
- Advocate the rights of patients who have mental health difficulties.
- Demonstrate an empathetic understanding of the emotional problems of patient and their relatives.
- Evaluate the psychological dimensions of illness.
- Demonstrate an understanding of ethical issues in Psychiatry
- Demonstrate a commitment to the social integration of patients with mental health problems and be sensitive to patients' concerns about stigma.
- Appreciate the importance of multi-disciplinary working within the field of mental health services and be able to work constructively with other health professionals.
- Show capacity for critical thinking and constructive self criticism.
- Tolerate uncertainty and be open-minded about the views of others.
- Recognise the importance of the promotion of mental health and the prevention of psychiatric disorders.

Structure of the Block

Week 1 Introductory course with structured presentations/ workshops on

- Introduction to the Course and Safety Talk
- Overview of Psychiatric Disorders
- Mood Disorders
- Psychosis
- Case discussions
- Classification of Neurotic and Personality Disorders
- Suicide and Para Suicide and Risk Assessment
- Psychiatric History Taking
- Interview Practice
- Introduction to Psychiatric Drugs
- Introduction to the Mental Health Act
- Psychotherapy
- Psychiatry for the elderly

Weeks 2-7; every Monday structured specialist teaching days are organised about the following subjects:

- Child and adolescent psychiatry
- Drugs and Alcohol
- Liaison Psychiatry
- Forensic Psychiatry
- Multiple Choice Questions on Pharmacology
- Electro Convulsive Therapy
- Eating Disorders
- Medical Ethics
- Public health
- Psychotherapy
- Learning Disabilities
- Practice DVD assessment

All students will attend 5 portfolio small group sessions; during these sessions the students will present clinical cases and topics related to psychiatry.

Clinical experience

- Attachment in General Adult Psychiatry
- Attachment in Psychiatry for the Elderly
- ECT observation
- Specialist services attachment
- On call attachment

Procedural skills

- Psychiatric interviewing
- Mental State Examination
- Mini Mental State Examination
- Physical examination in relation to psychiatry

Links to overarching themes

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

Genes and Disease

Tissues of the body – nervous tissue

Membranes and receptors - drugs and receptors.

Urinary System- toxicity syndromes

The nervous system

Pathological processes

Metabolism- the thyroid gland

Mechanisms of Disease- cell injury and death

The nervous system

Infection

Infection and immunity

Imaging

Knowledge of the use of CT and MRI in psychiatry

Pharmacology

Clinical pharmacology- clinical psychopharmacology

Cardiovascular system- drugs and the CVS

Professionalism

Health and disease in society

Communication skills

Team working and IPE

Health in the community

Assessment of the block

At the end of the block a report will be made to the Medical School as to whether each student has:

- Attended all compulsory timetabled sessions; and other clinical sessions as appropriate
- Completed the required tasks defined in the block workbook
- Satisfactorily completed in-block formative assessments (as appropriate for the block), including consultation skills and knowledge-based assessments.
- Demonstrated professional attitudes and behaviour
- Completed 2 portfolios to a satisfactory standard
- Satisfactorily pass the end of block DVD assessment

All students will be discussed at the end of block meeting attended by block leads, teachers and block organisers.

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Acute care

Block type: *Core*

Block duration: *7 Weeks*

Rotation *Senior*

Block Lead *Dr A Kumar, Dr L Walker and Dr N Langford*

Aims of the block

This block aims to ensure that students have a thorough grounding in the management of acutely ill patients. This will include learning about how to initially recognise and assess the unwell patient, how to manage/resuscitate such patients and how to stratify further risk and need for investigation/follow up.

Learning outcomes for the block

- Be able to assess and stabilize the acutely ill patient
- Be able to manage an airway
- Be able to manage Respiratory failure
- Be able to manage Circulatory failure
- Be able to manage reduced consciousness, abnormal neurology and acute confusion
- Be able to manage sepsis
- Perform blood risk stratification of acutely ill patients
- Be able to manage a patient with fever or hypothermia

Procedural skills

By the end of the block the student should be able to do:

- Venepuncture including blood cultures
- Arterial blood gas sampling
- Cannulation
- Capillary blood sugar measurement
- ECG recordings
- Peak flow measurements
- Nebuliser administration
- Antibiotic preparation for parenteral administration
- Administer IV, IM and SC injections
- NG tube insertion
- Bladder catheterisation
- Suturing
- Airway management including insertion of Geudel airway
- Basic application of plaster of paris backslab

Structure of the Block

To achieve the above goals there will be a 7 week course which will involve placement within both the Emergency Department (ED) and Acute Medical Unit (AMU). The course structure will be as detailed below and will include a mixture of didactic lectures, practical sessions, tutorials and clinical experience. To ensure the broadest possible exposure to the variety of conditions that can present to these departments much of the clinical work will be "shift" based.

- Induction and Suture training split with ALS on the first two days
- ABG and Patient safety training will be timetabled
- A timetable of shifts and educational opportunities will be provided for your block
- The block will be coordinated through our own section of the Blackboard VLE.
- Simulation practice will be offered mid Block

Links to overarching themes

During this block you will learn about the following aspects of the overarching themes:

Basic sciences:

- Anatomy of the upper airway
- Physiology of circulatory collapse
- Physiology of fluid and electrolyte balance

Pathological processes

- Causes of acute emergencies including respiratory failure, cardiovascular collapse, neurological disturbance and metabolic derangements

Pharmacology & therapeutics

- Use of oxygen as a drug
- Pharmacology of inotropic agents
- Selection of antibiotics in the treatment of common infections

Infection

- Presentations of common infections including pneumonia, urosepsis, biliary sepsis and meningitis.

Assessment of the block

At the end of the block a report will be made to the Medical School as to whether each student has:

- Attended all compulsory timetabled sessions; and other clinical sessions as appropriate
- Complied with the requirements of the VLE (Virtual Learning Environment)
- Satisfactorily completed the end of block EMQ and OSCEs
- Demonstrated professional attitudes and behaviour

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Older Persons Block

Block Type: *Core*
Block Duration: *7 weeks*
Rotation: *Senior*
Block Leaders: *Vacant*

Aims of the block

This block aims to give students a sound understanding of the ageing process and its affect on disease presentation, both medical and multi-disciplinary management, and to enable them to recognise and understand how to manage common neurological problems

Learning Outcomes for the block – Older Persons Care

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

- Explain the particular issues affecting care of the elderly including:
    - the changing demographics of the UK population and the impact upon pattern of illness and health service provision
    - Explain the physiological effects of ageing and the impact that has on pathology and pharmacokinetics
    - The pathophysiology of the "geriatric giants"
- identify the important causes of
    - falls
    - incontinence
    - confusion
    - dementia
    - mobility difficulties
    - delirium
    - stroke

  By taking a history considering physical, psychological and social aspects, and using clinical reasoning reach an appropriate provisional diagnosis and formulate an appropriate management plan.
- Use appropriate skills to assess an elderly patient coping with barriers that may affect this, and communicate with carers and relatives appropriately
- elicit selectively normal and abnormal physical signs in the elderly
- use appropriate investigations to confirm diagnostic hypotheses
- explain the purpose of the Multi Disciplinary Teams (MDT) in the management of elderly patients, define the roles of the various MDT members and be able to contribute effectively in the MDT context
- describe the services for and techniques of rehabilitation
- describe services available to support patients at home
- explain discharge options and processes to patients and carers, and facilitate safe discharges
- describe the long-term care of the disabled elderly
- explain the current legal guidelines around end-of-life issues

Learning Outcomes for the Block Neurology

By the end of phase 2 students should be able to

- demonstrate their ability to identify the important neurological causes for the symptoms of:
    - headache
    - dizziness
    - fits
    - unconsciousness
    - facial pain
    - limb pain
    - movement disorders
    - focal weakness
    - disturbances of sensation
    - visual disturbance

  by taking a history considering physical, psychological and social aspects, using clinical reasoning to reach an appropriate provisional diagnosis.
- elicit selectively, normal and abnormal physical signs in the neurological system to test diagnostic hypotheses including an attempt at an anatomical localisation of the lesion.
- use investigations selectively to confirm diagnostic hypotheses
    - recognise common indicators for lumbar puncture, EEG, CT and MRI in patients with neurological disease
    - Describe in detail the performance of a lumbar puncture
    - Interpret abnormalities in CSF
- formulate a management plan (including the rational use of medication), if necessary using information sources, appraise evidence and apply the conclusions, for the care of patients with common neurological diseases
- understand the need for sensitivity in communicating with patients and relatives about neurological disease

