



Copyright © 2003

Federation of Royal Colleges of Physicians

Royal College of Physicians of Edinburgh  
9 Queen Street, Edinburgh EH2 1JQ

Royal College of Physicians and Surgeons of Glasgow  
233–242 St Vincent Street, Glasgow G2 5RJ

Royal College of Physicians of London  
11 St Andrews Place, London NW1 4LE

ISBN 1 86016 187 1

Editorial and design by the Publications Unit,  
Royal College of Physicians of London

Typeset by Dan-Set Graphics, Telford, Shropshire

Printed in Great Britain by Sarum ColourView Group,  
Salisbury, Wiltshire

Cover

*photograph:* Science Photo Library

*design:* Merriton Sharp

## Acknowledgements

This 4th Edition of the *Core Curriculum for SHOs Training in General Medicine* has been written at the Royal College of Physicians, London under the direction of the Federation Curriculum Committee whose members are listed below.

The 4th Edition is an updated version of the previous document which was compiled by Dr Elizabeth Carty, Education Fellow at the Royal College, London in 2001, to which she was seconded from her Specialist Registrar Training Programme to undertake the task.

We also acknowledge and thank the General Professional Training Department at the Royal College of Physicians, London for its advice, administrative support and secretarial work.

### Members of the Federation Curriculum Committee

Dr Ed Neville *Chair,*  
*Director, General Professional Training, RCP London*

Dr Margaret Roberts  
*Joint Chair, IMSPEC, RCP Glasgow*

Dr Philip Cachia  
*Representative RCP Edinburgh*

Dr Timothy Felton  
*Associate College Tutor, RCP London*

Dr Michael Jones  
*Representative SAC General Internal Medicine*

Dr Hazel Scott  
*Representative, RCP Glasgow*

Dr Mark Smith  
*College Tutor, RCP London*

Dr Michael Venning  
*College Tutor, RCP London*

Mrs Winnie Wade  
*Head of Education, RCP London*

Dr Simon Wallis  
*Representative, RCP London*

# Contents

Background and introduction	iii
Abbreviations	iv
How to use this curriculum	1
Suggested learning opportunities	3
<b>1 Generic skills</b>	<b>5</b>
1.1 Good clinical care	7
1.2 Communication skills	9
1.3 Maintaining good medical practice	10
1.4 Working with colleagues	11
1.5 Maintaining trust	12
1.6 Teaching and training	15
<b>2 Specialty-specific skills</b>	<b>16</b>
2.1 Emergency medicine	17
2.2 Cardiology	20
2.3 Clinical pharmacology and therapeutics	22
2.4 Dermatology	24
2.5 Diabetes and endocrinology	26
2.6 Gastroenterology	28
2.7 Genitourinary medicine	31
2.8 Geriatric medicine	32
2.9 Haematology	34
2.10 Infectious diseases	35
2.11 Medical oncology	37
2.12 Neurology	38
2.13 Palliative medicine	41
2.14 Psychiatry	42
2.15 Rehabilitation medicine	43
2.16 Renal medicine	44
2.17 Respiratory medicine	47
2.18 Rheumatology	49
<b>3 Selection and interpretation of investigations</b>	<b>51</b>
A. Investigations commonly requested for general medical patients	52
B. Investigations requiring senior input into selection	53
<b>4 Practical procedures</b>	<b>54</b>
A. General knowledge and skills	54
B. Specific knowledge and skills for procedures	56
<b>5 Additional topics for SHOs in the specialties</b>	<b>57</b>
5.1 Cardiology	57
5.2 Clinical pharmacology	58
5.3 Dermatology	58
5.4 Diabetes and endocrinology	59
5.5 Gastroenterology	59
5.6 Genitourinary medicine	59
5.7 Geriatric medicine	60
5.8 Haematology	60
5.9 Infection	60
5.10 Medical oncology	60
5.11 Neurology	61
5.12 Palliative medicine	61
5.13 Psychiatry	62
5.14 Renal medicine	62
5.15 Respiratory medicine	62
5.16 Rheumatology	63
<b>Contacts</b>	<b>64</b>

# Background and introduction

The SHO years are an important and critical part of medical training. Clinical responsibility increases and basic knowledge, skills and attitudes are developed beyond those of undergraduates and pre-registration house officers. In addition, generic skills and attitudes are developed which underpin good medical practice, as defined by the General Medical Council, and are relevant to any future medical career. It is also a time when career choices are often made. SHO training may be directly related to a specialty and form the basis for entry into higher medical training. Postgraduate examinations are also undertaken during the SHO years. SHOs develop learning methods, which are necessary to promote life-long learning and contribute to continuing professional development.

Against this background it is vital that training posts are robust with opportunities for experiential clinical training supported by a strong formal educational component. The requirements for training SHOs, and recognition of training posts, have been devolved by the Specialist Training Authority (STA) to the Royal Medical Colleges. It has been agreed that regular assessments will be undertaken, and a Record of In-Training Assessment (RITA) will be developed and used throughout the United Kingdom. This assessment process will be overseen by the postgraduate deans. An assessment of competence will be undertaken at the end of each SHO post, or period of specialty attachment in a rotation. It is the task of the Colleges to define the content of the specialty assessment and the Royal Colleges of Physicians have undertaken this for general medicine and the medical specialties.

The *Core Curriculum* is designed to indicate to SHOs and trainers the knowledge, skills and attitudes that should be developed and acquired during the period of general professional training (GPT), which follows the pre-registration year, and precedes specialist training. The *Core Curriculum* is not all inclusive. The curriculum defines minimum outcomes from SHO training and is not intended to limit the acquisition of knowledge and skills. It will contribute to the preparation for the MRCP(UK), but the examination tests a wider body of knowledge.

The *Core Curriculum* should allow trainees and trainers to set educational objectives for general medical or medical specialty posts and will also provide a framework for the regular appraisal and assessment of SHOs. It will indicate to trusts, units and educational supervisors the clinical experience which the post might be expected to provide. In addition the educational programme of a unit might be expected to encompass, at a minimum, the themes outlined in the curriculum. The Royal Medical Colleges are involved in the inspection of SHO posts and the granting of educational approval on behalf of the STA. The standards expected of posts have already been widely circulated to trusts, but the curriculum will allow a more explicit standard which can be more readily examined and tested.

**N Finlayson**  
President  
Royal College of Physicians  
of Edinburgh

**A R Lorimer**  
President  
Royal College of Physicians  
and Surgeons of Glasgow

**C Black**  
President  
Royal College of Physicians  
of London

July 2003

# Abbreviations

## Abbreviations used in the Core Curriculum for SHOs

APTT	Activated partial thromboplastin time	IHD	Ischaemic heart disease
ARDS	Adult respiratory distress syndrome	INR	International normalized ratio
BiPAP	Bilevel positive airway pressure	IPPV	Intermittent positive-pressure ventilation
BMA	British Medical Association	ITU	Intensive therapy unit
BNF	British National Formulary	IV	Intravenous
BTS	British Thoracic Society	JCHMT	Joint Committee on Higher Medical Training
CCU	Coronary care unit	LRTI	Lower respiratory tract infection
COPD	Chronic obstructive pulmonary disease	MDMA	Methylenedioxyamphetamine (Ecstasy)
CPAP	Continuous positive airway pressure	MDRTB	Multi drug resistant tuberculosis
CRP	C-reactive protein	MRCP(UK)	Member of the Royal Colleges of Physicians (United Kingdom)
CSF	Cerebrospinal fluid	MRI	Magnetic resonance imaging
CT	Computed tomography	MRSA	Multi resistant <i>Staphylococcus aureus</i>
CVP	Central venous pressure	NHSE	National Health Service Executive
DC	Direct current	NST	Nutrition support team
DEXA	Dual energy X-ray absorptiometry	OT	Occupational therapy
DIC	Disseminated intravascular coagulopathy	PCP	Pneumocystis carinii pneumonia
DKA	Diabetic ketoacidosis	PE	Pulmonary embolism
DNAR	Do not attempt to resuscitate	PRHO	Pre-registration house officer
DTPA	Diethylene triamine pentaacetic acid	PUO	Pyrexia of unknown origin
DVLA	Driver and Vehicle Licensing Agency	RCP	Royal College of Physicians
DVT	Deep vein thrombosis	RITA	Record of in-training assessment
EBM	Evidence based medicine	RRT	Renal replacement therapy
ECG	Electrocardiogram	SHO	Senior house officer
ENT	Ear, nose and throat	STA	Specialist Training Authority
ERCP	Endoscopic retrograde cholangiopancreatography	STD	Sexually transmitted disease
ESR	Erythrocyte sedimentation rate	SUDEP	Sudden unexpected death in epilepsy
GI	Gastrointestinal	SVC	Superior vena cava
GMC	General Medical Council	TB	Tuberculosis
GPT	General Professional Training	UTI	Urinary tract infection
HIV	Human immunodeficiency virus	UV	Ultra violet
HONK	Hyperosmolar non-ketotic hyperglycaemia	VQ scan	Ventilation perfusion scan
		WHO	World Health Organisation

# How to use this curriculum

The curriculum defines the knowledge, skills and attitude that SHOs should acquire during the course of their General Professional Training. It should guide SHOs and their Trainers in Medicine and Medical specialties, and should be used to prepare personal learning plans as part of SHO appraisal. It is not intended to replace the MRCP(UK) curriculum, but not surprisingly there is some overlap of topics.

## 1. Generic skills (Section 1)

These are fundamental to good medical care, and although the principles should be acquired by the end of the first year of training, they will form part of ongoing development of the SHO, and reviewing the content of this part of the curriculum throughout SHO training is important.

## 2. Specialty skills (Sections 2 and 3)

The curriculum is divided into specialty topics as well as core topics relevant to acute medical take and outpatient clinics. Attachment to all specialties will not be feasible during a two-year programme, but patients with differing clinical problems may present in a variety of settings, eg the knowledge, skills and attitudes, relevant to the management of acute renal failure, may be acquired in settings other than a renal unit. Even where clinical experience is lacking, SHOs will, however, be expected to have acquired the appropriate background knowledge. The curriculum should also make it clear to SHOs in stand-alone posts what minimum experience they should acquire. The knowledge, skills and attitudes relevant to specialty skills should be acquired by the end of General Professional Training, ie usually over two years.

## 3. Selection and interpretation of investigations

This section gives objectives for SHOs learning how to use investigations. Again the knowledge and skills should be acquired by all SHOs by the end of SHO training.

## 4. Practical procedures

In this section the practical procedures that SHOs should have learnt as a PRHO, those they should be competent at by the end of SHO training and those that may require more training as a specialist registrar are outlined.

## 5. Additional topics for SHOs in the specialties

These are specialty related subjects in which SHOs could expect some training but which could be studied in greater depth as a specialist registrar. **These are not considered core subjects.**

Many specialties will have SHOs in training who intend to take up a career in general practice, or are undecided on a career. Doctors who require guidance on training for general practice should contact the local GP Course Organiser, or the GP Tutor, or could contact the Director of Postgraduate General Practice Education, who will be found within the Postgraduate Dean's department. The Joint Committee on Postgraduate Training for General Practice issues Certificates of Completion of Vocational Training, and has several useful documents including *A Guide to Certification*.<sup>1</sup>

The Royal College of General Practitioners has produced a series of publications, association with a number of specialist colleges, which describe the content of training in the medical discipline relevant to general practice. These booklets are available from the RGCP. Further information can be found on the RGCP website [www.rcgp.org.uk](http://www.rcgp.org.uk).

### Reference

1. Joint Committee on Postgraduate Training for General Practice. *A guide to certification*. JCPTGP Publications. [www.jcptgp.org.uk](http://www.jcptgp.org.uk)

# Suggested learning opportunities

## Adults learn by

- ▶ reflecting and building upon their own experiences
- ▶ identifying what they need to learn
- ▶ being involved in planning their education and training
- ▶ evaluating the effectiveness of their learning experiences.

For SHOs to maximise their experiential learning opportunities it is important that they work in a **'good learning environment'**. This includes encouragement for **self-directed learning** as well as **recognising the learning potential in aspects of day to day work** (eg what three things have I learnt from this ward round?) and generally adopting a **positive attitude to training**. Learning from peers should also be encouraged and SHO training should be 'fun'.

Active involvement in **group discussion** is an important way for doctors to share their understanding and experiences. A good educational programme should not therefore consist solely of lectures but also include small group sessions with and without senior involvement. A **supportive open atmosphere** should be cultivated and questions welcomed so that **no one is allowed to feel foolish**.

The list of learning opportunities below offers guidance only, there are other opportunities for learning that are not listed here. Further useful information can be obtained from the COPMed document 'Liberated Learning'.<sup>1</sup>

## A. Experiential learning opportunities

1. Ward-based learning including post-take ward rounds. Ward rounds, including those post-take, should be led by a consultant physician and include feed-back on clinical and decision making skills.
2. Supervised consultations in outpatient clinics (day hospital/community visits etc). SHOs should have the opportunity to assess both new and follow-up patients and discuss each case with the supervisor so as to allow feedback on diagnostic skills and gain the ability to plan investigations.

## B. Small group learning opportunities

1. Case presentations and small group discussion, particularly of difficult cases, using the electronic classroom where available. This should include critical incident analysis.
2. Small group bedside teaching such as training for the MRCP(UK) clinical exam, particularly covering problem areas identified by SHOs.
3. Small group sessions of data interpretation such as preparation for the MRCP(UK) written paper, particularly covering problem areas identified by SHOs.
4. Local resuscitation skills review by a resuscitation training officer including simulation with manikins.

5. Participation in audit meetings, journal clubs and research presentations etc.
6. Video consultation with subsequent small group discussion.

### C. One-to-one teaching

1. Review/case presentations with educational supervisor including selected notes, letters and summaries.
2. Critical incident analysis.
3. Discussion between trainee and trainer of knowledge of local protocols.
4. Video consultation with subsequent individual discussion with trainer.

### D. External courses etc

1. Lectures or courses, eg Advanced Life Support course.
2. Formal training in communication skills.

### E. Personal study

1. Personal study including computer-based learning.
2. Practise examination questions and subsequent reading.
3. Reading journals.

### F. Others

1. Participation in audit: SHOs should be directly involved and expect, after understanding the rationale and methodology, to undertake one in-depth audit during a two-year rotation.
2. Guideline generation/review.
3. Committee experience.

### Reference

1. Conference of Postgraduate Medical Deans of the UK. *Liberated learning*. COPMed Publications. [www.copmed.org.uk](http://www.copmed.org.uk)

# 1. Generic skills

## Introduction

During general professional training all senior house officers (SHOs) require skills that are irrespective of the specific training post and are 'generic' to all doctors. Many of these issues and others are outlined in the GMC document *Good Medical Practice*.<sup>1</sup> During the SHO years there is an exciting opportunity to build upon skills already established as an undergraduate and pre-registration house officer. To give SHOs and trainers guidance to recognise opportunities for learning, to reflect on clinical practice and to become self-critical in these vital areas, learning objectives, knowledge, skills and attitudes are outlined for the following 'generic skills':

### ▶ Good clinical care

History-taking, examination and note-keeping skills  
Time management, risk management and decision making  
Basic life support

### ▶ Maintaining good medical practice

Learning  
Evidence, audit and guidelines

### ▶ Communication skills

Within a consultation  
Breaking bad news  
With colleagues  
Complaints

### ▶ Working with colleagues (team working)

### ▶ Maintaining trust

Professional behaviour  
Ethics and legal issues  
Patient partnership and health promotion

### ▶ Teaching and training

These objectives should not restrict learning, they do however, outline the minimum requirements for satisfactory completion of general professional training.

## Aims

To provide SHOs with the knowledge, skills and attitudes to provide high standard medical care to patients with general medical problems. A positive attitude to lifelong learning will be encouraged. At the end of the process SHOs will be equipped with knowledge and skills to prepare them for higher specialist or general practice training.

## Reference

1. General Medical Council. *Good medical practice*. London. GMC, 2003.  
[www.gmc-uk.org](http://www.gmc-uk.org)

## 1.1 Good clinical care

### A. History-taking, examination & note-keeping skills

**OBJECTIVE** – To be able to take a history and examine patients, as well as keep an accurate and relevant medical record

Subject	Knowledge	Skills	Attitudes
i. History-taking	Symptom patterns Alarm symptoms	Elicit a relevant history Identify and synthesise problems Take a history in difficult circumstances, eg: <ul style="list-style-type: none"> <li>▶ when English is not the patient's first language</li> <li>▶ confused patients</li> <li>▶ deaf patients</li> <li>▶ patients with psychiatric/psychological problems</li> <li>▶ patients with special educational needs</li> <li>▶ questions regarding sexual behaviour and orientation</li> </ul>	Consider the impact of: <ul style="list-style-type: none"> <li>▶ physical problems on psychological and social well-being</li> <li>▶ physical illness presenting with psychiatric symptoms</li> <li>▶ psychiatric illness presenting with physical symptoms</li> <li>▶ psychological/social distress on physical symptoms (somatisation)</li> </ul>
ii. Examination	Patterns of clinical signs	Explain examination procedure and minimise patient discomfort Elicit signs, interpret standard nursing observations and use instruments appropriately	Consider: <ul style="list-style-type: none"> <li>▶ patient dignity</li> <li>▶ the need for a chaperone</li> </ul>
iii. Note-keeping, letters etc	Structure of: <ul style="list-style-type: none"> <li>▶ medical notes</li> <li>▶ discharge letters</li> <li>▶ discharge summaries</li> <li>▶ outpatient letters</li> <li>▶ prescriptions</li> </ul> Role of medical records in generation of central data returns	Record accurately and legibly in the medical notes including: <ul style="list-style-type: none"> <li>▶ history</li> <li>▶ examination</li> <li>▶ summary</li> <li>▶ differential diagnosis</li> <li>▶ initial investigation and management plan</li> <li>▶ investigation results and action taken</li> <li>▶ conversations, eg between team members and patient/relatives</li> </ul> Date and sign each entry (with time of first contact) Mouse and keyboard skills and ability to use email and the internet	Strive to ensure that notes are accessible to all members of the team and patients/relatives under certain circumstances Consider the importance of: <ul style="list-style-type: none"> <li>▶ timely dictation</li> <li>▶ cost-effective use of medical secretary time</li> <li>▶ prompt and accurate communication with primary care</li> </ul> Understand the importance of clear definition of diagnosis and procedures for coding for central returns Keen to use/learn about new technology

*continued*

## B. Time management, risk management and decision making

**OBJECTIVE** – To manage time and problems effectively

Subject	Knowledge	Skills	Attitudes
i. Time management	Which patients/tasks take priority	Start with the most important tasks Work more efficiently as clinical skills develop Recognise when he/she is falling behind and re-prioritise or call for help	Have realistic expectations of tasks to be completed by self and others Willingness to consult and work as part of a team
ii. Risk management	Complications and side effects of treatments	Discuss risks with patients/ <i>parents</i>	Be willing to accept patient's choices
iii. Decision making	Clinical priorities for investigation and management	Analyse and manage clinical problems Involve patients and other professionals	Be flexible and willing to change Be willing to consider who is the most appropriate decision maker

## 1.2 Communication skills

**OBJECTIVE** – To communicate effectively with patients, relatives and colleagues in the circumstances outlined below

Circumstance	Knowledge	Skills	Attitudes
<b>i. Within a consultation</b>	<p>How to structure the interview to identify the patient's/parents'</p> <ul style="list-style-type: none"> <li>▶ concerns/problem list</li> <li>▶ expectations</li> <li>▶ understanding</li> <li>▶ acceptance</li> </ul>	<p>Listen</p> <p>Use appropriate questioning techniques including open and closed questions</p> <p>Avoid jargon and use familiar language</p> <p>Use interpreters appropriately</p> <p>Give clear information and feedback to patients/parents and share information with relatives when appropriate</p> <p>Reassure 'worried well' patients</p> <p>Telephone skills</p>	<p>Possess empathy and ability to form therapeutic relationships with patients/parents</p> <p>Consider the importance of:</p> <ul style="list-style-type: none"> <li>▶ involving patients/parents in decisions</li> <li>▶ offering choices</li> <li>▶ respecting patient's/parents' views</li> </ul>
<b>ii. Breaking bad news</b>	<p>How to structure the interview and where it should take place</p> <p>Normal bereavement process and behaviour</p> <p>Awareness of organ donation procedure and role of local transplant co-ordinators</p>	<p>Avoid jargon and use familiar language</p> <p>Encourage questions</p> <p>Avoid conveying unrealistic optimism and undue pessimism</p>	<p>Act with empathy, honesty and sensitivity</p>
<b>iii. With colleagues</b>	<p>How and when to communicate effectively with other members of the care team and with medical colleagues, especially at handovers</p>	<p>Identify patient's/parents' anxieties and issues of concern</p>	<p>Be aware of :</p> <ul style="list-style-type: none"> <li>▶ who needs to know what information</li> <li>▶ others' perspectives in contributing to management decisions</li> </ul>
<b>iv. Complaints</b>	<p>Awareness of the local complaints procedure</p>	<p>Deal with dissatisfied patients/relatives</p>	<p>Act with honesty and sensitivity</p>

## 1.3 Maintaining good medical practice

### A. Learning

**OBJECTIVE** – To understand the necessity of life-long learning in medical practice

Subject	Knowledge	Skills	Attitudes
i. Life-long learning	Define continuing professional development Understand the role of appraisal Understand the role of assessment	Recognise and use learning opportunities Maximise the potential of study leave Compose a personal learning plan	Be: <ul style="list-style-type: none"> <li>▶ self-motivated to learn</li> <li>▶ eager to learn</li> <li>▶ willing to learn from colleagues</li> <li>▶ willing to critically evaluate own work and make appropriate changes</li> <li>▶ willing to consider criticism</li> </ul>

### B. Evidence, audit and guidelines

**OBJECTIVE** – To be able to use evidence, guidelines and audit to benefit patient care

Subject	Knowledge	Skills	Attitudes
i. Evidence based medicine (EBM)	Principles of EBM Types of clinical trial	Critically appraise evidence Competently use databases, the library and the Internet Discuss relevance of evidence with individual patients	Be keen to use evidence to support patient care
ii. Audit	The audit cycle Data sources for audit Understand data confidentiality	Be involved in on-going audit and undertake at least one	Consider the relevance of audit to: <ul style="list-style-type: none"> <li>▶ benefit patient care</li> <li>▶ clinical governance</li> </ul>
iii. Guidelines	Advantages and disadvantages of guidelines Methods of determining best practice	Use local guidelines Be involved in guideline generation and evaluation	Consider individual patient needs when using guidelines

## 1.4 Working with colleagues (team working)

**OBJECTIVE** – To understand the role of colleagues and to work with them effectively

Circumstance	Knowledge	Skills	Attitudes
<b>Interactions between:</b> ▶ members of a team ▶ hospital & GP ▶ hospital & other agencies, eg social services	Roles and responsibilities of team members  How teams work effectively	Delegate, show leadership and supervise safely  Handover safely  Seek advice if unsure  Communicate with team members (see 1.2iii)	Be conscientious  Respect colleagues and recognise good advice  Recognise own limitations

## 1.5 Maintaining trust

### A. Professional behaviour

**OBJECTIVE** – To develop the knowledge, skills and attitudes necessary to act in a professional manner at all times

Subject	Knowledge	Skills	Attitudes
<b>i. Doctor-patient relationship</b>	Aspects of a professional relationship	Avoid unnecessary personal comments Ensure all discussion/examination is relevant Deal with inappropriate behaviour in patient, eg aggression, violence, sexual harassment	Adopt a nondiscriminatory attitude to all patients and recognise their needs as individuals Broad willingness to place need of patients above own convenience
<b>ii. Continuity of care</b>	Relevance of continuity of care	Ensure satisfactory completion of reasonable tasks at the end of the shift/day with appropriate handover Produce accurate handover documentation Make adequate arrangements to cover leave	Recognise the importance of: <ul style="list-style-type: none"> <li>▶ punctuality</li> <li>▶ attention to detail</li> </ul>
<b>iii. Recognition of own limitations</b>	Extent of own limitations and when to ask for advice	Summarise cases and ask relevant questions when seeking advice from others	Be willing to consult and have respect for colleagues
<b>iv. Stress</b>	The effects of stress Knowledge of support facilities	Develop coping mechanisms for stress and ability to seek help if appropriate	Recognise the manifestations of stress on self & others
<b>v. Interaction with other professionals</b>	Understanding the role of other professionals in patient care	Seek to involve other professionals in the management of patients and their illnesses	Be tolerant, flexible and respectful of other professional viewpoints
<b>vi. Relevance of outside bodies</b>	The relevance to professional life of: <ul style="list-style-type: none"> <li>▶ The Royal Colleges</li> <li>▶ GMC</li> <li>▶ Postgraduate deans</li> <li>▶ Defence unions</li> <li>▶ BMA</li> </ul>	Recognise situations when appropriate to involve these bodies/individuals	Be open to constructive criticism Accept professional regulation

*continued*

## B. Ethics and legal issues

**OBJECTIVE** – To acquire the knowledge and skills to cope with ethical and legal issues which occur during the management of patients with general medical problems

Subject	Knowledge	Skills	Attitudes
i. Informed consent	<p>Process for gaining informed consent</p> <p>Associated legal framework</p> <p>Legal framework for consent, including incapacitated patients</p>	<p>Give appropriate information in a manner patients/<i>parents</i> understand and be able to obtain consent from patients/<i>parents</i></p> <p>Deal with patients/<i>parents</i> who cannot give informed consent</p> <p>Use leaflets and written material appropriately</p>	<p>Consider the patient's needs as an individual</p>
ii. Confidentiality	<p>Strategies to ensure confidentiality</p>	<p>Use and share all information appropriately</p> <p>Avoid discussing one patient in front of another</p> <p>Ensure privacy when discussing sensitive issues</p>	<p>Respect the right to confidentiality</p>
<p>iii. Legal issues, particularly those relating to:</p> <ul style="list-style-type: none"> <li>▶ death certification</li> <li>▶ role of the coroner/procurator fiscal</li> <li>▶ mental illness</li> <li>▶ advance directives and living wills</li> <li>▶ withdrawing and withholding treatment, including DNAR decisions (see 2.1.E)</li> <li>▶ DVLA</li> </ul>	<p>Legal responsibilities of completing death certificates</p> <p>Types of deaths to be referred to the coroner/procurator fiscal</p> <p>Situations where section under the Mental Health Act would be appropriate</p> <p>Conditions that patients should report to the DVLA</p>	<p>Complete death certificates</p> <p>Liaise with the coroner/procurator fiscal</p> <p>Check whether the patient has an advance directive or living will</p> <p><i>Share information in professional manner with inter-agency team members</i></p>	<p>Show attention to detail and recognise pressures of time</p> <p>Respect living wills and advance directives</p> <p>Adopt a non-judgemental, compassionate approach</p>