Specific learning outcomes

The Neurological Examination

- How to perform a focused but thorough neurological examination
- How to perform a rapid screening neurological examination
- How to perform a neurological examination on patients with an altered level of consciousness
- How to recognize and interpret abnormal findings on the neurological examination

Localization – general principles differentiating lesions at the following levels:

- Cerebral hemispheres – lobes of the brain
- Posterior fossa – cerebellum and brain stem
- Spinal cord – the importance of a spinal level
- Nerve root/Plexus
- Peripheral nerve (the commoner forms of mononeuropathy, polyneuropathy, and mononeuritis multiplex)
- Neuromuscular junction - myasthenia
- Muscle – myositis, muscular dystrophies

Common Symptoms – a systematic approach to the evaluation and differential diagnosis of patients who present with:

- Focal limb weakness
- Generalised limb weakness

- Clumsiness and incoordination
- Involuntary movements
- Gait disturbance, loss of balance
- Urinary or faecal incontinence
- Dizziness
- Vision loss
- Double vision (diplopia)
- Speech disturbance
- Chewing and swallowing difficulty
- Acute mental state changes
- Dementia
- Headache
- Focal pain
- Numbness or altered sensation
- Transient or episodic focal symptoms
- Blackouts

Specific Diseases – the ability to recognize, evaluate and manage the following neurological conditions (either because they are common, or because they are potentially life-threatening):

- Potential emergencies
    - Raised intracranial pressure
    - Subarachnoid haemorrhage
    - Meningitis/Encephalitis
    - Status epilepticus
    - Acute stroke (ischaemic or haemorrhagic)
    - Spinal cord or cauda equina compression
    - Head Trauma
    - Acute respiratory distress due to neuromuscular disease (e.g., myasthenic crisis or acute inflammatory demyelinating polyradiculoneuropathy)
    - Temporal arteritis
- Seizures
- Alzheimer's disease
- Parkinson's disease
- Essential tremor
- Multiple sclerosis
- Migraine and chronic headache
- Bell's palsy
- Carpal tunnel syndrome
- Polyneuropathy

Learning Opportunities – Working with the clinical team

- *Ward Work*. The exact nature of your attachment will depend on your local hospital. This may vary slightly. It is likely that you will be attached to a consultant Geriatrician's team in groups of 2 or 3. Some students may have a primary attachment to a consultant physician with an interest in geriatrics, or stroke. You will be expected to become part of the team, and take responsibility for a group of patients that you will follow through their hospital stay and hopefully back into the community. Each ward will also have a full multi-disciplinary team attached to it and you will be expected to work with the team members. You will receive a timetable at the start of your block. Teaching opportunities will include ward

rounds, MDT meetings, clinics, observation of investigations/ procedures, consultant teaching.

- *Medical on-call* – all the consultants will also be involved in the general medical on-call rota. The vast majority of unselected medical admissions are elderly so you will be expected to accompany your team on-call and avail yourself of experience at the hospitals 'front door'.

- *Speciality clinics* – you will either be assigned (in UHL) or should seek out (DGH) specialised clinics e.g. falls and continence clinics, TIA clinics and neurology clinics.

- *Seminars / Lectures* – a series of lectures on neurological and elderly care topics will be arranged on a Friday. All UHL based students will attend. Those students at DGH's may have some of the sessions covered there. Details of these sessions will be given at induction.

- *Clinical skills* – during this module you should continue to practice your clinical skills on the wards under supervision, and if possible undertake an age-suit simulation.

- *Other teaching opportunities* – there will be a series of post-graduate teaching events that run in your hospital and you will be informed of these at induction. Of course private study and self-directed learning will also be necessary.

- *Neurology*- bed-side teaching sessions will be arranged by Dr Eames and Abbott for UHL students

- *Community services* – to enable a full understanding of the patient journey attachments to pre-hospital, emergency services, intermediate care and community based services (both in hospital and in the home) will also be arranged. UHL students will be expected to feedback and reflect on the patient experience during a supervised session at the end of the block.

Assessment of the Block

At the end of the block a report will be made to the Medical School as to whether each student has:

- Attended all compulsory timetabled sessions; and other clinical sessions as appropriate
- Completed the required tasks defined in the block workbook
- Satisfactorily completed in-block formative assessments (as appropriate for the block), including consultation skills and knowledge-based assessments.
- Demonstrated professional attitudes and behaviour

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Cancer Care

Block type:	*Core/SSC*
Block duration*:*	*7 Weeks*
Rotation	*Senior*
Block Leaders	*Dr Barbara Powell, Dr Guy Faust and Dr Fiona Miall*

Aim of the block

This block aims to ensure that students understand how cancer arises and spreads and how therapies work, the prognosis and the effectiveness of therapies in common cancers, the impact of diagnosis and therapy on patient and family, holistic cancer care in the UK and multidisciplinary management and palliative care. We would expect you to apply this in more detail to five common cancers, namely lung, breast, colorectal, prostate and skin. You should address the haematology learning objectives, aiming in particular to achieve the learning outcomes relating to haematological malignancy and blood transfusion during this block.

Learning outcomes for the block

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

- be able to take a focused history from and perform an examination of a patient with cancer. There should be assessment of the physical, emotional, spiritual and social domains of the patient's life, as well as an assessment of performance status.
- describe the referral pathway for patients with suspected cancers, including identification of important symptoms
- explain the reasons for and process of diagnostic procedures for patients with suspected cancer, using language that the patient could understand
- describe the causes of cancer, at both a population and cellular level
- describe the staging systems and prognostic markers of common cancers, and give reasons for the importance of these
- relate the behaviour, investigation and treatment of common cancers to their cell biology, anatomy and physiology
- describe the following terms relating to cancer treatment
    - radical/curative
    - palliative
    - adjuvant
    - neo-adjuvant
    - maintenance therapy
    - palliative care
    - supportive care
- describe the principles of the following anti-cancer treatments to a patient, including the broad rationale and possible side-effects (as you might need to at FY level)
    - surgery
    - cytotoxic chemotherapy
    - radiotherapy
    - hormone therapy
    - immunotherapy

    - molecular targeted therapy
- describe the recognition and management of the following clinical scenarios:
    - the patient in severe pain
    - neutropenic sepsis
    - spinal cord compression
    - hypercalcaemia
    - the severely distressed patient
    - superior vena caval obstruction
    - the haemorrhagic patient
    - complete dysphagia
    - bowel and gastric outlet obstruction
- be able to assess patients with the following symptoms, and initiate appropriate management plans
    - pain, including neuropathic pain
    - nausea and vomiting
    - breathlessness
    - constipation
    - depression
    - headaches, fits and other signs of raised intracranial pressure
    - confusion
    - infective symptoms
- recognise and investigate patients presenting with paraneoplastic syndromes
- recognise the risk of long-term toxicities of cancer treatments
- develop the use of good communication skills to enable the future FY1 doctor to
    - elicit concerns of the patient and family
    - discuss the diagnosis and treatment of malignancy with patients and family
    - break bad news
    - discuss withholding and withdrawing treatment
    - discuss preferred place of care with patients and families
- work effectively within a multidisciplinary team
- describe good care of the dying patient, including use of the Liverpool Care Pathway
- describe the ethos and structure of cancer and palliative care services in the UK, including multi-disciplinary working
- demonstrate awareness of their own limitations, both professional and personal, and a knowledge of when and to whom to refer for help

Outcomes for the clinical genetics bioworkshop:

Students should be able to:

- describe practical difficulties of family dynamics in genetic counseling
- draw pedigrees to understand inheritance patterns and identify at risk relatives
- recognise tumour syndromes
- debate consent, confidentiality and genetic testing in childhood issues
- discuss the pros and cons of screening for cancer

- communicate complex issues and give information with trained genetic counselors
- manage susceptibility to cancer risk sensibly
- use the main principles of Medical Ethics in building a case for any given course of management.

Procedural Skills

- Compulsory Blood Transfusion training
- Compulsory to witness a Bone Marrow examination
- Ideally witness an endosocopy
- Ideally witness a GI cancer resection

During your Day Ward and Ward attendances, you may gain experience of:

- Pleural drainage
- Paracentesis
- Blood cultures
- Management of Hickman lines
- Difficult venepuncture and cannulation
- Pharesis procedures

Structure of the Block

For all students:

Week 1 – 5 days of structured teaching; 2 days' induction, 2 days at LOROS for palliative care and end-of-life teaching, half a day on a biogenetics workshop.

Weeks 2 – 4 or 5 (depending on the hospital you are in) learning in the clinical area. Weekly tutorials. The aim is for students to see patients at all stages of the cancer journey, including diagnosis.

Weeks 5 or 6– 7 – Student Selected Component in a cancer-related area

All students will have an SSC; these will be either 2 or 3 weeks depending on the hospital in which you are placed.

All students should have tutorials in both haematological malignancy and blood transfusion. Students will be offered tutorials in GI cancer surgery.

Links to overarching themes

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

- Cell biology.
- Genetics.

Pathological processes

- Cancer behaviour (at cellular and systems levels) and how this influences treatment. This is especially important in cancer surgery, where you will consider the following areas
    - Staging of cancer, focussing on GI cancers
    - When to operate – the aims and limitations of cancer surgery
    - Selecting the correct oncological operation – achieving lymph node clearance (using colorectal cancer examples)
    - Outcomes following cancer surgery

Pharmacology & therapeutics

- Pharmacology of pain relief, anti-emetics and laxatives
- Prescription of controlled drugs
- Principles and examples of chemotherapy and modern cancer drugs

Infection

- Recognition and initial treatment of neutropenic sepsis
- Use of anti-microbials in immune-compromised patients

Imaging

- Oncological radiology

Ethics and Law

- Withholding and withdrawing treatment
- Care of the Dying patient
- Consent and clinical trial practice
- Cancer genetics screening and testing

Public Health

- Provision of services and funding of screening through to high cost therapies

Assessment of the block

Students will be graded in 4 components:

Professionalism, Attendance, Block work, Clinical.

By the end of the block students must have:

- Attended all compulsory timetabled sessions
- Attended all arranged tutorials
- Attended all allocated clinic and other sessions
- Demonstrated professional behaviour in the clinical setting
- Completed the workbook
- Written a reflective essay based on an aspect of their experiences in the block
- Completed the formative cancer block assessments on blackboard
- Participated in a cancer or urology related SSC
- Completed the blood transfusion training
- Completed the haematology malignancy and GI cancer surgery workbooks

The *Block work* grade is based on marks allocated for:

- Workbook
- Reflective essay and
- Participation in tutorial group

The *Clinical* grade is allocated by the tutor on the basis of:

- Clinical assessment forms
- Clinical competence form
- SSC form (if relevant and as this may not be available at the time of marking, the clinical grade may subsequently be altered if there are concerns raised by SSC supervisor)
- Direct observation in clinical setting (if applicable, timetable does not always allow for this)

At the end of the block a report will be made to the Medical School as to whether each student has:

- Attended all compulsory timetabled sessions; and other clinical sessions as appropriate
- Completed the required tasks defined in the block workbook
- Satisfactorily completed in-block formative assessments (as appropriate for the block), including consultation skills and knowledge-based assessments
- Demonstrated professional attitudes and behaviour

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Special Senses

Block type:	*Core (with a SSC component)*
Block duration:	*7 Weeks (4 weeks special senses and 3 weeks SSC)*
Rotation	*Senior*
Block Leaders	*Ms Nagini Sarvananthan and Professor Henry Pau*

Aims of the block

This block aims to equip students to:

1. take a history and carry out an appropriate examination in a patient with an ENT or ophthalmic problem

2. understand the impact of dysfunction or loss of a special sense for a patient and their carer, and the resources required to manage the disability

3. understand acute, common, and important ophthalmic and ENT disorders, especially those that have systematic features or appear in other parts of the MBBS course.

Learning outcomes for the block

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

- demonstrate their ability to identify the important causes for the symptoms of:
    - ocular discomfort
    - visual disturbance
    - a red eye
    - ocular discharge
    - an abnormal pupil
- by taking an appropriate history to reach a provisional diagnosis
- elicit selectively, normal and common abnormal signs in the eyes to test diagnostic hypotheses, in particular:
    - test and record visual acuity in adults and children
    - assess a patient for the presence of squint by means of the corneal reflexes and cover testing
    - examine the anterior segment and external eye with a pen torch, perform the swinging lamp test for a reflective afferent papillary defect
    - examine the fundus with a direct ophthalmoloscope.
    - use safely mydriatic and fluorescein diagnostic drops
    - examine visual fields by confrontation
    - examine the ocular media of both adults and children by means of the red reflex
- distinguish between ophthalmic complaints requiring immediate referral, those which require referral but are not urgent and those with can be managed by the newly qualified practitioner
- discuss the extent and causes of preventable blindness world-wide
- demonstrate their ability to identify the important causes of
    - nasal blockage
    - rhinitis

  - epistaxis
  - deafness
  - pain in the ear
  - pain in the throat
  - difficulty swallowing
  - swelling of the neck
  - facial pain
  - headache
  - hoarseness
- by taking an appropriate history to reach a provisional diagnosis
- elicit selectively normal and common abnormal signs in the ears, nose and throat including the use of an otoscope and a tuning fork to test diagnostic hypotheses
- use investigations selectively to confirm diagnostic hypotheses
- formulate a simple management plan including an assessment of the need for referral

Competency contexts: the above competencies should be expressed in the following contexts:

- Chronic visual loss
- Cataract
- Diabetic retinopathy
- Eye trauma
- Conjunctivits, corneal abrasion, corneal foreign body, corneal abscess, keratitis, orbital cellulitis
- Deafness, conductive and sensorineural
- Infections of the ear
- Rhinosinusitis and sinsusitis
- Throat infections

Procedural skills

- Use of ophthalmoscope
- Use of otoscope

Structure of the Block

The block will be divided as follows:

<table>
<tr><th>Week 1</th><th>Week 2</th><th>Week 3</th><th>Week 4</th><th>Week 5</th><th>Week 6</th><th>Week 7</th></tr>
<tr><td rowspan="2">Structured teaching for all students</td><td colspan="3">Half the students do:
Special Senses for 3 weeks</td><td colspan="3">Half the students do:
Student Selected Component</td></tr>
<tr><td colspan="3">Half the students do:
Student Selected Component</td><td colspan="3">Half the students do:
Special Senses for 3 weeks</td></tr>
</table>

The block will cover the following topics:

- Examination of the special senses
  - DVD – Examination of the ENT – Monday afternoon, Week 1
  - Introduction to ophthalmology examination. Week 1.

    - Clinical Skills laboratory – whole day. Week 1
    - Anatomy review. Week 1.
- Clinical opportunities (in weeks 2 to 4):
    - Eye casualty
    - Eye clinic
    - ENT clinic
    - ENT emergency clinic (Monday-Friday from 2pm)
- An understanding of the impact of a dysfunction or loss of a special sense on an individual patient and their carer and the resources required to manage the disability
    - Introductory session run by Community team. In week 1.
    - Planned visits to key hospital areas (weeks 2 to 4) including:
        - Audiology
        - Balance
        - Eye clinic
- Common and acute problems affecting the special senses
    - Structured teaching.
        - ENT lectures in week 1.
        - Seminars. Ophthalmology seminars in weeks 2 to 4
    - Clinical opportunities
        - Clinics
        - Eye casualty
        - Special interest clinics
    - WEB-based learning sessions

Links to overarching themes

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

- Anatomy of the special senses by spending a session in the Dissecting Room

Pharmacology & therapeutics

- Review of sympathetic and parasympathetic nervous system
- Pharmacology of nasal decongestants.
- Treatment of acute eye infections
- Treatment of acute ear infections

Infection

- Acute otitis media
- Sinusitits
- Conjunctivitis
- Corneal abscess

Imaging

- Radiology of sinuses

Assessment of the block

At the end of the block a report will be made to the Medical School as to whether each student has:

- Attended all compulsory timetabled sessions; and other clinical sessions as appropriate
- Completed the required tasks defined in the block workbook
- Satisfactorily completed in-block formative assessments (as appropriate for the block), including consultation skills and knowledge-based assessments.
- Demonstrated professional attitudes and behaviour

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

An ENT prize, “The Andy Moir ENT Prize” will be awarded every year for the best student in ENT of that year. The winner will receive a certificate and a book voucher.

The Keeler prize will be awarded to the highest ranked Leicester student in the Royal College of Ophthalmologists Duke Elder Prize Examination. The exam is usually held in May of each year. More information is available from www.rcophth.ac.uk. Any student wishing to enter the exam should apply via Rob Marsden before 1 March.