*continued*

### C. Patient partnership and health promotion

**OBJECTIVE** – To be able to educate patients effectively and sensitively

Subject	Knowledge	Skills	Attitudes
<b>i. Educating patients/parents about:</b> ▶ disease ▶ investigations ▶ therapy	Natural history of common diseases  Investigation procedures including possible alternatives/choices  Strategies to improve adherence to therapies	Give information to patients/parents clearly  Encourage questions  Negotiate individual treatment plans, encouraging ownership and responsibility for action to be taken by the patient on deterioration or improvement	Consider involving patients/parents in developing mutually acceptable investigation plans  Encourage patients/parents to access: ▶ further information ▶ patient/parents support groups
<b>ii. Environmental &amp; lifestyle risk factors</b>	Risk factors for disease including: ▶ diet ▶ exercise ▶ social deprivation ▶ occupation ▶ substance abuse ▶ accidents and child abuse ▶ sexual behaviour	Advise on lifestyle changes  Involve other health care workers, social workers and teachers as appropriate	Have a non-judgemental approach  Consider the social and environmental circumstances of patients/parents
<b>iii. Smoking</b>	Effects of smoking on health  Implications of addiction  Smoking cessation strategies	Advise on smoking cessation and supportive measures  Identify 'ready to quit' smokers	Consider the importance of support during smoking cessation
<b>iv. Alcohol</b>	Effects of alcohol on health and psychosocial well-being  Local support groups/agencies	Advise on appropriate drinking levels or drinking cessation	Suggest patient support groups as appropriate  Have a non-judgemental approach
<b>v. Epidemiology &amp; screening</b>	Data collection methods and their limitations  Notifiable diseases  Principles of prevention, health surveillance & screening	Assess an individual patient's risk factors  Encourage participation in appropriate disease prevention or screening programmes	Consider the: ▶ positive & negative aspects of prevention ▶ importance of patient confidentiality  Respect patient autonomy
<b>vi. Infection control</b>	Prevention of spread of infection: hand washing (eg for MRSA) and need for isolation facility for multi-resistant organisms (eg MDRTB)  Be familiar with common infection control procedures including universal precautions against blood-borne viruses		Attend infection control education programme  Recognise when to involve infection control team

## 1.6 Teaching and training

**OBJECTIVE** – To acquire the knowledge, skills and attitudes to become life-long learners and teachers

Subject	Knowledge	Skills	Attitudes
<b>i. Teaching</b>	How adults learn Learner-centred approach	Use all opportunities for teaching Communicate and share information one-to-one and in small groups Always seek feedback	Demonstrate willingness, enthusiasm and patience to teach
<b>ii. Presentations</b>	Features of an effective presentation	Give presentations to small groups, eg journal club Present material in different presentation media	Be confident and not intimidated when presenting Embrace new technology

## 2. Specialty-specific skills

### Introduction

This specialty-specific skills section of the curriculum outlines clinical scenarios in which all medical SHOs should receive training.

The objectives cover problems which are cross-specialty as well as common problems encountered in general medical emergency patients and outpatients.

It is expected that on **completion** of medical SHO jobs, all SHOs should be competent and feel confident in the areas outlined appropriate to the specialties covered.

This is a minimum standard and is not meant to be restrictive. Moreover SHOs should be aware that the MRCP(UK) examination is not limited to these areas.

### Aims

The aim of the specialty-specific skills section of the curriculum is to produce physicians who are competent to assess, initiate investigations and manage patients presenting with general medical problems, both as emergency cases and as outpatients.

## 2.1 Emergency medicine

### A. Management of acutely ill patients

**OBJECTIVE** – To provide the SHO with the knowledge and skills to be able to assess and initiate management of patients presenting as emergencies with the problems outlined below. For each scenario SHOs should in particular gain knowledge and skills to recognise the critically ill and:

- ▶ immediately assess and resuscitate if necessary
- ▶ formulate a differential diagnosis and refer as appropriate
- ▶ select relevant investigations and accurately interpret reports
- ▶ communicate the diagnosis and prognosis – see Generic Skills
- ▶ reassess as appropriate

Problem	Knowledge	Skills
i. The acutely ill patient	<ul style="list-style-type: none"> <li>▶ common symptoms and signs of acute illness including breathlessness, chestpain, headache, nausea and vomiting</li> <li>▶ causes of acute abdominal pain</li> <li>▶ acutely abnormal physiology</li> <li>▶ safe oxygen therapy for acutely ill patients</li> <li>▶ safe use of analgesics</li> <li>▶ common derangements of arterial blood gases</li> <li>▶ causes of impaired level of consciousness</li> <li>▶ Glasgow coma scale and other critical care scores</li> <li>▶ causes of acute confusional states</li> <li>▶ understand factors surrounding deliberate self harm</li> </ul>	<p>Identify, assess, and initiate treatment in critically ill patients</p> <ul style="list-style-type: none"> <li>▶ promptly assess the airway, breathing and circulation in the collapsed patient</li> <li>▶ document acutely abnormal physiology</li> <li>▶ establish venous access with attention to infection control measures</li> <li>▶ deliver a fluid challenge safely to acutely ill patients</li> <li>▶ reassess acutely ill patients following initiation of treatment within an appropriate period</li> <li>▶ maintain a safe environment for an acutely ill patient</li> <li>▶ undertake a focused history and examination to establish a differential diagnosis</li> <li>▶ request senior or more experienced help when appropriate</li> <li>▶ succinctly present the relevant clinical details of an acutely ill patient to a senior doctor</li> <li>▶ assess level of consciousness</li> <li>▶ manage patients with impaired consciousness including fits</li> <li>▶ evaluate psychological factors including risks to self and others</li> <li>▶ evaluate risk of suicide after deliberate self harm</li> </ul>

*continued*

## B. Management of the 'take'

**OBJECTIVE** – To be able to safely manage the general medical 'take'

Subject	Knowledge	Skills
i. 'Take' management	<p>Medical indications for urgent investigation and therapy</p> <p>Skills and capabilities of members of the 'on-take' team</p> <p>When to seek help</p>	<p>Able to prioritise</p> <p>Interact effectively with other health care professionals</p> <p>Keep patients and relatives informed</p> <p>Receive referrals appropriately</p> <p>Cope with stress</p> <p>Delegate effectively and safely</p> <p>Keep an accurate patient list</p> <p>Handover safely with appropriate documentation</p>

## C. General medical care

**OBJECTIVE** – To be able to provide general care for medical inpatients

Subject	Knowledge	Skills
i. Non-specific symptoms eg lethargy, anorexia	<p>Causes</p> <ul style="list-style-type: none"> <li>▶ organic</li> <li>▶ psychiatric</li> </ul>	<p>Initiate investigations to explore possible causes</p> <p>Recognise depression</p>
ii. Nutrition	<p>Impact of:</p> <ul style="list-style-type: none"> <li>▶ disease on nutritional status</li> <li>▶ malnutrition on clinical outcomes</li> </ul> <p>Principles and routes of nutrition support</p> <p>Role of nutrition support team (NST)</p>	<p>Assess nutritional status</p> <p>Recognise cultural and religious issues</p> <p>Identify those needing nutrition support advice</p> <p>Recognise:</p> <ul style="list-style-type: none"> <li>▶ the skills of others, eg special nurses, pharmacists, dieticians</li> <li>▶ when to consult NST</li> </ul>
iii. Pressure sores	<p>Causes</p> <p>How to prevent</p> <p>Risk assessment scores, eg Waterlow</p>	<p>Assess and initiate first line treatment</p> <p>Recognise need for referral, eg tissue viability team, plastic surgery</p>
iv. Pain	<p>Causes</p> <p>Disease or treatment related</p> <p>Exacerbating factors, eg psychological state</p> <p>Pain pathophysiology, eg nociceptive, neuropathic</p>	<p>Able to take a pain history</p> <p>Identify and alleviate cause if possible</p> <p>Commence appropriate analgesia</p> <p>(See Palliative Care 2.13)</p>

*continued*

## D. Discharge planning

**OBJECTIVE** – To be able to plan difficult discharges for patients, particularly the elderly and those terminally ill

Subject	Knowledge	Skills
i. Discharge planning	<p>Impact of physical problems on activities of daily living</p> <p>Roles and skills of members of the multidisciplinary team including nurses, OTs, physiotherapists, discharge co-ordinators and social workers</p> <p>Impact of unnecessary hospitalisation</p> <p>Available support in primary care</p>	<p>Recognise when inpatient care is not required</p> <p>Partake in discharge planning meetings</p> <p>Liaise and communicate with patient, family and primary care</p> <p>Be aware of family dynamics and socio-economic factors influencing success of discharge</p> <p>Write reports for appropriate bodies</p> <p>Complete immediate discharge document in timely fashion</p>

## E. Resuscitation

**OBJECTIVE** – To be able to recognise critically ill patients, take part in advanced life support, feel confident to lead a resuscitation team under supervision and to use the local protocol for deciding when not to resuscitate patients

Subject	Knowledge	Skills
i. Recognise critically ill patients	<p>Presentation and treatment of life threatening emergencies</p>	<p>Recognise critically ill patients</p> <p>Perform initial assessment</p> <p>Recognise when to call for help from seniors or other specialties, eg ITU</p>
ii. Advanced life support	<p>Advanced life support algorithms</p> <p>Role and side effects of commonly used anti-arrhythmics and cardiac support drugs</p>	<p>Maintain basic life support skills</p> <p>Recognise cardiac arrhythmias</p> <p>Perform emergency defibrillation</p> <p>Stay calm and think clearly</p>
iii. Lead a cardiac arrest team	<p>Role and responsibilities of the team leader</p>	<p>Safe and effective communication and delegation</p>
iv. Do not attempt to resuscitate orders (DNAR)	<p>Local and national protocols for DNAR orders</p> <p>Legal and ethical considerations</p>	<p>Support patients and families</p> <p>Respect living wills and advance directives</p> <p>Act with empathy and sensitivity</p> <p>Breaking bad news – see Generic skills (1.2ii)</p>

## 2.2 Cardiology clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with the cardiac problems outlined below. For each scenario SHOs should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
i. Chest pain	<p>Causes</p> <ul style="list-style-type: none"> <li>▶ cardiac/vascular</li> <li>▶ respiratory</li> <li>▶ gastrointestinal</li> <li>▶ locomotor</li> <li>▶ psychological</li> </ul> <p>Appropriate analgesia and routes of administration</p>	Initiate investigations to explore the differential diagnosis
ii. Acute coronary syndromes	<p>ECG changes</p> <p>Complications</p> <p>Indications and complications of thrombolysis, anti-anginals and anti-thrombotic therapies</p> <p>Indications for stress testing/coronary angiogram</p> <p>Strategies for primary and secondary prevention</p>	<p>Recognise need for urgent assessment and prompt treatment with thrombolysis when indicated</p> <p>Manage complications such as:</p> <ul style="list-style-type: none"> <li>▶ arrhythmias</li> <li>▶ pulmonary oedema</li> <li>▶ hypotension</li> </ul> <p>Use CCU protocols/guidelines</p>
iii. Dizziness or syncope	<p>Causes</p> <ul style="list-style-type: none"> <li>▶ cardiac</li> <li>▶ neurological</li> <li>▶ ENT</li> <li>▶ endocrine</li> <li>▶ others</li> </ul>	Initiate investigations to explore the differential diagnosis
iv. Heart failure	<p>Causes, precipitating factors and prognosis</p> <p>Drug indications, contraindications and side effects</p> <p>Complications</p>	Initiate investigations to identify the cause

*continued*

Problem	Knowledge	Skills
v. Arrhythmias	ECG patterns of narrow and broad complex tachycardias and bradycardias Indications, contraindications and side effects of: <ul style="list-style-type: none"> <li>▶ anti-arrhythmic drugs</li> <li>▶ anti-coagulation</li> </ul> Indications for temporary pacing	Recognise and correctly identify arrhythmias Ability to perform carotid sinus massage, explain the valsalva manoeuvre and perform DC cardioversion Manage arrhythmias causing acute haemodynamic compromise
vi. Endocarditis	Indications and limitations of echocardiography Complications Indications for antibiotics and anticoagulation Strategies for prevention	Recognise the role of cardiac surgeons and microbiologists
vii. Haemodynamic disturbances	Causes Indications for: <ul style="list-style-type: none"> <li>▶ emergency imaging including echocardiogram and CT</li> <li>▶ a fluid challenge</li> </ul> Indications, and complications of insertion of a central venous line Indications, contraindications and side-effects of inotropes	Recognise the need for: <ul style="list-style-type: none"> <li>▶ rapid assessment</li> <li>▶ specialist nursing care / monitoring</li> </ul> Breaking bad news – see Generic section (1.2ii)

## B. Outpatient-based scenarios

Problem	Knowledge	Skills
i. Stable angina	Risk factors Indications, contraindications and side effects of 1st line agents Strategies for primary and secondary prevention	Recognise when to consult to consider exercise stress test or coronary angiogram
ii. Hypertension	Causes (including pregnancy) Indications, contraindications and side effects of 1st line agents Complications	Discuss necessity for long-term treatment
iii. Palpitations	Causes	Initiate investigations to explore the differential diagnosis
iv. Heart failure	Causes and precipitating factors Indications, contraindications and side effects of 1st line agents Complications	Initiate investigations to identify the cause
v. Valvular heart disease	Complications Indications for anticoagulation and antibiotics in valvular heart disease	Use echocardiography appropriately Explain to patients the risk/benefit ratios of treatments including anti-coagulation