Reproductive Health

Block type: *Core*
Block duration: *7 Weeks*
Rotation *Senior*
Block Leaders *Dr A Akkad*

Aims of the Block

To enable students to acquire an understanding of women's reproductive health issues, including normal and complicated pregnancy, common gynaecological disorders, sexual health and family planning.

Learning outcomes for the Block

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

- Take a full obstetric, gynaecological and sexual history considering physical, psychological and social aspects of women's health
- Perform competently a physical examination of the reproductive system and related systems where appropriate
- Diagnose and date pregnancy
- Counsel patients about routine antenatal care and antenatal screening and diagnosis
- Recognise and suggest management strategies for common problems in pregnancy
- Identify and participate in the management of life-threatening problems of pregnancy
- Manage normal labour, delivery and puerperium under supervision
- Identify and participate in the management of abnormal labour and puerperium
- Explain the benefits of breast feeding
- Identify important causes of irregular, absent, painful or excessive menstruation, and suggest appropriate investigations and management strategies
- Identify common causes of acute and chronic pain (including pelvic pain and dyspareunia), vaginal discharge and genital ulceration and suggest appropriate investigations and management strategies
- Counsel patients regarding common methods of family planning and advise on prevention and diagnosis of sexually transmitted disease
- Identify common causes of male and female infertility and suggest appropriate investigations and management strategies
- Identify common causes of genital prolapse and urinary incontinence and suggest appropriate investigations and management strategies
- Recognise risk factors for gynaecological cancer and counsel patients regarding appropriate screening programmes
- Describe concepts of screening and related public health issues
- Recognise and discuss ethical dilemmas in Obstetrics and Gynaecology

Structure of the block:

Week 1: Introductory lectures in Leicester, then begin clinical attachment at designated unit

Weeks 2-7: Clinical experience at designated unit; participation in Public Health/Ethics Seminar and Exam preparation session in Leicester

Week 7: Exam at end of Week 7, Results on last Friday of the course.

Links to Overarching themes

Basic sciences

- Anatomy and embryology of the female reproductive tract
- Reproductive and pregnancy physiology

Pathological processes

- Gynaecological cancers

Pharmacology & therapeutics

- Drug treatment in Obstetrics and Gynaecology
- Pre-operative assessment and Peri-operative care

Infections:

- Community and hospital acquired infections
- infection control
- sexually transmitted infections

Public health

- Screening and prevention

Medical ethics

- Termination of pregnancy
- Prenatal diagnosis

Assessment

At the end of the block a report will be made to the Medical School as to whether each student has:

- Attended all timetabled sessions; and other clinical sessions as appropriate
- Completed the required tasks defined in the block workbook
- Satisfactorily completed in-block formative assessments, including consultation skills and knowledge-based assessments.
- Demonstrated professional attitudes and behaviour

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Child Health

Block type: *Core*
Block duration: *7 Weeks*
Rotation *Senior*
Block Leaders *Dr David Luyt*

Aims of the block

This block aims to ensure that students have a sound understanding of child health, including normal and delayed development; routine health screening and surveillance; knowledge of common acute and chronic paediatric illnesses; and the role of the family in child health.

Learning outcomes for the block

Students should be able to demonstrate that they are able to:

- take an appropriate history using appropriate communication skills, including dealing with language difficulties, from a carer about a newborn, infant, toddler and older child, and take a history from an adolescent
- undertake a physical examination of a child
- undertake a developmental assessment of a child, recognise if a child is developmentally delayed and be aware of common behavioural problems
- describe simple feeding problems
- describe common neonatal problems and routine newborn baby examination
- use investigations appropriately
- formulate management plans for common paediatric problems
- adopt a team approach and recognise the importance of multi-disciplinary team working
- recognise common paediatric illnesses for example:
    - common respiratory disease, such as asthma, stridor, pneumonia, cystic fibrosis
    - cardiovascular, such as common congenital heart disease
    - gastrointestinal conditions, such as vomiting, diarrhoea, constipation, abdominal pain, gastroenteritis, and common surgical problems
    - urinary system disease, such as UTI, bed wetting and nephritic syndrome
    - central nervous system, such as febrile fits, epilepsy and meningitis
    - Other – haematology, diabetes, common skin and joint disease.
- Explain the principles and processes of child protection
- exhibit appropriate personal and professional attitudes and show multicultural awareness, recognising the need not be prejudiced by culture, belief, race, colour or disability.

Structure of the Block

Day 1 & 2 – introductory lectures

Then 6 weeks clinical experience – 3 weeks at Leicester Royal Infirmary, then 3 weeks at a district teaching hospital, or vice versa

2-3 Friday afternoon lecture sessions during the 6 weeks

During final week – assessment

During the 3 week attachment at Leicester Royal Infirmary:

- Attachments to 9 medical wards
- Attending Ward Rounds (recommend 2 per week per student)
- Individually Clerking Patients (clerk at least an average of 1 per day)
- Teaching – weekly ward teaching 2-4 sessions per week
- Neonatal Seminars – 2 per week
- Specialist Teaching – Intensive care, surgery, neurology, cardiology – 1 session each
- Clinic Attendance – 1 or 2 per week
- 1 neonatal day
- 1 community day
- 1 CAU day
- Evening presentations (Monday-Thursday)
- Make use of interactive learning items available on Blackboard

During the 3 week attachment at a district teaching hospital:

- Ward rounds, Clinics and Teaching as per individual hospital

Links to overarching themes

During this block students will learn about the following aspects of the overarching themes:

Basic sciences:

- Relevant anatomy, for example upper airway in stridor and obstruction
- Relevant physiology, such as the mechanism of epilepsy and its management
- Relevant biochemistry, such as diabetes

Pathological processes

- Pathological processes in common diseases such as pneumonia, bronchiolitis and cystic fibrosis, pathology of common congenital heart disease

Pharmacology & therapeutics

- Use of insulin in diabetes
- Use of anticonvulsants in epilepsy
- Use of antipyretics and pain relief

Infection

- Use of antibiotics in severe infection, such as meningitis, septicaemia and septic arthritis
- Management of UTI and otitis media

Assessment of the block

At the end of the block a report will be made to the Medical School as to whether each student has:

- Attended all compulsory timetabled sessions; and other clinical sessions as appropriate
- Completed the required tasks defined in the block workbook assessment sheet
- Satisfactorily completed end of block written and clinical exams
- Demonstrated professional attitudes and behaviour

The Phase 2 Board of Examiners, or a sub-group of it, will review the block reports and progress of each student at regular intervals, and define appropriate action in the case of students who do not complete all aspects of block assessment satisfactorily.

Student Selected Components

Block type:	*SSC*
Block duration:	*3 Weeks*
Rotation	*Senior*
Block Leaders	*Various*

Aims of the Blocks

These blocks aim to enable students to study subjects of their choice in order to follow interests, including investigation of possible future careers, and to develop generic skills of self directed study, scholarship and research and self-confidence.

Learning outcomes for the blocks

These are generic to all blocks, by the end of which students should be able to

- Use research skills
- Direct their own learning effectively
- Describe the key features of selected topics outside of the core curriculum
- Demonstrate confidence in their own skills and abilities
- Present the results of their work verbally and in writing
- Evaluate possible future career choices

Structure of the blocks

There are three opportunities for Student Selected Study in Phase 2 in addition to the elective period. Each of the three SSC blocks is three weeks in duration.

One of the blocks occurs in late summer when there are no other clinical blocks running for any phase 2 students. You may choose between a wide range of clinical attachments. These are ideal opportunities to explore potential career options by spending more time attached to a specialty, and extending your knowledge and skills in that area beyond the core curriculum.

The remaining two SSC blocks are part of attachments in the senior rotation. One, which runs during the 'Special Senses' block will allow you to choose between a range of options to study topics which normally fall outside of the core curriculum, such as specialist aspects of pathology, imaging, public health and health service provision. The second embedded SSC is in the 'Cancer care' block, and consists of a short project in a field of your choice related to cancer care, which offers an especially rich and varied range of options from basic biology to ethics and law.

In addition to formal SSC time, and the Elective period, which is also SSC, as you choose where you go, every clinical block has elective tasks within it, where you choose what to study, so that you may complete the outcomes of the course in ways which suit your interests and aspirations. You should expect to spend about 10% of your time on such embedded SSC activity.