## 2.3 Clinical pharmacology and therapeutics clinical scenarios

### A.

**OBJECTIVE** – To be able to prescribe drugs safely

Problem	Knowledge	Skills
Therapeutics	Effects of disease on prescribing: <ul style="list-style-type: none"> <li>▶ hepatic</li> <li>▶ renal</li> </ul> Effects of patient factors on prescribing: <ul style="list-style-type: none"> <li>▶ drug allergy</li> <li>▶ genetic susceptibility to adverse drug reactions</li> <li>▶ pregnancy</li> </ul> Effects of drug interactions: <ul style="list-style-type: none"> <li>▶ metabolism by CYP450 isoenzymes</li> </ul> Drugs that require therapeutic monitoring Evidence-based prescribing	Taking a drug history Use of the BNF and other sources of information Writing a clear and unambiguous prescription Liaising with ward pharmacist Explaining drug therapy to patient Safe prescribing in pregnancy

### B.

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with General Medical emergencies with the problems outlined below. SHOs should, in particular, gain knowledge and skills to

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)

Problem	Knowledge	Skills
i. Poisoning and drug overdose	Initial management of poisoning with <ul style="list-style-type: none"> <li>▶ aspirin</li> <li>▶ paracetamol</li> <li>▶ anti-depressants</li> <li>▶ opioids</li> <li>▶ Benzodiazepines</li> <li>▶ paraquat</li> <li>▶ carbon monoxide</li> </ul>	Assess and provide emergency care (see section 2.1.A) Use of the Poisons Information Centre Assess mental state (see Psychiatry section 2.14)

*continued*

Problem	Knowledge	Skills
ii. Illicit drug use	Psychological and physiological effects of: <ul style="list-style-type: none"> <li>▶ opioids</li> <li>▶ amphetamines and Ecstasy</li> <li>▶ cocaine</li> <li>▶ cannabis</li> <li>▶ alcohol</li> </ul>	Recognising illicit drug use Acquire accurate history Use of the Poisons Information Centre Assess and provide emergency care for acutely ill patients who have taken illicit drugs
iii. Adverse drug reactions	The potential range of adverse drug reactions to commonly used drugs The common presentations of drug-induced disease: <ul style="list-style-type: none"> <li>▶ skin disease</li> <li>▶ bone marrow disease</li> <li>▶ gastrointestinal including liver disease</li> <li>▶ neuropsychiatric disease</li> <li>▶ fetal and neonatal disease</li> <li>▶ renal disease</li> </ul>	Use the BNF and other sources of information Complete a Yellow Card report Acquire information from clinical pharmacist, manufacturer or Medicines Control Agency

## C.

**OBJECTIVE** – To assess and initiate management of patients presenting as general medical outpatients requiring steroids

Problem	Knowledge	Skills
i. Steroid treatment	Indications Side effects Strategies to prevent/minimise osteoporosis	Educate/counsel patients about risk/benefit profile – see Generic skills (1.5Ci) Appropriate use of steroid leaflet, card, and medic alert

## 2.4 Dermatology clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with the dermatology problems outlined below. For each scenario SHOs should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
i. Skin failure, eg toxic epidermal necrolysis, erythroderma	Causes Emergency management Complications	Assess mucosal involvement and systemic effects including estimation of fluid requirements Start initial treatment rapidly Recognise when to consult dermatology, ophthalmology
ii. Urticaria, angio-oedema, anaphylaxis	Precipitating circumstances and associated conditions Complications	Assess airway competence and manage upper airway obstruction Initiate rapid treatment
iii. Cellulitis	Causal microbial agents: antibiotic rationale Associated conditions	Assess the possibility of venous thrombosis Recognise need for nursing skills for local treatments including dressings
iv. Cutaneous drug reactions	Patterns and common precipitants Serious complications, eg Stevens-Johnson syndrome	Assess mucosal involvement
v. Herpes zoster and disseminated herpes simplex	Patterns Complications Treatment options	Recognise: <ul style="list-style-type: none"> <li>▶ high risk patients</li> <li>▶ severe infections</li> <li>▶ when to consult other specialty, eg ophthalmology</li> </ul>
vi. Acute cutaneous vasculitis	Causes Complications	Assess systemic involvement

*continued*

## B. Outpatient based scenarios

Problem	Knowledge	Skills
i. Pruritus	Causes and associated conditions including: <ul style="list-style-type: none"> <li>▶ infestation</li> <li>▶ primary skin disease</li> <li>▶ systemic disease</li> </ul> Management options	Initiate investigations to explore the differential diagnosis Identify contacts and refer to infection team if scabies diagnosed
ii. Psoriasis and eczema	Patterns and clinical variants Indications, contraindications and side effects of first line therapies Serious complications	Describe and record patterns Recognise: <ul style="list-style-type: none"> <li>▶ the role of the dermatology nurse</li> <li>▶ psychosocial effects</li> </ul>
iii. Skin cancer	Effects of UV exposure on skin Risk factors Features and initial management of: <ul style="list-style-type: none"> <li>▶ basal cell carcinoma</li> <li>▶ squamous cell carcinoma</li> <li>▶ melanoma</li> </ul>	Differentiate from common benign tumours Recognise when to consult other specialty Advise on prevention, eg strategies for UV protection
iv. Manifestations of systemic disease affecting skin, hair or nails	Cutaneous signs in <ul style="list-style-type: none"> <li>▶ endocrine and metabolic disease</li> <li>▶ gastrointestinal disease</li> <li>▶ malignancy</li> <li>▶ connective tissue disease</li> <li>▶ immunosuppression</li> <li>▶ TB and sarcoid</li> </ul>	Recognise the underlying disease

## 2.5 Diabetes and endocrinology clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with the diabetic and endocrinology problems outlined below. For each scenario SHOs should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
i. Diabetic ketoacidosis (DKA)	Precipitating circumstances Complications Strategy for long-term follow-up	Prescribe fluids, insulin and potassium appropriately including need for repeated review
ii. Non-ketotic hyperosmolar coma (HONK)/severe hyperglycaemia	Precipitating circumstances Prevention and treatment of complications	Prescribe fluids, insulin and potassium appropriately including need for repeated review
iii. Hypoglycaemia	Precipitating circumstances	Measure blood glucose Rapidly administer glucose/20% dextrose/glucagon if indicated
iv. "Ill" or perioperative diabetic	Effect of disease process/procedure on glycaemic control Effect of poor glycaemic control on disease processes/procedure	Monitor and manage insulin and oral hypoglycaemic agents whilst patients are fasting
v. Acute adreno-cortical insufficiency	Hypothalamo-pituitary-adrenal axis – function and assessment Causes Complications	Management of emergency Initiate investigations to establish the diagnosis and identify the cause
vi. Hyper/hypocalcaemia	Causes Complications	Initiate investigations to identify the cause Management – see <i>also</i> Oncology section (2.11Ai)
vii. Hyponatraemia	Causes Complications	Ability to assess severity and volume status and initiate appropriate fluid balance management Initiate investigations to identify the cause

*continued*

## B. Outpatient based scenarios

Problem	Knowledge	Skills
<b>i. Diabetes (new)</b>	<p>Diagnostic criteria</p> <p>Pathophysiological differences between Type I and Type II diabetes and recognition of insulin dependence</p> <p>Monitoring glycaemic control and effects of diet and exercise</p> <p>Strategies for primary and secondary prevention of complications</p> <p>Role of diabetes specialist nurse</p>	<p>Use of glucose tolerance test</p> <p>Rationally manage oral hypoglycaemic agents and insulin regimes</p> <p>Perform patient education including individualised plan for therapy agreed by patient – see Generic skills (1.5.Ci)</p>
<b>ii. Diabetes (complications)</b>	<p>Long-term complications:</p> <ul style="list-style-type: none"> <li>▶ macrovascular IHD/stroke/peripheral vascular disease</li> <li>▶ microvascular eye/kidney/nerves</li> <li>▶ diabetic foot</li> <li>▶ infections</li> </ul> <p>Relationship of complications to glycaemic control and other factors</p>	<p>Recognise when to consult other specialty</p>
<b>iii. Dyslipidaemia</b>	<p>Classification</p> <p>Complications and effects on natural history of other diseases</p> <p>Role of diet</p> <p>Indications, contraindications and side effects of lipid lowering agents</p>	<p>Interpret lipid biochemistry results</p> <p>Take accurate family history</p>
<b>iv. Thyroid dysfunction</b>	<p>Pathophysiological effects of thyroid dysfunction</p> <p>Causes</p>	<p>Interpret thyroid function tests</p> <p>Initiate investigations to establish the diagnosis and identify any underlying cause</p>

## 2.6 Gastroenterology clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with the gastroenterology problems outlined below. For each scenario SHO's should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
i. Abdominal pain (acute)	<p>Causes:</p> <ul style="list-style-type: none"> <li>▶ gastrointestinal</li> <li>▶ surgical</li> <li>▶ gynaecological/urological</li> <li>▶ cardiac/vascular</li> </ul> <p>Appropriate analgesia and routes of administration</p>	<p>Initiate investigations to explore the differential diagnosis</p> <p>Assess need for:</p> <ul style="list-style-type: none"> <li>▶ 'nil by mouth'</li> <li>▶ IV fluid replacement/resuscitation</li> </ul> <p>Liaise with surgeons when appropriate</p>
ii. Diarrhoea (acute)	<p>Causes</p> <p>Indications for isolation</p> <p>Indications and contraindications for antibiotics, steroids and anti-diarrhoeal agents</p> <p>Diagnosis and initial management of acute severe colitis</p>	<p>Initiate investigations to explore the differential diagnosis</p> <p>Manage diarrhoea including infectious and non-infectious causes</p> <p>Correct fluid and electrolyte imbalances</p>
iii. Gastrointestinal bleeding	<p>Causes</p> <p>Indications and complications of:</p> <ul style="list-style-type: none"> <li>▶ transfusion of blood products</li> <li>▶ insertion of a central venous line</li> <li>▶ urgent endoscopy</li> </ul> <p>Local guidelines and indicators of rebleeding risk</p>	<p>Urgent and rapid assessment of:</p> <ul style="list-style-type: none"> <li>▶ haemodynamic state</li> <li>▶ co-morbid disease</li> <li>▶ likelihood of variceal bleeding</li> </ul> <p>Immediate management of hypovolaemic shock</p>
iv. Abdominal distension	<p>Causes</p>	<p>Initiate investigations to explore the differential diagnosis</p>
v. Jaundice	<p>Causes including precipitating or exacerbating drugs</p> <p>Indications for:</p> <ul style="list-style-type: none"> <li>▶ liver biopsy</li> <li>▶ ERCP</li> </ul>	<p>Recognise the presence of chronic liver disease and/or fulminant liver failure</p> <p>Initiate investigations to look for cause</p> <p>Recognise, prevention and management of:</p> <ul style="list-style-type: none"> <li>▶ sepsis including cholangitis</li> <li>▶ renal impairment</li> </ul>

*continued*

Problem	Knowledge	Skills
vi. Decompensated cirrhosis and fulminant liver failure	Causes and precipitants Specific complications including: <ul style="list-style-type: none"> <li>▶ encephalopathy</li> <li>▶ sepsis</li> <li>▶ fluid and electrolyte disturbance</li> <li>▶ renal impairment</li> <li>▶ hypoglycaemia</li> <li>▶ coagulopathy</li> <li>▶ bleeding</li> <li>▶ malnutrition</li> </ul>	Initiate investigations to establish the diagnosis and identify the cause Prevent/manage complications (as listed in knowledge) Avoid precipitating/exacerbating drugs Recognise need to discuss referral to liver unit early
vii. Alcohol withdrawal syndrome	Strategies for prevention and management Complications Acute and long-term effects of alcohol excess	Recognise need for: <ul style="list-style-type: none"> <li>▶ correction of vitamin deficiencies</li> <li>▶ nutritional assessment</li> <li>▶ other specialty or service, eg psychiatry or social services</li> </ul>

## B. Outpatient based scenarios

Problem	Knowledge	Skills
i. Upper abdominal pain, dyspepsia or reflux symptoms	Causes Local and national guidelines for investigation and management Indications, contraindications and side effects of 1st line therapies Role of <i>H. pylori</i>	Initiate investigations to explore the differential diagnosis
ii. Chronic diarrhoea	Causes	Initiate investigations to explore the differential diagnosis
iii. Dysphagia	Causes: <ul style="list-style-type: none"> <li>▶ organic</li> <li>▶ functional</li> </ul>	Recognise need for: <ul style="list-style-type: none"> <li>▶ rapid assessment</li> <li>▶ nutritional assessment</li> <li>▶ surgical input when appropriate</li> </ul> Initiate investigations to explore the differential diagnosis