Assessment of Student Selected Components

You must complete all student selected components satisfactorily to graduate. To complete an SSC block satisfactorily you must have

- Attended all sessions
- Completed an SSC report describing in a reflective way what you have learned from the block
- If appropriate, completed prescribed work, such as a reflective essay or research report during the SSC

Elective and Global Health

Elective

The aim of the elective period is to provide an opportunity for students to engage in self directed learning, reflect on their professional development, and experience medicine in a different context.

By definition the elective is a period of study unstructured by the Faculty and chosen by the student. This choice should be as wide as possible without endangering the student or embarrassing the medical school, and allow the student to have one or more of:

- develop greater ownership of the learning process
- facilitate the development of attitudes appropriate to the practice of medicine
- develop a greater understanding and practical experience of research in medicine
- gain clinical experience that would not normally be gained as a part of the course
- improve upon existing clinical skills and develop new ones through the wide variety of clinical situations frequently available during the elective, particularly overseas

All Electives must be a minimum of **6 WEEKS** and will take place after the Final Examinations.

Global Health

The course in Phase 1 focuses on diseases prevalent in the UK today, the attitudes of its citizens towards health and illness and the services provided. During Phase 2 as your knowledge and understanding increases you will be given opportunities to think about the nature and causes of disease in other countries of the world and how different societies provide care for their peoples.
In Phase 2 you will study:

- Major epidemic diseases of developing countries that are encountered in the UK, particularly tuberculosis, HIV-AIDS and malaria
- Health care systems in different regions of the world, including North America, Europe, Africa and Asia
- The likely health consequences of climate change and the measures that NHS can contribute to mitigate these
- The impact of migration, particularly that of health workers to and from the UK
- Preparation for an elective, including aspects of cultural sensitivity and personal safety

The learning that you will do is in preparation for your elective experience, which you will do after finals. The majority of you will choose to travel to another country for the elective, where you will see the effects of these issues at first hand. Those who undertake their elective in the UK will also be expected to consider aspects of global health teaching relevant to the setting in which you are doing it.
After the elective there will be a week of study about global health that will be based around your elective experiences. This will be formally assessed and the work that you submit must achieve a satisfactory grade to allow you to graduate.

Longitudinal Themes

Every block will refer to the longitudinal themes, which are topics relating to all aspects of medical practice. As you go through each of the blocks you should constantly refer your accumulating experiences back to the longitudinal themes. If you do you will find that you begin to see patterns which cross specialties and disciplines, and your overall understanding will increase.

Remember the themes are:

- *Basic sciences*: prompts to revisit, revise and expand material encountered in phase 1 of the course
- *Pathological processes*: developing an integrated understanding of disease processes to inform your clinical work
- *Infection:* developing an integrated understanding of infectious disease, infection control and treatment of infections
- *Imaging:* linking together your understanding of anatomy and disease processes
- *Pharmacology & therapeutics*: extending your understanding of the rational use of drugs in clinical practice
- *Public Health:* developing and integrating understanding of health and disease in populations, and the psychological and social factors influencing health & illness
- *Professionalism:* facilitating your acquisition of attitudes and behaviours appropriate for a medical practitioner
- *Team working:* assuring that you will be able to work in multi-professional health care teams.

Every block will have references to these themes, and there are 'theme leaders' who oversee the material across blocks to make sure that the relevant topics are covered and reinforced as the curriculum progresses..

For example, pharmacology and therapeutics builds from the beginning of phase 2 onto the foundations laid in phase 1. In every block you will consider the therapeutics relevant to the topics covered, and in every block you will have to show that you can deal with the practicalities of identifying the right drugs and prescribing appropriately. You will always be asked to identify patients, establish a management plan for them, and then demonstrate in your workbook how you will complete appropriate drug charts or prescriptions. By then end of the course you should be able to perform this task, which is critical for working as a Foundation Doctor, instinctively.

In nearly every block you will be asked to look at appropriate images. Make sure that as you progress you keep a check list of the various categories of image you may have to review. Remember that this is a significant part of both the Intermediate and Final Professional Examinations.

Many of the blocks have events which are specifically related to the theme of public health, to demonstrate to you that all specialties need to understand public health issues in order to practise effectively.

Professionalism is a major theme which is supported by a series of events where you all come together as well as activities and assessment in each block.

Pathological Processes

Aim

The aim of this theme is that you should link your developing clinical competencies with a deep understanding of the pathological processes which relate to clinical conditions and presentations.

The Specific learning outcomes are that you should be able to identify, for each clinical context and presentation the relevant features of:

- cell injury and death.
- acute inflammation.
- chronic inflammation.
- healing and repair.
- haemostasis and thrombosis.
- atheroma.
- cellular adaptations.
- neoplasia.

The theme also includes key aspects of hematology.

Aim for the Haematology component of this theme:

By qualification, students:

- should have a good working knowledge of the reactive haematological picture expected in common clinical scenarios, reflected in changes in both the Full Blood Count and clotting screen, be able to interpret results and initiate appropriate investigations and management.
- will have a broad understanding of both malignant and non-malignant haematological disorders such that they can recognise common clinical presentations, initiate appropriate investigations and first line management steps and know when to seek specialist advice.
- must be able to demonstrate safe transfusion practice

Detailed knowledge of rare conditions, specialist investigations and specialist treatments is not required.

Modes of Delivery

The Haematology theme will be delivered through Phases 1 and 2 by:

- Lectures
- Tutorials
- Workbooks
- Resources on blackboard
- e-learning packages
- Optional SSCs in Haematology

Individual topics have been mapped to the relevant course section but self-directed learning based on the curriculum is expected.

Learning Outcomes

A detailed document outlining the expected level of competence for each topic is available on blackboard (longitudinal themes>pathological processes>haematology). Each student should work through the objectives ensuring competence by completion of phase 2.

Haematology Topics

Subject	Where covered in the curriculum
Mechanisms of anaemia	• Integrative module Phase 1: *Anaemia*
B_{12}, iron and folate deficiency	• Integrative module Phase 1: *Anaemia* • *Introduction to haematology for clinical blocks,* ICC
Haemoglobinopathies	• Phase 1 • *Interpretation session and feedback lecture,* ICC • *Haemoglobinopathies: Issues in pregnancy*; Reproductive Health Block
Anaemia of chronic disease	• Integrated module: *Anaemia* • *Introduction to haematology for clinical blocks,* ICC
Haemolytic anaemias, HS, G6PD deficiency and AIHA as examples	• Phase 1 • *Introduction to haematology for clinical blocks*, ICC. • *Common haematological problems* on blackboard • *Transfusion tutorial & workbook*, Cancer Care Block
Polycythaemia	• *Introduction to haematology for clinical blocks*, ICC. • *Normal haemopoiesis and Myeloproliferative neoplasms* , Junior Summer SSC week 1
Reactive changes in white cells	• *Introduction to haematology for clinical blocks*, ICC. • *Interpretation session and feedback lecture, ,*ICC
Thrombocytopenia	• *Introduction to haematology for clinical blocks*, ICC. • *Perioperative assessment- Haematology,* Perioperative care block
Leukaemias	• *Leukaemia*, Junior Summer SSC week 1 • *Haematology malignancies tutorial & workbook*, Cancer Care Block
MDS	• *Bone marrow failure disorders* ,Cancer Care Block
Myeloproliferative disorders (PV, ET, MF)	• *Normal haemopoiesis and Myeloproliferative neoplasms* , Junior Summer SSC week 1
Lymphoma	• *Lymphoma and Myeloma,* Junior Summer SSC week 1 • *Haematology malignancies tutorial & workbook*, Cancer Care Block
Multiple myeloma	• *Lymphoma and Myeloma,* Junior Summer SSC week 1 • *Haematology malignancies tutorial & workbook*, Cancer Care Block
Normal coagulation and platelet function	• *Introduction to haematology for clinical blocks*, ICC.

Disorders of haemostasis	• *Inherited and Acquired bleeding disorders,* Acute care Block • *Perioperative assessment- Haematology,* Periop
Thrombosis and fibrinolysis	• *VTE,* Cardio-respiratory Block • *VTE,* Perioperative Care Block
Anticoagulation	• Clinical Pharmacology and Therapeutics module, phase 1
Principles of blood transfusion	• *Transfusion tutorial & workbook*, CCB • UHL elearning transfusion package • *Transfusion lecture,* Perioperative Care Block
Patient safety in blood transfusion	• *Transfusion tutorial & workbook*, Cancer Care Block • UHL elearning transfusion package • *Transfusion lecture,* Perioperative Care Block
Transfusion reactions	• *Transfusion tutorial & workbook*, Cancer Care Block • UHL e-learning transfusion package
Safe use of blood components and products	• *Transfusion tutorial & workbook*, Cancer Care Block • UHL e-learning transfusion package • *Perioperative assessment- Haematology,* Perioperative Care Block • *Haematology support,* Cancer Care Block

Infection

Theme Aim

The aim of the Infection longitudinal theme is to broaden the students' understanding of the role and relevance of infection to their clinical practice regardless of speciality.

Infections are exciting – they are constantly evolving and present new challenges daily. They provide a rare example of where patients can be cured, not just treated. The opportunities for encountering infections are multiple. Infections occur in patients across virtually all clinical specialties and at all ages. In some patients, community onset-pneumonia for example, the infection is the main problem and the reason for seeking medical care. In other patients, infections complicate the treatment of other conditions. An example of this is post-operative infection of a surgical wound. The main challenges of infection are recognition of the infectious process, diagnosis of the cause and working out and giving the appropriate treatment. Often the patient has clear signs of infection and treatment may be started empirically, before the infecting organism is definitely established. Other times there may be a diagnostic challenge that requires dogged pursuit before the causative organism is identified.

Treatment options usually include an antibiotic, but the increasing number of antibiotic resistant bacteria may mean that therapeutic ingenuity is required to achieve a successful outcome. A number of common diseases have only recently been recognized as having an infectious cause. A good example of one of these is peptic ulceration. The discoverers of the infectious origin of this condition received the Nobel Prize in 2005 for establishing the role of *Helicobacter pylori* in peptic ulcer disease.

Ultimately, the best option would be to prevent infections. Health care associated infections are a significant risk for all patients attending hospitals. Such infections can kill or cause permanent disability and they are a major cost to hospitals, prolonging in-patient stay and incurring additional diagnostic and treatment costs. All doctors must know and practice good medical techniques that minimize the risk of health care associated infections. Part of this includes recognizing those patients who are most susceptible to infection. Another element is appreciating that what doctors do can lead to infections and making sure that such risks are removed whenever possible or otherwise reduced to a minimum. Infections can be prevented in the community generally by promoting a healthy lifestyle and specifically by vaccination.

In the healthcare environment infections may be minimized in some patients by the judicious use of antimicrobial prophylaxis. Infections are always a cause of concern for those individual patients who are suffering them, but the ability of some infections to cause outbreaks in communities brings about additional concerns and these will also be explored. In recent years there has been increasing concern that micro-organisms will be used as weapons of bioterrorism and you should be alert to this possibility and how such attacks may present. Throughout your medical career, in medical school and afterwards, you should always be aware of infections and your responsibilities for the prevention or treatment of them. Finally, students should be aware of the risks that some infections pose to their own health, understand the techniques that will protect them and when these measures should be used.

Philosophical Approach

The philosophical approach is that it is more important to leave the students with a lasting memory of the principles, concepts and philosophy of Infection rather than the facts and figures. Knowing where to look for information and the need to keep abreast of developments both over time and geographically will be valuable achievements. It is hoped that the students will complete the Phase II Course with the skills and attitudes to consider infection issues in their clinical work.

Learning Outcomes

By the end of the course, stud nest should be able to explain and demonstrate:

- alertness to the possibility of infection in patients,
- the appropriate use of both microbiological and non-microbiological diagnostic approaches (including haematological, biochemical, immunological and radiological investigations)
- the interpretation of diagnostic investigations.
- the appropriate use of antimicrobial agents, in accordance with local and national policies and guidelines
- the use of non-antimicrobial approaches to infection treatment, including surgery and supportive therapies
- correct approaches to infection prevention and control in all health care settings, including hand hygiene, gloves, gowns and masks, patient isolation, antibiotic prophylaxis, vaccination
- To describe the relevance and limitations of research evidence, national and local guidance and policy service evaluations and their applicability in practice.
- To be aware of emerging issues in infection, including emerging pathogens, changes in antimicrobial resistance, potential or actual outbreaks and local and national concerns .

Modes of Delivery

The modes of deliver are:

- face-to-face tutorials
- teaching ward rounds
- student presentations
- workbook exercises
- web-based exercises.

Group-based presentations, exercises and discussion are favoured as they allow students to explore, appraise, consolidate and assimilate the information.

Infection Topics

The following list of infection topics will be covered over individual Clinical Blocks to select from. The aim is to have individual Clinical Blocks cover different infection topics so that all the infection topics are covered by the end of the MB,ChB Phase II Course.

Each topic should include approaches to the clinical recognition of infection, the use of diagnostic tests, empirical approaches to treatment where appropriate, the use of treatment resources such as the antimicrobial policy and preventative measures including appropriate infection control precautions.

The questions in each infection topic are examples of the types of issues that a session could cover. They are phrased to prompt exploration and discussion. A session could cover one or several infection topics. An infection topic could be covered in different sessions in different Clinical Blocks. Infection at all ages should be covered, pointing out similarities and differences as appropriate.

Skin and soft tissue infections

- Impetigo, cellulitis, necrotising fasciitis, fungal skin, hair and nail infections
- Surgical site infections, antibiotic prophylaxis in surgery, vascular access associated infections,
- Skin manifestations of systemic infections

Respiratory infections

- Upper respiratory tract infections including otitis media, sinusitis, pharyngitis.
- Lower respiratory tract infections including community acquired pneumonia, infectious exacerbations of chronic pulmonary disease,
- Tuberculosis
- Healthcare associated respiratory infections including ventilator associated pneumonia

Cardiovascular infections

- Endocarditis

Gastrointestinal infections

- Dental infections, gastritis/peptic ulceration, infectious diarrhoea, hepatitis, biliary infections.

Genitourinary tract infections

- Urinary tract infections including cystitis, pyelonephritis and prostatitis
- Sexually transmitted diseases
- Pregnancy associated infections

Musculo-skeletal infections

- Osteomyelitis, septic arthritis, prosthetic joint infections

Central Nervous System infections

- Meningitis, encephalitis, Creutzfeldt-Jakob disease

Sepsis

- Community acquired sepsis/bacteraemia,
- Infections in intensive care
- Infections in patients with immunodeficiency, including HIV/AIDS, neutropenia during chemotherapy, transplantation, congenital immunodeficiency

Healthcare –associated infections

- MRSA, Clostridium difficile, norovirus

Travel-related infections

- Imported infections including typhoid, malaria

Public Health and Infections

- Community outbreaks of infection, including influenza, meningitis, vaccine preventable infections, bioterrorism
- Vaccination to prevent infections

Socio-economic factors in the risk of infectious disease

Imaging

Imaging is increasingly used as one of the major investigations that any patient will undergo at any time in their life. The appropriate use of imaging and an understanding of the information it provides is of key importance to graduating students.

Theme Aim

The aim of the imaging theme is to impart an understanding of the use, and potential abuse, of ionising radiation and an appreciation of other non-ionising imaging modalities along with their relevance and potential pitfalls.

Learning Outcomes

- To understand the legislation around the use of ionising radiation and its risks and benefits.
- To learn a systematic approach to basic key radiological investigations and to interpret them accordingly
- To gain an understanding of the basics of cross-sectional imaging and its relevance to management of both acute and chronic conditions.
- To gain an understanding of both “positive” and “negative” investigations.

Specific Imaging Topics

The list below identifies the main imaging topics that students will cover over the course of the junior and senior rotation blocks.

Chest X-ray (plain frontal view): Students must be able to demonstrate a systematic approach to the interpretation of the chest x-ray and an understanding of common pathologies

Abdominal X-ray: Students must be able to demonstrate a basic approach to the interpretation of the abdominal x-ray and an understanding of common pathologies

Students must be able to demonstrate a basic approach to the interpretation of:
Pelvic X-ray
Cervical spine x-ray

Basic cross-sectional imaging (CT scan and ultrasound): Students must be able to demonstrate a basic approach to these images and to link the findings with underlying pathology. These will include Thoracic and Abdominal CT in both illness and trauma.

There will be an introduction to other modalities including MRI, Breast imaging, nuclear medicine and PET scanning

Student Selected Module: There will be an option to pursue a special interest in imaging by undertaking the Imaging SSM, where topics include interventional imaging and neuro-radiology

Public Health

The Public Health longitudinal theme takes concepts introduced in the Health and Disease in Populations Module and applies them to clinical practice. It will demonstrate how epidemiology, statistics, demography, data and evidence affect clinical care. It will also show how poor clinical care results from failure to consider and understand those concepts.