*continued*

Problem	Knowledge	Skills
iv. GI cancer	Principles of staging Indications for surgery	Recognise need for: <ul style="list-style-type: none"> <li>▶ rapid assessment</li> <li>▶ nutritional assessment</li> <li>▶ other specialty when appropriate, eg oncology, surgery</li> </ul> Breaking bad news – see Generic skills (1.2ii)
v. Rectal bleeding	Causes	Proctoscopy Initiate investigations to explore the differential diagnosis
vi. Irritable bowel syndrome	Diagnostic criteria Indications, contraindications and side effects of 1st line agents	Have a balanced approach to investigation Be sensitive to psychological distress
vii. Iron deficiency anaemia – see also Haematology (2.9)	Causes: <ul style="list-style-type: none"> <li>▶ bleeding</li> <li>▶ dietary</li> <li>▶ malabsorption</li> </ul> Roles/risks of blood transfusion	Initiate investigations to establish the diagnosis and identify the cause
viii. Malabsorption, including coeliac disease	Associated conditions	Recognise role of dietician
ix. Inflammatory bowel disease	Differences between ulcerative colitis, Crohn’s disease and infectious colitis Indications and side effects of 1st line agents Complications including acute severe colitis	Create individualised treatment plan – see Generic skills (1.5Ci) Recognise the role of: <ul style="list-style-type: none"> <li>▶ nutritional assessment</li> <li>▶ specialist nurses</li> </ul>
x. Chronic liver disease	Causes Strategies for prevention of viral hepatitis Complications	Interpret viral serology reports and understand their implications Recognise: <ul style="list-style-type: none"> <li>▶ patients who may require referral to liver unit</li> <li>▶ the role of nutritional assessment</li> </ul>

## 2.7 Genitourinary medicine clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with genitourinary problems outlined below. SHO should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations, accurately interpret reports and initiate appropriate treatment
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
i. HIV	Natural history Presentations of seroconversion illness Common presentations of immunodeficiency and opportunistic infection Markers of disease progression Principles and side effects of anti-retroviral therapy Principles of universal infection control Precautions and safe disposal of sharps	Take a sexual history Perform pre-test discussion and get consent prior to HIV testing Recognise associated sexually or parenterally transmitted diseases
ii. Percutaneous injuries and exposure to blood and body fluids	Local policy and procedures Immediate management of percutaneous injury in relation to blood-borne viruses Indications for post-exposure HIV prophylaxis	Perform risk assessment of source patient

### B. Outpatient scenarios

Problem	Knowledge	Skills
i. Vaginal/urethral discharge Genital ulcers Genital warts	Causes of vaginal and urethral discharge and genital ulcers including microbiological aetiologies	Take a sexual history Examine external genitalia
ii. Pelvic pain in women (non-acute)	Causes in women in the reproductive years Aetiology of pelvic inflammatory disease (PID)	Take a sexual history

## 2.8 Geriatric medicine clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients, particularly older people, presenting with the problems outlined below. For each scenario SHOs should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
<b>i. Acute confusion</b>	Causes including the effects of drugs Impact of the physical environment	Emergency management of agitation Use the mini-mental state examination Initiate investigations to explore the differential diagnosis Recognise underlying cognitive impairment or psychiatric disease including depression
<b>ii. Falls</b>	Risk factors including the effects of polypharmacy Strategies for prevention Complications	Initiate investigations, identify an underlying cause Multidisciplinary team working – see Generic skills (1.4 and 1.5Av)
<b>iii. Hypothermia</b>	Risk factors Complications	Initiate emergency management and monitoring Initiate investigations, identify an underlying cause
<b>iv. Deterioration in mobility ('Off legs')</b>	Precipitating circumstances Effects of polypharmacy	Assess gait and use the 'Get up and go' test Recognise: <ul style="list-style-type: none"> <li>▶ social breakdown</li> <li>▶ psychiatric problems</li> <li>▶ need for multidisciplinary team</li> </ul>
<b>v. Urinary incontinence</b>	Causes Urinary tract infection – microbial pathogens: antibiotic rationale Management options	Recognise: <ul style="list-style-type: none"> <li>▶ need for pelvic examination</li> <li>▶ when investigation is appropriate</li> <li>▶ psychosocial impact</li> </ul> Exclude and treat underlying problems, eg UTI

*continued*

Problem	Knowledge	Skills
vi. Stroke	<p>Causes and risk factors</p> <p>Indications and complications of anti-thrombotic strategies</p> <p>Benefits and role of stroke units</p> <p>Complications</p> <p>Preventative strategies (primary &amp; secondary)</p>	<p>Recognise:</p> <ul style="list-style-type: none"> <li>▶ social and psychological impact</li> <li>▶ importance of rehabilitation</li> <li>▶ role of multidisciplinary team</li> <li>▶ patients requiring supportive treatment only</li> <li>▶ patients requiring urgent/specific interventions</li> </ul> <p>Use stroke unit protocols/guidelines</p>
vii. Management of complex, multipathology states	<p>Possible pathologies</p> <p>Nutritional factors</p> <p>Role of rehabilitation</p> <p>Social implications for disease management</p>	<p>Comprehensive assessment</p> <p>Timely and appropriate discharge planning</p>
viii. Age related pharmacology	<p>Altered pharmacokinetics in older people</p>	<p>Management of polypharmacy, non-compliance and adverse drug reactions in older people</p>

## B. Outpatient and day/community hospital-based scenarios

Problem	Knowledge	Skills
i. Dementia	<p>Organic causes</p> <p>Natural history and prognosis</p> <p>Legal framework for care</p>	<p>Use the mini-mental state examination and geriatric depression score</p> <p>Initiate investigations to identify an underlying cause</p> <p>Recognise:</p> <ul style="list-style-type: none"> <li>▶ social and psychological effects</li> <li>▶ when to consult old age psychiatry</li> </ul> <p>Breaking bad news – see Generic skills (1.2ii)</p>
ii. Parkinson's disease	<p>Neurotransmitter abnormalities</p> <p>Diagnostic criteria</p> <p>Natural history and prognosis</p> <p>Treatment options and side effects of therapy</p> <p>Drug resistance features</p> <p>Role of surgical therapy</p>	<p>Recognise the social and psychological effects including associated depression</p> <p>Involve the multidisciplinary team including the PD nurse specialist</p>
iii. Repeated falling and/or syncope	<p>Cardiovascular and neurological causes</p>	<p>Initiate investigations and management plans</p>

## 2.9 Haematology clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with the haematology problems outlined below. For each scenario SHO's should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
i. Bone marrow failure	<p>Causes</p> <p>Specific complications including:</p> <ul style="list-style-type: none"> <li>▶ sepsis</li> <li>▶ bleeding</li> </ul> <p>Local guidelines</p>	<p>Recognise patients requiring:</p> <ul style="list-style-type: none"> <li>▶ isolation</li> <li>▶ blood product transfusion</li> <li>▶ prophylactic antimicrobial agents</li> <li>▶ referral to haematology</li> </ul>
ii. Sickle cell crisis	<p>Precipitating circumstances</p> <p>Complications:</p> <ul style="list-style-type: none"> <li>▶ sepsis</li> <li>▶ aplasia</li> <li>▶ acute sequestration</li> <li>▶ haemolysis</li> </ul>	<p>Manage fluid balance and analgesia</p> <p>Liaise with haematology</p>
iii. Disseminated intravascular coagulopathy and other bleeding disorders	<p>Diagnostic criteria</p> <p>Associated conditions and complications</p>	<p>Initiate investigations to identify underlying cause</p> <p>Initiate emergency management</p>
iv. Transfusion of blood products	<p>Indications for blood products</p> <p>Complications including:</p> <ul style="list-style-type: none"> <li>▶ transfusion reactions</li> <li>▶ transmission of infection</li> </ul>	<p>Prescribe blood products safely</p> <p>Explain benefits/risks to patients</p>
v. Anticoagulation	<p>Indications for:</p> <ul style="list-style-type: none"> <li>▶ thrombolysis</li> <li>▶ heparins</li> <li>▶ oral anticoagulants</li> </ul> <p>How to monitor anticoagulation including recommendations for:</p> <ul style="list-style-type: none"> <li>▶ target INR and APTT</li> <li>▶ duration of therapy</li> </ul>	<p>Start and adjust dose of anticoagulant</p> <p>Manage over-anticoagulation</p>

*continued*

## B. Outpatient-based scenarios

Problem	Knowledge	Skills
i. Anaemia	Classification and how to differentiate the likely causes: <ul style="list-style-type: none"> <li>▶ bleeding</li> <li>▶ haematinic deficiency</li> <li>▶ haemolysis</li> <li>▶ haemoglobinopathy</li> <li>▶ bone marrow problems</li> </ul> Complications Role of replacement therapy	Initiate investigations to establish the diagnosis and identify the cause
ii. Thrombophilia	Classification Content of a thrombophilia screen Role of anticoagulation	Explain benefits/risks of antithrombotic strategies to patients

## 2.10 Infectious diseases clinical scenarios

**OBJECTIVE** – To provide the SHO with a range of knowledge and skills which will enable him/her to:

- ▶ safely assess the patient
- ▶ carry out appropriate investigations
- ▶ initiate treatment when patients are admitted with a suspected infection related general medical problem
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
i. Sepsis	Definition of sepsis, severe sepsis, septic shock Complications of sepsis, eg ARDS, pulmonary oedema, DIC Site of origin and microbiology Local common patterns of infection Understand difference between community and hospital acquired infections Be familiar with common community acquired infections: <ul style="list-style-type: none"> <li>▶ LRTI, UTI, skin and soft tissue infections, viral exanthema, food poisoning</li> </ul>	Assess severity Select appropriate investigations Obtain accurate history including contact/occupational/pets history

*continued*

Problem	Knowledge	Skills
ii. Antimicrobial therapy	<p>Rationale for prescribing common antimicrobials: choice (spectrum of microbiological cover), route, dose, duration and safety profile</p> <ul style="list-style-type: none"> <li>▶ role of patient co-morbid illness in antibiotic handling and role of therapeutic drug monitoring</li> <li>▶ appreciate the consequences of inappropriate prescribing: eg antibiotic resistance</li> <li>▶ local antibiotic policy</li> </ul> <p>Strategies to ensure patient compliance</p>	<p>Liaise with local microbiology/ID and clinical pharmacist re prescribing and monitoring</p> <p>Assess 'allergy'</p> <p>Recognise role of microbial sensitivities and antibiotic levels (eg gentamicin)</p> <p>Recognise need to seek specialist advice when unsure</p>
iii. Fever from abroad	<p>Likely causes, especially malaria</p> <p>Travel causes of fever and STD</p> <p>Understand patient education regarding prevention of future infection</p>	<p>Take a travel history and vaccination/prophylaxis, especially ask about compliance</p> <p>Take a sexual history</p> <p>Select appropriate investigations including serial blood film for malaria parasites, fresh stool microscopy for parasites ± serology (eg amoeba)</p> <p>Recognise when to consult for tropical medicine advice</p> <p>Refer for pre-travel advice</p>
iv. Immuno-compromised host	<p>Typical immuno-compromised hosts and atypical presentation of infection (elderly, steroids/other immuno-suppressive drugs, chemotherapy, prosthesis)</p> <p>Appreciate the principles of HIV counselling and testing (see GUM 2.7)</p>	<p>High index of suspicion of infection in this 'risk' patient population</p> <p>Discuss with appropriate specialists regarding specific investigations (eg induced sputum for PCP)</p>
v. Microbiological investigations	<p>Knowledge of simple microbiological investigations, their interpretation and limitations</p>	<p>Complete request form appropriately to get most out of test</p> <p>Discuss with microbiologist if unsure</p>
vi. Prophylaxis	<p>Role of immunisation and public health in infection practice:</p> <p>Chemoprophylaxis, eg anti-malarial</p> <p>Notification of public health for infectious diseases</p>	<p>Complete forms for notifiable diseases (eg meningococcal infection, food poisoning)</p> <p>Ensure high risk patients are immunised appropriately</p>
vii. Infection emergencies	<p>Understand the pathophysiology of sepsis causing shock</p>	<p>Recognise and rapidly resuscitate sick patients with: presumed meningitis, toxic shock syndrome and severe sepsis/shock (see 2.1 Emergency medicine)</p>

## 2.11 Medical oncology clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with the oncology problems outlined below. For each scenario SHOs should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis (including associated tumour type)
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
<b>i. Malignant hypercalcaemia</b>	Long-term therapeutic options	Provide initial emergency management, particularly correction of dehydration Measure calcium in all patients with malignancy
<b>ii. Neutropenic sepsis</b>	Patients at risk Features of specific infections Appropriate: <ul style="list-style-type: none"> <li>▶ microbiological samples</li> <li>▶ broad spectrum antibiotics</li> <li>▶ isolation and infection control procedures</li> <li>▶ supportive measures</li> </ul>	Initiate management urgently Recognise need for repeated review and monitoring (see 2.1 Emergency medicine)
<b>iii. SVC obstruction, spinal cord compression, tumour lysis syndrome</b>	Preventative measures	Provide initial emergency management Recognise patients requiring urgent therapy
<b>iv. Hickman line</b>	Indications and complications	Care for lines including the taking of samples Remove lines
<b>v. Intercurrent illness in patients with malignancy</b>	Specific complications of therapy: <ul style="list-style-type: none"> <li>▶ toxicity</li> <li>▶ renal impairment and failure</li> <li>▶ drug interactions</li> </ul> Specific complications of disease: <ul style="list-style-type: none"> <li>▶ local invasion</li> <li>▶ distant metastases</li> <li>▶ paraneoplastic manifestations</li> </ul>	Recognise importance of quality of life Keep patients and families informed and listen to their concerns – see Generic skills (1.2 + 1.5.Ci) Consult on appropriateness of resuscitation

*continued*

## B. Outpatient-based scenarios

Problem	Knowledge	Skills
i. Lung, breast, colon cancer and carcinoma of unknown primary	Risk factors Natural history Principles and methods of cancer staging Understand the principles, indications and complications of: <ul style="list-style-type: none"> <li>▶ surgical treatment</li> <li>▶ chemotherapy</li> <li>▶ radiotherapy</li> <li>▶ endocrine therapy</li> </ul>	Recognise warning symptoms/signs Recognise the need for rapid assessment Breaking bad news – see Generic skills (1.2ii) Recognise when to consult appropriate specialists including palliative care
ii. Metastatic cancer	Routes of dissemination of common cancers Management strategies for patients with bony, liver, pleural and cranial metastases	Breaking bad news – see Generic skills (1.2ii) Recognise when to consult appropriate specialist Recognise the importance of symptom control – see Palliative care (2.13)