Theme Aim

The aim of the Public Health longitudinal theme is to broaden the students' understanding of the role and relevance of population issues to their clinical practice, whether it be their understanding of population-based research or their potential to impact on public health.

Philosophical Approach

The philosophical approach is that it is more important to leave the students with a lasting memory of the principles, concepts and philosophy of public health rather than the facts and figures. By focusing on challenging students' preconceptions of public health rather than telling them what they already know, it is hoped that the students will complete the Phase II Course with the skills and attitudes to consider and challenge public health issues in their clinical work.

Teaching Objectives

- To demonstrate how to interpret numerical and graphical analyses.
- To demonstrate the relevance and limitations of research evidence, service evaluations and their applicability in practice.
- To demonstrate how public health data influences, assesses and assists service provision.
- To demonstrate the role of clinicians in disease prevention, control and screening.
- To engage students in current philosophical debates regarding public health.

Learning Outcomes

By the end of the course, students will be able to:

- Interpret numerical and graphical analyses.
- Describe the relevance and limitations of research evidence, service evaluations and their applicability in practice.
- Describe how public health data influences, assesses and assists service provision.
- Describe the role of clinicians in disease prevention, control and screening.
- Evaluate current philosophical debates in public health.

Modes of Delivery

Public Health longitudinal theme sessions will be delivered in most Clinical Blocks, about half of which will be delivered jointly with another clinician. Students are expected to participate in the sessions, with some requiring preparatory work beforehand.

The list of public health topics is designed to challenge and stretch students. Group-based presentations, exercises and discussion will be used as they allow students to explore, appraise, consolidate and assimilate the issues presented to them.

Public Health Topics

In the **Mental Health Clinical Block**, the validity of media reporting of doctors' performance will be considered. Students will be asked to reflect on their personal ability to critically appraise data about doctors' performance and the issues that affect their interpretation.

In the **Gastrointestinal and Metabolic Care Clinical Block**, the criteria for introducing screening programmes will be considered within an epidemiological context. Students will be asked to reflect on the issues that influence people's decisions to participate in a screening programme.

In the **Clinical Methods Clinical Block**, the need to consider the evidence-base for media reports of health and healthcare issues will be considered. Students will be asked to consider whether the evidence justifies the media report and how to discuss this within a GP consultation setting.

In the **Cardio-Respiratory Care Clinical Block**, the use of clinical performance data will be considered within the context of professionalism. Students will be asked to reflect on how they would wish their own clinical performance to be judged as adequate or inadequate.

In the **Reproductive Health Clinical Block**, statistical concepts of risk will be explored leading to consideration of doctors' ethical responsibilities when communicating risk to patients making decisions about their clinical management. Students will be asked to reflect on how they would handle such ethical dilemmas.

In the **Child Health Clinical Block**, the statistical basis of the WHO Child Growth Charts will be described, and the implications for their use and interpretation will be considered. Students will be asked to reflect on how they would decide between normal variation and abnormal deviation.

In the **Cancer Care Clinical Block**, the organisation and funding of health services will be illustrated using cancer care services. Students will be asked to reflect on the influences that affect the degree of prioritisation and funding of services.

In the **Acute Care Clinical Block**, statistical concepts of probability will be used to demonstrate how the ability of an investigation to detect disease depends on the population tested. Students will be asked to reflect on the implications for their personal clinical practice.

In the **Older Persons Clinical Block**, the demographic issues facing society will be discussed. Students will be asked to reflect on how such issues will affect their future personal and professional lives.

Professionalism

Patients need good doctors. Good doctors make the care of their patients their first concern: they are competent, keep their knowledge and skills up to date, establish and maintain good relationships with patients and colleagues, are honest and trustworthy, and act with integrity.

General Medical Council 2006

Introduction

The Phase II professionalism longitudinal theme gives you the opportunity to learn professional behaviour in a supervised clinical environment supported by lecture-based and small group teaching. By gaining experience working with practising clinicians and clinical teams, you will acquire attitudes and behaviours appropriate for a medical practitioner and for your future responsibilities to patients, colleagues and society in general. You should make yourself familiar with the principles of professional practice are set out in the 2006 version of Good Medical Practice and in the GMC and Medical Schools Council booklet: Medical students: professional behaviour and fitness to practise 2009 summarised as follows:

Good clinical care

Doctors must practice good standards of clinical care, practice within the limits of their competence, and make sure that patients are not put at unnecessary risk.

Maintaining good medical practice

Doctors must keep up to date with developments in their field and maintain their skills

Relationships with patients

Doctors must develop and maintain successful relationships with their patients

Working with colleagues

Doctors must work effectively with colleagues

Teaching and training

If doctors have teaching responsibilities, they must develop the skills, attitudes and practices of a competent teacher

Probity

Doctors must be honest

Health

Doctors must not allow their own health or condition to put patients and others at risk.

Learning outcomes

By the end of the course you should be able to

- explain and apply the principles of professional behaviour expected of medical students and doctors
- evaluate the impact of the structure and function of the modern NHS upon medical professionalism
- explain how professional autonomy and culture in medical practice affects patient care
- describe the role of regulatory bodies in influencing the performance and practice of clinicians

What is medical professionalism?

The core values of professionalism upon which the practice of medicine is built derive from the common human experience of disease, and caring for those in need. A definition of medical professionalism includes:

- Excellence
- Person-centred care
- Accountability
- Altruism

Underpinned by a sound foundation in ethical and legal understanding, communication skills and clinical competence ***Stern 2006***

Excellence means more than competence, but a personal commitment to exceed ordinary standards

Respect, compassion, empathy, honour and integrity comprise *person-centred care*

Accountability means fulfilling the requirements of the doctor-patient partnership, as well as the professional's responsibility to society, and includes self-regulation, and commitment to quality improvement. In today's NHS where care is delivered in the context of multi-disciplinary teams, collective responsibility and the use of guidelines, protocols, care pathways, combined with openness to inspection and evaluation (audit) is essential to good professional practice.

Altruism demands that patient need, not self-interest, guides medical practice.

Deficient medical professionalism, either individual or collective can have a serious impact on patient care and is well described in the Bristol Cardiac, the Royal Liverpool Children's, and Shipman enquiries. Common themes emerging from these reports are the recognition that a culture of medical tribalism and professional self-interest can adversely affect patient care by lack of engagement in departmental policy and protocols. NHS organisational culture can prevent learning from experience, and discourage transparency where there is concern about poor medical performance. In addition a rapidly changing NHS with targets, externally imposed controls and the growth of patient consumerism, together with rapid advances in medicine present new challenges to medical professionalism.

You will have a lifelong responsibility for the development and maintenance of your professional skills, attitudes and behaviour. While you will experience working with and learning from many exemplary and inspiring role models in medical practice, you may also encounter examples of unprofessional behaviour during medical training and in clinical practice. We hope to equip you with the knowledge and skills to allow you learn for these experiences and to make the right choices about your own professional behaviour both now and in your future medical careers.

Curriculum Content

Professionalism

Learning to ensure a set of values, behaviours and relationships that ensure public trust in doctors

Knowledge

- Theoretical understanding of what constitutes a profession including regulation
- Morality and spirituality
- Ethical practice
- Social responsibility and advocacy
- Humanities
- Law and accountability
- Confidentiality and consent
- Dealing with unprofessional behaviour

Skills

- Integrity
- Altruism
- Communication
- Compassion and empathy
- Respect of cultural and ethnic diversity
- Interactions with patients to demonstrate, confidentiality, consent, capacity
- Leadership
- Coping with stress and uncertainty
- Self awareness and insight
- Continuous improvement and commitment to lifelong learning

Values/attitudes

Appreciation of the values and attitudes required for positive professional practice
Recognise need for on-going personal development

Behaviours

Put into practice above learning when working with patients and other colleagues
Appropriate personal and interpersonal behaviours
Non-judgmental practice
Personal conduct and behaviour throughout medical school training including attendance

Learning opportunities

1. Phase II induction week
    a. Professional Practice in Phase II - lecture
    b. Understanding Probity – interactive lecture
    c. "You, me and significant others" – professionalism scenarios in small groups

2. Personal and Professional Development (PPD) Programme – Phase II
    a. Professionalism strand includes lectures on professionalism, medical regulation and fitness to practise
    b. Personal Development Planning Portfolio development supported by lecture programme and Phase II personal tutor

3. Clinical modules and workbooks –all have links to professionalism longitudinal theme
    a. *Junior rotation* -
        i. **Cardio-respiratory care** Information, evaluation and improvement exercise in small groups (professionalism and public health)
        ii. **Mental Health care** Short note exercise using scenarios with examples of challenging communication and learning points
    b. Senior rotation
        i. **Cancer care** Professional skills teaching (tutorial-based and 1:1) with opportunities for support and structured feedback
        ii. **Older Persons** Small group teaching simulated patient feedback and reflection

4. A minimum of two reflections in Phase II for inclusion in Portfolio. These must include:
        i. an observation of medical role models whose practice reflects professionalism
        ii. a personal critical incident which demonstrate good professional conduct during a patient or professional interaction.