## 2.12 Neurology clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with the neurology problems outlined below. For each scenario SHO should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
i. Headache	Causes	Initiate investigations to explore the differential diagnosis
ii. Status epilepticus	Causes Complications Indications for intubation and ventilation	Provide emergency management Awareness of pseudo-status Rapid detection of cause, eg hypoglycaemia

*continued*

Problem	Knowledge	Skills
iii. Subarachnoid haemorrhage	Risk factors Timing and correct analysis of lumbar puncture if CT scan negative	Recognise atypical presentations Liaise with neurosurgeon
iv. Meningitis, encephalitis brain abscess	Microbial causes: appropriate antibiotic/antiviral treatment Indications and contraindications to lumbar puncture Complications Procedure for notification, contact tracing and primary prevention with antibiotics	Liaison with microbiology Recognise <ul style="list-style-type: none"> <li>▶ co-morbidity, eg HIV, ear/sinus disease, alcoholism, skull fracture</li> <li>▶ need for urgent treatment</li> </ul>
v. Coma	Glasgow coma scale Causes Indications for intubation and ventilation	Provide emergency management including urgent treatment of remedial causes Initiate investigations to establish diagnosis Role of EEG
vi. Raised intra-cranial pressure	Causes Complications Relevant anatomy (CSF circulation)	Initiate investigations to establish diagnosis Liaise with neurologist/neurosurgeon/ITU
vii. Acute paralysis, eg Guillain Barre syndrome, spinal cord compression, myasthenia gravis	Causes Methods of monitoring progression Complications	Measure vital capacity Liaise with neurology/neurophysiology
viii. Acute onset or relapse of multiple sclerosis	Usual presentations Treatment options Complications	Liaise with neurologist Urgent rehabilitation and return to home environment

*continued*

## B. Outpatient-based scenarios

Problem	Knowledge	Skills
<b>i. Headache</b>	<p>How to differentiate the common causes:</p> <ul style="list-style-type: none"> <li>▶ tension headache</li> <li>▶ migraine</li> </ul> <p>Features of unusual causes:</p> <ul style="list-style-type: none"> <li>▶ temporal arteritis – see Rheumatology (2.18)</li> <li>▶ raised intracranial pressure</li> <li>▶ cluster headaches</li> <li>▶ trigeminal neuralgia</li> <li>▶ analgesic abuse</li> </ul> <p>Management options</p>	<p>Recognise patients requiring urgent/limited investigation</p> <p>Check ESR in all patients over 60</p>
<b>ii. Stroke and transient ischaemic attacks</b>	<p>Risk factors</p> <p>Treatment options</p> <p>Secondary prevention</p> <p>Role of carotid endarterectomy</p>	<p>Initiate:</p> <ul style="list-style-type: none"> <li>▶ investigation</li> <li>▶ acute treatment</li> <li>▶ correction of risk factors</li> </ul>
<b>iii. Epilepsy</b>	<p>Diagnosis and classification of seizures</p> <p>Role and limitations of imaging/EEG</p> <p>Indications for and side-effects of anti-epileptic drugs</p> <p>Issues relating to women with epilepsy</p>	<p>Distinguish non-epileptic events eg:</p> <ul style="list-style-type: none"> <li>▶ syncope</li> <li>▶ parasomnias</li> <li>▶ drop attacks</li> </ul> <p>Recognise non-epileptic seizures/status</p> <p>Advise patients about</p> <ul style="list-style-type: none"> <li>▶ lifestyle</li> <li>▶ employment</li> <li>▶ risk of SUDEP</li> <li>▶ driving regulations</li> <li>▶ pregnancy/contraception</li> </ul> <p>Liaise with epilepsy nurse specialists</p>
<b>iv. Multiple sclerosis</b>	<p>Diagnostic criteria/roles of clinical, CSF and MRI data</p> <p>Treatment options</p> <p>Natural history and prognosis</p>	<p>Recognise psychological effects and need for counselling</p> <p>Recognise role for multidisciplinary team and liaise with MS nurse specialist</p>

## 2.13 Palliative medicine clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with the palliative care problems outlined below. For each scenario SHOs should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

Problem	Knowledge	Skills
i. Pain	Causes of pain in advanced progressive disease Analgesia – WHO classification <ul style="list-style-type: none"> <li>– mode of action</li> <li>– possible routes</li> <li>– step up approach (ladder)</li> <li>– side effects</li> </ul> Indications for adjunctive therapies, eg radiotherapy, sedatives	Ability to take a pain history Identify and alleviate cause if possible Recognise co-morbid psychological and social problems Use local protocols and liaise with palliative care or pain control team
ii. Constipation	Associated and exacerbating conditions Therapeutic strategies	Recognise acute and chronic bowel obstruction
iii. Breathlessness	Causes Empirical therapies	Select and use interventions to alleviate symptoms Use opiate therapy appropriately Recognise panic and treat accordingly
iv. Nausea and vomiting	Causes and exacerbating factors in advanced disease	Alleviate causes where possible Prescribe appropriately to relieve symptoms
v. Care of the dying	Common symptoms in terminal care Symptom management in unconscious patients Dose conversions to parenteral drugs	Recognise the dying phase Set up subcutaneous syringe drivers Assess family needs

## 2.14 Psychiatry clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with the psychiatric problems outlined below. For each scenario SHO's should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
i. Parasuicide	Risk factors for suicide Local protocols for liaison with psychiatric services	Evaluate suicide risk Identify co-morbid psychiatric problems
ii. Acute psychosis	Associated circumstances Initial management options including drug indications, contraindications and side effects	Assess mental state Initiate investigations to identify organic cause
iii. Opiate dependence	Opiate withdrawal syndrome including prevention/management Complications of intravenous injecting	Manage aggressive patients Identify co-morbid psychiatric problems
iv. Bereavement	Stages of bereavement reactions Support services available locally	Recognise atypical grief reactions

### B. Outpatient-based scenarios

Problem	Knowledge	Skills
i. Depression	Risk factors Management options including side effects and interactions of antidepressants	Initiate investigations to exclude organic cause Recognise depression in patients presenting with physical symptoms Liaise with psychiatric services

## 2.15 Rehabilitation medicine clinical scenarios

**OBJECTIVE** – To assess and initiate management of patients presenting with general medical problems requiring rehabilitation.

Problem	Knowledge	Skills
<b>Rehabilitation especially for:</b> 1. <b>Neurological disorders</b> 2. <b>Musculoskeletal disorders including arthritis</b> 3. <b>Cardiopulmonary disorders</b> 4. <b>Limb amputations</b>	Define: <ul style="list-style-type: none"> <li>▶ impairment</li> <li>▶ disability</li> <li>▶ handicap</li> </ul> Factors predicting rehabilitation potential Strategies to prevent/treat: <ul style="list-style-type: none"> <li>▶ spasticity, contractures, deformity</li> <li>▶ pain</li> <li>▶ incontinence</li> <li>▶ aggressive behaviour</li> </ul> The role of occupational therapists and physiotherapists in rehabilitation	Assess neurological disability, especially cognition, language and mental competence (see 1.5B) Recognise impact of: <ul style="list-style-type: none"> <li>▶ cognitive function</li> <li>▶ family/support</li> <li>▶ psychosocial factors</li> <li>▶ nutrition</li> </ul> Work in a multidisciplinary rehabilitation team and facilitate goal setting

## 2.16 Renal medicine clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with the renal problems outlined below. For each scenario SHOs should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
<p><b>i. Acute renal failure (ARF): diagnosis and assessment of severity</b></p>	<p>Identify:</p> <ul style="list-style-type: none"> <li>▶ pre-renal uraemia in the oliguria patient as distinct from ARF</li> <li>▶ the causes of oliguria and strategies to treat reversible causes of acute renal failure</li> <li>▶ features distinguishing acute from chronic renal failure</li> <li>▶ the patient with possible urinary tract obstruction</li> </ul> <p>Describe:</p> <ul style="list-style-type: none"> <li>▶ initial methods of investigating the severity and causes of acute renal failure</li> <li>▶ the indications for haemodialysis, peritoneal dialysis or hemofiltration</li> <li>▶ the relationship between ARF and systemic disease</li> </ul>	<p>Take a clinical history in the assessment of acute renal failure including drug, surgical, family, social and environmental factors</p> <p>Perform a reliable clinical examination</p> <p>Use clinical findings and laboratory results to detect and treat pre-renal uraemia</p> <p>Initiate investigations to identify the cause and assess the severity of renal failure</p> <p>Liaise with a Renal Unit</p>
<p><b>ii. Chronic renal failure (CRF)</b></p>	<p>Describe:</p> <ul style="list-style-type: none"> <li>▶ the causes, associated conditions and diagnosis of CRF</li> <li>▶ the investigations used to assess the degree of renal impairment</li> <li>▶ the role of blood pressure control and the use of angiotensin blockade in slowing progression of CRF</li> <li>▶ the pathophysiology of renal bone disease and its treatment</li> <li>▶ the pathophysiology of renal anaemia and its treatment</li> </ul>	<p>Take a clinical history in the assessment of chronic renal failure including drug, surgical, family, social and environmental factors</p> <p>Perform a reliable clinical examination</p> <p>Initiate investigations to identify the cause and assess the severity of renal failure</p> <p>Identify complications, eg anaemia, bone disease, pericarditis</p> <p>Liaise with a Renal Unit</p>

*continued*

Problem	Knowledge	Skills
iii. Nephrotic syndrome	<p>Describe:</p> <ul style="list-style-type: none"> <li>▶ the diagnosis of nephrotic syndrome and identify causes and relationship to systemic diseases</li> <li>▶ how to investigate nephrotic syndrome to establish its severity and cause</li> <li>▶ the indications for and complications of a renal biopsy</li> <li>▶ management of nephrotic syndrome, including the indications for ACE inhibitors, and to understand the specific use of corticosteroids and other immunosuppressive agents</li> </ul>	<p>Take a relevant history, including family history, and perform an appropriate examination</p> <p>Initiate appropriate investigations</p> <p>Liaise with a Renal Unit</p>
iv. Urinary tract infection	<p>Diagnose and assess the severity and long-term consequences of urinary tract infection</p> <p>Identify causal microbial agents</p> <p>Define:</p> <ul style="list-style-type: none"> <li>▶ underlying structural causes of urinary tract infection and their investigation</li> <li>▶ the rationale of action of antimicrobials</li> </ul>	<p>Take a relevant history and perform appropriate examination to assess severity</p> <p>Recognise which patients require investigation and when to consult another specialty, eg urology</p> <p>Demonstrate the significance of history of urinary tract infection and relevance to the development of chronic renal impairment</p>
v. Hyper and hypokalaemia	<p>Identify causes</p> <p>Define methods for urgent treatment and monitoring</p>	<p>Interpret biochemical investigations</p> <p>Provide immediate emergency management</p>
vi. Disturbance of fluid and/or acid base balance	<p>Identify the composition of and indications for common intravenous fluid solutions</p> <p>Describe the precipitating circumstances, investigation and initial management of:</p> <ul style="list-style-type: none"> <li>▶ metabolic acidosis</li> <li>▶ metabolic alkalosis</li> <li>▶ hypo- and hypernatraemia</li> </ul>	<p>Perform reliable and accurate examination of the patient including assessment of fluid balance</p> <p>Recognise under- and over-hydration</p> <p>Assess the severity of acid-base disturbance</p> <p>Provide immediate emergency management</p>
vii. Drugs and renal disease	<p>Define</p> <ul style="list-style-type: none"> <li>▶ how commonly used drugs may affect renal function</li> <li>▶ the handling of commonly used drugs in the presence of renal impairment</li> </ul>	<p>Recognise drug induced renal disease</p> <p>Prescribe safely and efficiently for patients with renal disease after consultation if necessary</p>
viii. Patients on renal replacement therapy (RRT)	<p>Understand the differences between haemodialysis, continuous ambulatory peritoneal dialysis and automated peritoneal dialysis</p> <p>Define the prognosis and short- and long-term complications of RRT</p>	<p>Use appropriate sites for routine venous access</p> <p>Liaise with a Renal Unit</p>

*continued*

Problem	Knowledge	Skills
ix. Patients with a renal transplant who develop an acute medical problem	Describe the rationale for the use of common immunosuppressive drugs and their adverse effects  Understand the importance of infection in patients on immunosuppressants	Assess infection in immunosuppressed patients  Liaise with a Renal Unit
x. Rapidly progressive glomerulonephritis	Describe: <ul style="list-style-type: none"> <li>▶ the presentation of the condition</li> <li>▶ the cause, including its relationship to systemic vasculitis</li> <li>▶ the laboratory investigations</li> </ul>	Take a full history and perform a thorough examination  Initiate immediate investigation and diagnosis  Liaise with a Renal Unit

## B. Outpatient-based scenarios

Problem	Knowledge	Skills
i. Proteinuria/haematuria	Define the causes  Describe the methods of investigation	Initiate investigations to explore the differential diagnosis
ii. Adult polycystic kidney disease	Define the mode of inheritance of APKD  Describe use and timing of ultrasound scanning in confirming the diagnosis  Define the natural history (and variability) of the condition	Take a full history, including family, and perform a thorough examination  Liaise with a Renal Unit

## 2.17 Respiratory medicine clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with the respiratory problems outlined below. For each scenario SHOs should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
i. Acute severe asthma	British Guidelines including markers of severity and discharge policy	Recognise acute severe asthma Institute appropriate emergency treatment Recognise patients requiring ventilation
ii. Chronic obstructive pulmonary disease (COPD)	BTS guidelines Safe oxygen therapy Management of specific complications including: <ul style="list-style-type: none"> <li>▶ respiratory failure</li> <li>▶ right ventricular failure</li> <li>▶ polycythaemia</li> </ul>	initiate appropriate therapy Recognise precipitating factors, eg infection, pneumothorax, pulmonary embolus Recognise patients requiring: <ul style="list-style-type: none"> <li>▶ mask ventilation</li> <li>▶ intubation and IPPV</li> </ul> Give smoking cessation advice
iii. Pneumonia	Microbial causes: antibiotic rationale Markers of severity Features suggesting TB	Record markers of severity Recognise: co-morbidity, eg COPD, HIV, underlying carcinoma <ul style="list-style-type: none"> <li>▶ patients requiring intensive care</li> <li>▶ complications, eg empyema</li> </ul>
iv. Respiratory failure	Causes Indications for ventilation: mask or by intubation	Recognise patients requiring: <ul style="list-style-type: none"> <li>▶ urgent assessment and treatment</li> <li>▶ assisted ventilation</li> </ul> Monitor patients with neuromuscular disease by spirometry
v. DVT/PE	Causes, risk factors and preventative measures Severity stratification Indications for thrombolysis, anticoagulation therapeutic radiology and surgery	Recognise underlying associated diseases, eg malignancy, thrombophilia Initiate treatment and investigative pathway

*continued*

Problem	Knowledge	Skills
<b>vi. Pleural disease (pneumothorax and effusion)</b>	Causes/associated diseases BTS guidelines Complications Indications and complications of aspiration and intercostal drain insertion	Perform aspiration Insert and manage an intercostal drain

## B. Outpatient-based scenarios

Problem	Knowledge	Skills
<b>i. Haemoptysis</b>	Causes: <ul style="list-style-type: none"> <li>▶ respiratory</li> <li>▶ cardiac</li> <li>▶ other</li> </ul>	Initiate investigations to explore the differential diagnosis Recognise need for rapid assessment and investigation
<b>ii. Asthma (outpatient)</b>	British Guidelines – step approach Complications of drugs used Exacerbating features	Institute individualised management plan Show patients how to use a peak flow meter and diary Assess inhaler technique
<b>iii. COPD (outpatient)</b>	BTS guidelines Management of: <ul style="list-style-type: none"> <li>▶ respiratory failure</li> <li>▶ right ventricular failure</li> <li>▶ polycythaemia</li> </ul> Smoking cessation strategies Indications for domiciliary nebulisers, oxygen therapy and pulmonary rehabilitation	Recognise need for individualised management plan Interpret pulmonary function tests
<b>iv. Lung cancer</b> see also Medical Oncology (2.11)	Risk factors Role of bronchoscopy, imaging and other tests in diagnosis and staging care pathways	Breaking bad news – see Generic skills (1.2ii)
<b>v. Pulmonary TB</b>	Risk factors including those for multiresistant mycobacteria Standard treatment regimes Side effects of drugs Need for contact tracing	Notify cases
<b>vi. Interstitial lung disease and fibrosis</b>	Causes Imaging appearances Pulmonary function abnormality Treatment options	Recognise occupational causes

## 2.18 Rheumatology clinical scenarios

**OBJECTIVE** – To be able to assess and initiate management of patients presenting with the rheumatology problems outlined below. For each scenario SHOs should in particular gain knowledge and skills to:

- ▶ assess symptoms and signs
- ▶ formulate a differential diagnosis
- ▶ select appropriate investigations and accurately interpret investigation reports
- ▶ communicate the diagnosis and prognosis – see Generic skills (1.2)
- ▶ commence appropriate treatment

### A. On-take and ward-based scenarios

Problem	Knowledge	Skills
i. Acute mono-arthritis	Causes and disease associations Indications for: <ul style="list-style-type: none"> <li>▶ antibiotic therapy</li> <li>▶ surgical drainage</li> <li>▶ physiotherapy</li> </ul>	Initiate investigations to explore the differential diagnosis Recognise <ul style="list-style-type: none"> <li>▶ underlying joint or bone disease</li> <li>▶ when to consult rheumatologist, orthopaedic surgeon</li> </ul>
ii. Acute polyarthritis	Causes and disease associations Indications for physiotherapy	Recognise when to consult rheumatology
iii. Acute low back pain	Causes: <ul style="list-style-type: none"> <li>▶ malignant</li> <li>▶ septic</li> <li>▶ locomotor</li> <li>▶ renal/urological</li> <li>▶ neurological causes</li> </ul>	Initiate investigations to explore the differential diagnosis Recognise: <ul style="list-style-type: none"> <li>▶ underlying systemic, joint or bone disease</li> <li>▶ when to consult other specialty, eg orthopaedics, neurosurgery</li> </ul>
iv. Polymyalgia rheumatica & temporal arteritis	Indications for: <ul style="list-style-type: none"> <li>▶ temporal artery biopsy</li> <li>▶ steroids</li> <li>▶ bone prophylactic therapy</li> </ul>	Initiate investigations to explore the differential diagnosis Recognise the need for long-term disease monitoring
v. Acute connective tissue disease	Know the main clinical features and complications of: <ul style="list-style-type: none"> <li>▶ systemic lupus erythematosus</li> <li>▶ scleroderma</li> <li>▶ poly- and dermatomyositis</li> <li>▶ Sjogren's syndrome</li> <li>▶ vasculitis</li> </ul>	Recognise: <ul style="list-style-type: none"> <li>▶ side effects of drugs including immunosuppressants</li> <li>▶ when to consult rheumatologist</li> </ul>

*continued*

## B. Outpatient type scenarios

Problem	Knowledge	Skills
i. Osteoarthritis	<p>Patterns of disease</p> <p>Indications for surgery</p> <p>Conservative management including analgesic and physical measures</p>	<p>Identify and assess disability and handicap</p> <p>Recognise role of multidisciplinary team</p>
ii. Rheumatoid arthritis	<p>Patterns of disease and multisystem involvement</p> <p>Indications for and side effects of drugs</p> <p>Complications</p>	<p>Recognise:</p> <ul style="list-style-type: none"> <li>▶ effects of handicap and disability</li> <li>▶ role of multidisciplinary team</li> <li>▶ liaison with other specialty, eg rheumatology, orthopaedics</li> </ul>
iii. Crystal arthropathy: gout and pseudo-gout	<p>Causes of gout and pseudo-gout</p> <p>Patterns of disease</p> <p>Complications</p>	<p>Initiate and monitor therapy</p>
iv. Osteoporosis	<p>Risk factors and causes</p> <p>Strategies for:</p> <ul style="list-style-type: none"> <li>▶ prevention</li> <li>▶ management including both drugs and lifestyle changes</li> </ul>	<p>Recognise patients at risk and how to minimise risk – for steroids – see Clinical pharmacology (2.3)</p> <p>Use national/local guidelines</p>
v. Soft tissue problems, eg shoulder pain fibromyalgia	<p>Patterns of disease</p>	<p>Recognise effects of disability and handicap</p> <p>Initiate treatments including physiotherapy</p>
vi. Spinal pain	<p>Patterns of disease</p>	<p>Recognise effects of disability and handicap including psychosocial</p> <p>Initiate investigation and treatment and involve the multidisciplinary team</p>

## 3. Selection and interpretation of investigations

### Introduction

The SHO years are a phase of increased clinical responsibility, a key element of which is the ability of SHOs to select and interpret reports of investigations.

Training in selection, requesting and interpretation of reports of some investigations may have taken place as an undergraduate or PRHO; however, it is important that these skills are developed and widened. It is also vital that SHOs learn to critically evaluate when investigations are **not** required and are not cost effective. Where national and local guidelines on selection of investigations exist, they should be used. For example, the Royal College of Radiologists' document *Making best use of a department of clinical radiology*,<sup>1</sup> gives helpful guidance to doctors requesting imaging and SHOs should be familiar with this.

For clarity, the investigations are listed in two groups:

1. investigations that are very frequently requested on general medical patients with detailed objectives, skills and knowledge
2. investigations that may require more senior input into selection.

As in the core skills section, the objectives listed below apply to **all SHOs on completion** of all SHO jobs.

Again, these are minimum standards and are not meant to be restrictive.

### Aims

To produce physicians who are competent and confident to select, request and interpret reports of commonly used investigations required for diagnosis and management of patients with general medical problems.

### Objectives

**For each of the investigations listed in this section:**

SHOs should receive training in how to describe to patients:

- ▶ the nature of the investigation
- ▶ why it is required
- ▶ the implications of the results.

---

1. Royal College of Radiologists. *Making the best use of the department of clinical radiology – guidelines for doctors* (4th edn). London: RCR. [www.rcr.ac.uk](http://www.rcr.ac.uk)

SHOs should also learn to:

- ▶ recognise the need for an investigation result to impact on management
- ▶ avoid unnecessary investigations
- ▶ recognise that investigation reports are often the professional opinion of an individual and so require relevant information on the request
- ▶ recognise that reports may need review in view of changing circumstances.

**A. Investigations commonly requested for general medical patients**

**OBJECTIVE** – To be able to select, request appropriately and accurately interpret reports of the frequently used investigations, used to manage general medical patients, listed below. For all investigations it is vital that SHOs recognise abnormalities which require immediate action.

Investigation	Knowledge	Skills
Full blood count	Circumstances requiring urgent results	Use results reporting system
Urea and electrolytes	Normal ranges	Record and tabulate where appropriate
Blood glucose		Interpret results
Cardiac markers		
Liver function tests		
Amylase		
Calcium and phosphate		
Coagulation studies		
Arterial blood gases		
Lipids		
Autoantibodies		
ESR/CRP		
12 lead ECG	Normal ECG appearances	Use of ECG machines including how to connect limb and chest leads
Exercise ECG	Patterns for common abnormalities	Recognise:
24-hour monitoring and cardiomemo		▶ normal variants
Echo-cardiography (transthoracic)		▶ common abnormality
		▶ when to repeat

*continued*

Investigation	Knowledge	Skills
Chest X-ray	Circumstances requiring: ▶ urgent results ▶ particular views	Communicate well with radiologists, radiographers and other staff Recognise the need for radiological advice
Abdominal X-ray		
CT scans	Normal findings Image appearances of common abnormalities	
Ultra sound scans		
VQ scans		
Radio-isotope scans, eg bone and thyroid		
DEXA scans	Indications for particular tests	Recognise common patterns of abnormality
Pulmonary function tests		
Microbiological samples	Type of samples and collection method required Specificity and sensitivity	Interpret results

## B. Investigations requiring senior input into selection

**OBJECTIVE** – To recognise the indications for, complications of, and accurately interpret reports from investigations requested under guidance and used to manage general medical patients listed below:

### 1. Cardiac

- ▶ Cardiac catheterisation and coronary angiography
- ▶ Other vessel angiography
- ▶ Transoesophageal echocardiogram
- ▶ Pharmacological stress testing and nuclear cardiology stress testing

### 2. Gastrointestinal

- ▶ Emergency upper GI endoscopy
- ▶ Colonoscopy
- ▶ Contrast studies of gastrointestinal and urinary tract
- ▶ Endoscopic retrograde cholangiopancreatography

### 3. Imaging

- ▶ MRI scans
- ▶ Bone marrow examination
- ▶ DTPA renal scans
- ▶ Renal and liver biopsies

### 4. Others

- ▶ Bronchoscopy
- ▶ Skin biopsy

## 4. Practical procedures

### Introduction

Training in some practical procedures may have taken place in the PRHO grade but it is important that skills are developed and widened so that SHOs become competent and feel confident to perform commonly required practical procedures. Listed here are those procedures in which PRHOs and SHOs should be competent and feel confident to perform **on completion** of medical jobs. We have also identified procedures that may require further experience as a specialist registrar.

Again, these are a minimum standard and not meant to be restrictive.

### Aims

To produce physicians who are competent and confident to perform common practical procedures required for diagnosis and management of patients with general medical problems.

### Methods of learning

In general SHOs should be trained in practical procedures by:

- ▶ reading up on the theory or studying virtual training packages on the Internet
- ▶ observing first hand
- ▶ being themselves observed performing the procedure by a competent practitioner who has recent relevant experience of the procedure
- ▶ using skills laboratories where available.

#### A. General knowledge and skills

For each procedure SHOs should:

- ▶ know indications and contraindications

and be able to:

- ▶ explain the procedure to the patient including possible complications and gain informed consent for procedures carried out by the SHO
- ▶ prepare the required equipment including a sterile field
- ▶ position the patient and give pre-med/sedation as required, involving the anaesthetist where appropriate
- ▶ adequately prepare the skin including local anaesthetic
- ▶ arrange appropriate aftercare/monitoring
- ▶ safely dispose of equipment including sharps
- ▶ document the procedure, including labelling of samples and instructions for monitoring post procedure
- ▶ record complications

*continued*

**PRHOs should be competent and confident to perform:**

- ▶ venepuncture, cannulation and venesection
- ▶ blood cultures from peripheral and central sites
- ▶ intravenous infusions including the prescription of fluids, blood and blood products
- ▶ an ECG
- ▶ arterial blood sampling
- ▶ injection – subcutaneous, intradermal, intramuscular and intravenous
- ▶ urethral catheterisation – male and female

**SHOs should be competent and confident to perform:**

- ▶ elective DC cardioversion
- ▶ insertion, pressure measurement and care of central venous lines\*
- ▶ use of a temporary pacing box and external pacing machine
- ▶ tracheostomy management
- ▶ pleural and ascitic fluid aspiration
- ▶ intercostal drain insertion and management\*
- ▶ nasal support ventilation
- ▶ knee joint aspiration
- ▶ proctoscopy
- ▶ lumbar puncture\*

**Procedures for which a specialist registrar may require further experience:**

- ▶ temporary cardiac pacing\*
- ▶ nasal support ventilation

*Note:* For invasive procedures (indicated by \*), prior practice in a clinical skills lab/manikin is desirable. SHOs should have access to a clinical skills lab.