5. Links with Inter-professional education IPE (Dr E Anderson), public health (Dr R Hsu) and ethics (Dr Rhona Knight) Phase II longitudinal themes

Resources

Medical Students: professional behaviour and fitness to practise. Medical Schools Council and General Medical Council. September 2007

http://www.gmc.uk.org/education/undergraduate/undergraduate_policy/professional_behaviour.asp

Good Medical Practice. General Medical Council. November 2006

http://www.gmc.uk.org

Good Doctors, safer patients

http://www.dh.gov.uk

The Bristol Royal Infirmary Inquiry (2001)

www.bristol-enquiry.org

The Shipman Enquiry

www.shipman-enquiry.org

Doctors in Society. Medical Professionalism in a Changing World. Report of a working party. Royal College of Physicians. London 2005

http://www.rcplondon.ac.uk/pubs/books/docinsoc/

The Doctors' Tale. Professionalism and Public Trust. Donald Irvine. Radcliffe Medical Press 2003

Assessment

For each clinical block:

Grading by consultant supervisors based on attendance, attitude and skills
Assessment of professional attitudes and behaviours

Junior rotation summer SSC project

Choice of longitudinal theme includes professionalism and is assessed

PDP portfolio graded satisfactory or unsatisfactory

Students are required to present their Portfolio at appraisal by a member of academic or clinical teaching staff during the Preparation for Professional Practice period.

Final Professional Examination

Written paper EMQs professionalism **summative**

OSCE Station: **summative**

Professionalism evaluation form

A process for raising concerns regarding the professional conduct of a medical student under the following categories:

a. Unmet professional responsibility
b. Lack of effort toward self improvement and adaptability
c. Diminished relationships with patients and families
d. Diminished relationships with members of the health care team

Information will be collated and reviewed within the Medical School using a traffic light system to code level of concern and determine an action plan

A single minor concern would not normally result in any action. However repeated minor concerns or a more serious concern would trigger a discussion between the Medical School and the student in a fair and transparent manner.

Further information regarding the professionalism reporting, monitoring and evaluation procedures can be found in The Code of Practice on Professionalism-Phase II.

Raising a concern about professional behaviour

In circumstances where you observe unprofessional behaviour in a student colleague or health professional, in the first instance you should discuss your concerns with the module leader or raise the issue through the 'Yellow Form' reporting system you have been told about. For more serious concerns you should refer the matter to the Phase II Coordinator Dr Heney or the Phase II Personal and Professional Development Lead Dr West at the Medical School

Interprofessional Learning for Interprofessional Working

During Phase I you completed a minimum of two inter-professional learning events designed to prepare you for your time working alongside clinical teams in Phase II. In summary these events were:

Strand One

Aim: *To explore what is meant by team working in health and social care with respect to your chosen profession and others in relation to promoting person-centred collaborative care.*

You completed an interactive, experiential and problem-based learning day at the university. The event helped you to explore why we need to understand and respect the roles and responsibilities of members of health and social care teams. The day was referred to as, '*Introduction to Team Working'*.

Strand Two

Aim: *To become familiar with the theoretical basis of team working and effective collaborative team practice and to consider your future role within teams.*

You completed a practice based day in an area of poverty and deprivation to explore collaborative practice to tackle health inequalities and the working of a primary health care team within the wider community. These two days were known as '*Health in the Community'*.

The themes introduced to you in the above learning events were;

- Roles and responsibilities of a wide range of statutory and voluntary sector practitioners within health and social care
- Structure and functioning of teams in health and social care
- Theoretical underpinnings relating to effective team working
- Barriers and possible solutions within healthcare policy, structures, finances and other factors which effect optimal team working
- The importance of patient and carer/family centred team working
- The complexity of communication within and between teams and why important messages can be lost, misunderstood and inappropriately responded to limiting patient care and outcome
- Benefits of team working for patients and staff
- Professional values, ethical principles and behaviours relating to effective team working
- Collaborative and partnership working in health and social care
- The value of interprofessionalism, as you work professionally.

As you completed the above you reflected on your personal professional journey towards developing an interprofessional competence. Your learning journey was recorded in your **IPE PORTFOLIO**. These reflections were reviewed. In Phase II you will have opportunities to demonstrate on-going development of your interprofessional competence. Remember your competence consists of your knowledge, skills and attitudes. You will do this through a range of set and opportunistic learning opportunities. In each block you will become a team member and have the opportunity to observe a range of doctors and other professions working together.

Strand Three – Phase II

Aims

To provide context(s) for applying your developing interprofessional competence to practice; *To further develop your knowledge and team working skills as applied to health and social care services, identifying solutions to effective team working*.

Intended Learning Outcomes:

- Appraise and construct opportunities to engage with team working in modern health and social care settings
- Compare how individual professional values complement and enhance patient care
- Assess the context(s) for applying interprofessional competence for effective practice
- Analyse and formulate solutions to improve team based care

Working in teams and effective collaboration is not easy; in fact a breakdown in team working is responsible for a range of clinical and mostly human error in health and social care delivery. You will have opportunities in many blocks to observe interprofessional ward rounds, attend team meetings, complete case studies where the roles and responsibilities of other professionals, ensure positive patient outcomes. In primary care you will learn in a practice team, experience team meetings, joint patient assessments, informal meetings between doctors and other disciplines particularly the practice nurse and you may be able to reflect debate and share opinions on patient needs. In theatre you will be immersed within a team structure. In all these circumstances you will observe teams trying to deal with real practice challenges such as effective use of each other's skills, the impact of financial constraints, sharing of joint-patient goals to achieve optimal patient care. All of these observations and learning moments count towards understanding the essential key ingredients of effective, efficient team working. You should come to see that in essence a great deal depends on communication in all its facets. In some blocks in Leicester these opportunities will be formalised and be integral within your block learning these include;

Mental Health: Opportunities for you to work with mental health nurses, social workers and others to explore the essential components of community and hospital team-based care. You will learn from patient experiences and explore the challenges of making team decisions concerning the well being of patients with complex needs.

Care of the Elderly: Where possible you will be paired with other student disciplines available on community hospitals wards to complete patient care analysis and to present your teams work to the practising team at ward rounds and at multi-disciplinary team meetings. You will also have opportunities to work in acute wards with pharmacy students analysing complex drug issues.

Child Health The care of children depends on professionals who have specialist training. For example in nursing this begins with midwives, to health visitors in the care of the normal child and for specialist medical care nurses who train for the child branch. While in hospital opportunities are made for you to work alongside a specialist nurse. In the community you should experience the range of teams who care for disabled children which include teachers.

Acute Care: A one-day event will enable you to reflect on patient safety in teams using a real patient journey across acute care settings in a training DVD. Where possible some groups will also complete interprofessional simulations on the clinical skills suit.

Special Senses: Available to some students is a Special Study event entitled, '*The Listening Project'*. This is a patient led event involving a range of patients with challenging communication needs e.g. dysphasia. You will explore with patients what it feels like to be on the receiving end of professional consultations. Patients will give you feedback.

Assessment

In each block make the most of *opportunistic learning* on interprofessional practice. Document all learning in your IPE PORTFOLIO and wherever possible share these reflections with block leads or other clinicians and ask them *to sign your work* to say they have read it and agree with your learning. Your reflections could be signed by another qualified professional e.g. Ward Sister or physiotherapist. These key learning moments will enable you to easily complete your FYI application which annually includes a question on '*teamworking'*. You will complete an **exit interview** with your Portfolio during your period of Preparation for Professional Practice. Portfolios must be complete before finals.