*continued*

## B. Specific knowledge and skills for procedures

Procedure	Knowledge	Skills
i. Elective DC cardioversion	Necessity of synchronised shock Starting voltage Number of shocks	Safely use defibrillator
ii. Central venous lines	Anatomical markers for central veins Strategies to ensure measurements are accurate	Safely cannulate vein Perform the Seldinger technique Secure line in place/review position on X-ray Connect manometer & measure CVP
iii. Use of temporary cardiac pacing box and wire – see central line cannulation	Use of flotation device/safe use of fluoroscopy (radiation protection course) Anatomical markings/fluoroscopic appearances of a good right ventricular position	Manipulate wire to right ventricle Secure line in place Use pacing box and external pacer including connection & settings
iv. Tracheostomy management	Tube care Infection risk	Safely change tubes
v. Pleural and ascitic fluid aspiration	Safe approach	Puncture pleural/ascitic space Withdraw fluid
vi. Intercostal drain	Anatomical markings How an underwater seal functions	Perform safe blunt dissection to pleural space and insert intercostal tube Connect underwater seal and secure in place Assess and manage a drain Safely remove the tube
vii. Nasal support ventilation	Principles of BiPAP and CPAP Monitoring and limitations	Fit masks Understand pressures
viii. Knee joint aspiration	Anatomical markers of joint space	Safely puncture the joint Remove samples
ix. Proctoscopy	Normal and abnormal appearance	Safe insertion
x. Lumbar puncture	Anatomical markers Appropriate timing of procedure	Safely puncture Measure CSF pressure Remove samples and interpret results

# 5. Additional topics for SHOs in the specialties

## Introduction

These are specialty related subjects in which SHOs could expect some training and with which they should be familiar. This section is **not** considered as **core**.

## Aims

The aim of including these additional topics in the curriculum is to enable physicians to acquire a broad knowledge of common problems of patients in medical specialties.

### 5.1 Cardiology

#### A. Indications for and management of patients before and after coronary artery:

- i. angiogram
- ii. angioplasty
- iii. stent insertion

#### B. Prosthetic heart valves:

- i. types
- ii. indications
- iii. complications

#### C. Presentation, diagnosis and management of pericardial disease including:

- i. pericarditis
- ii. pericardial effusion and cardiac tamponade
- iii. constrictive pericarditis

#### D. For patients requiring permanent pacemakers:

- i. indications
- ii. types of pacemaker available
- iii. complications
- iv. ECG patterns – normal pacing and failure to pace

#### E. Indications and interpretation of cardiac investigations:

- i. exercise stress test
- ii. 24-hour ECG monitoring
- iii. cardiomemo
- iv. echocardiography (trans-thoracic and trans-oesophageal)
- v. radioisotope perfusion scan

#### F. Cardiomyopathy

#### G. Adult congenital heart disease

## 5.2 Clinical pharmacology

### A. Criteria for selecting drugs from the same class:

- i. approved indications
- ii. clinical trial data
- iii. pharmacokinetics
- iv. pharmacodynamics
- v. adverse effects
- vi. drug interactions
- vii. cost effectiveness

### B. Role of:

- i. National Institute for Clinical Excellence
- ii. Committee on Safety of Medicines
- iii. Hospital formulary committee

### C. Prescribing for:

- i. the elderly
- ii. pregnancy and breast feeding
- iii. patients with renal disease
- iv. patients with hepatic disease

### D. Principle stages in drug development

## 5.3 Dermatology

### A. Recognition of skin tumours, including:

- i. common benign tumours (melanocytic naevus (mole), seborrhoeic wart, pyogenic granuloma)
- ii. important malignant
- iii. premalignant tumours

### B. Recognition and management of cutaneous infection (bacterial, viral and fungal) and infestations (scabies) including ability to take a skin scrape for mycology/scabies and nail samples for mycology

### C. Recognition of:

- i. acne
- ii. lichen planus

### D. Causes of alopecia

### E. Causes and management of leg ulcers including how to measure ankle-brachial pressure index

### F. Diagnosis and management of bullous disorders

### G. Use of topical treatments, ultraviolet light and immunosuppression, including the ability to write a prescription for topical treatment with an emollient

### H. Ability to provide advice on care of the hands and on sun-protection

### I. Surgical procedures including punch skin biopsy, curettage and cautery, cryosurgery

*continued*

#### 5.4 Diabetes and endocrinology

**Clinical features, initial investigation and management of:**

- i. Pheochromocytoma
- ii. Diabetes Insipidus
- iii. Cushing's syndrome
- iv. Hypopituitarism

#### 5.5 Gastroenterology

**A. Presenting features of chronic pancreatitis**

**B. Presenting features and investigation of liver tumours**

#### 5.6 Genitourinary medicine

**A. Causes, investigations and initial therapy of:**

- i. proctitis
- ii. prostatitis
- iii. epididymo-orchitis
- iv. anogenital warts
- v. genital herpes
- vi. vulvitis and balanitis
- vii. scabies and pediculosis

**B. Clinical features of syphilis and interpretation of treponemal serology**

**C. Clinical features and investigations of disseminated gonococcal infection and sexually acquired reactive arthritis**

**D. Non-genital manifestations of bacterial and viral sexually transmitted infections**

**E. Confidentiality/partner notification**

**F. Knowledge of sexual behaviour and associated risks**

**G. Sexual health promotion**

**H. Common causes of sexual dysfunction and simple therapy**

**I. Methods of contraception including emergency contraception**

**J. Acute pelvic pain in women**

**K. Acute scrotal pain/swelling**

**L. Acute genital/perineal pain**

} causes and immediate management

*continued*

## 5.7 Geriatric medicine

- A. Physician's role in the multidisciplinary team
- B. Prescribing for older people
- C. Osteoporosis – diagnosis, prevention and treatment – see rheumatology and include fracture prevention strategies

## 5.8 Haematology

- A. Congenital and acquired haemolytic anaemias
- B. Presentation, classification, diagnosis and management (broad aspects) of:
  - i. leukaemias
  - ii. lymphomas
  - iii. myeloma
  - iv. myeloproliferative disorders
- C. Indications for, complications of and safe care of long lines
- D. Safe handling and administration of chemotherapy
- E. Thrombocytosis and thrombocytopenia
- F. Bleeding disorders including haemophilia
- G. Indications, complications and procedure for bone marrow aspiration

## 5.9 Infection

- A. Clinical features of
  - i. leptospirosis
  - ii. Lyme disease
- B. Tropical infections – clinical features of:
  - i. leishmaniasis
  - ii. schistosomiasis
  - iii. amoebiasis
  - iv. filariasis
  - v. hookworm
  - vi. viral haemorrhagic fevers

## 5.10 Medical oncology

- Concepts of:
  - i. curative care
  - ii. palliative care

*continued*

## 5.11 Neurology

**A. Intracranial tumours – presenting features and initial management**

**B. Alcohol related neurological syndromes**

**C. Cancer and the nervous system**

**D. Causes and investigation of:**

- i. peripheral neuropathy
- ii. myopathy

**E. Causes of:**

- i. cerebellar syndromes
- ii. paraparesis

**F. Clinical features, initial investigation and management of:**

- i. motor neurone disease
- ii. myasthenia gravis
- iii. muscular dystrophies
- iv. myotonic dystrophy
- v. vitamin B12 deficiency
- vi. benign intracranial hypertension
- vii. vertigo
- viii. Bell's, 3rd and 6th nerve palsies

## 5.12 Palliative medicine

**A. Organisation of palliative care services in hospital, hospices and community**

**B. Communication issues: eg understanding denial and collusion while breaking bad news**

**C. Palliative care emergencies, eg poorly controlled pain, delirium, acute psychological distress**

**D. Ethics at the end of life (see Generic Skills)**

- i. withdrawing and withholding treatment
- ii. advance directives and DNR decisions
- iii. requests for euthanasia and understanding principle of double effect

**E. Caring for the dying patient and their family**

- i. awareness of cultural and religious influences

*continued*

### 5.13 Psychiatry

#### A. Major psychiatric disorders and their treatment

- i. schizophrenia
- ii. paranoid disorders
- iii. affective disorders including anxiety, bipolar affective disorder
- iv. obsessive compulsive disorder
- v. phobias

#### B. Eating disorders – recognise and seek appropriate specialist help

#### C. Learning difficulties – features of the commoner syndromes

### 5.14 Renal medicine

#### A. Incidence, natural history, assessment initial management and complications of:

- i. diabetic nephropathy
- ii. glomerulonephritis
- iii. hypertensive renal disease
- iv. reflux nephropathy
- v. obstructive nephropathy
- vi. renovascular disease
- vii. interstitial nephritis
- viii. polycystic kidneys
- ix. vasculitides

#### B. Calcium and phosphate balance in chronic renal failure

#### C. Renal transplantation

### 5.15 Respiratory medicine

#### A. Presentation, investigation and initial management of:

- i. obstructive sleep apnoea
- ii. sarcoidosis
- iii. bronchiectasis including cystic fibrosis
- iv. pulmonary vasculitis
- v. empyema
- vi. allergic alveolitis and bronchopulmonary aspergillosis
- vii. mesothelioma

#### B. Indications for lung transplantation

*continued*

## 5.16 Rheumatology

### A. Diagnosis and management of:

- i. Paget's disease
- ii. osteomalacia
- iii. ankylosing spondilitis
- iv. reactive arthropathy
- v. psoriatic arthropathy
- vi. enteropathic arthritis

### B. Systemic vasculitic syndromes

### C. Bechet's syndrome

# Contacts

## **Royal College of Physicians of London**

11 St Andrews Place  
Regent's Park  
London NW1 4LE  
Tel: 020 7935 1174  
Fax: 020 7487 5218  
[www.rcplondon.ac.uk](http://www.rcplondon.ac.uk)

## **Royal College of Physicians of Edinburgh**

9 Queen Street  
Edinburgh EH2 1JQ  
Tel: 0131 225 7324/5  
Fax: 0131 220 3939  
[www.rcpe.ac.uk](http://www.rcpe.ac.uk)

## **Royal College of Physicians and Surgeons of Glasgow**

234–242 St Vincent Street  
Glasgow G2 5RJ  
Tel: 0141 221 6072  
Fax: 0141 221 1804  
[www.rcpsglasg.ac.uk](http://www.rcpsglasg.ac.uk)

## **General Medical Council**

178–202 Great Portland Street  
London W1N 6JE  
Tel: 020 7580 7642  
Fax: 020 7915 3641  
[www.gmc-uk.org](http://www.gmc-uk.org)

## **British Medical Association**

BMA House  
Tavistock Square  
London WC1H 9JP  
Tel: 020 7383 6164  
Fax: 020 7383 6383  
[www.bma.org.uk](http://www.bma.org.uk)

## **Overseas Doctors Association in the UK Ltd**

ODA House  
316A Buxton Road  
Great Moor  
Stockport SK2 7DD  
Tel: 0161 456 7828  
[www.odauk.com](http://www.odauk.com)

## **The Specialist Training Authority of The Medical Royal Colleges**

70 Wimpole Street  
London W1M 7DE  
Tel: 020 7935 8586  
Fax: 020 7935 9031  
[www.sta-mrc.org.uk](http://www.sta-mrc.org.uk)

## **Academy of Medical Royal Colleges & Their Faculties**

1 Wimpole Street  
London W1G 0AE  
Tel: 020 7290 3913  
Fax: 020 7290 3914  
[www.aomrc.org.uk](http://www.aomrc.org.uk)

## **Scottish Council for Postgraduate Medical Education**

12 Queen Street  
Edinburgh EH2 1JE  
Tel: 0131 225 4365  
Fax: 0131 225 5891  
[www.show.scot.nhs.uk/scpmde](http://www.show.scot.nhs.uk/scpmde)

## **National Advice Centre for Postgraduate Medical Education**

British Council  
Bridgewater House  
58 Whitworth Street  
Manchester M1 6BB  
Tel: 0161 957 7218  
Fax: 0161 957 7029  
[www.britishcouncil.org/health/nacpme/](http://www.britishcouncil.org/health/nacpme/)

## **Conference of Postgraduate Medical Deans (COPMed)**

20 Guildford Street  
London WC1N 1DZ  
Tel: 020 7404 2931  
Fax: 020 7404 2930  
[www.copmed.org.uk](http://www.copmed.org.uk)

## **Royal College of Anaesthetists**

48–49 Russell Square  
London WC1B 4JY  
Tel: 020 7813 1900  
Fax: 020 7813 1876  
[www.rcoa.ac.uk](http://www.rcoa.ac.uk)

**Royal College of General Practitioners**

14 Princes Gate  
Hyde Park  
London SW7 1PU  
Tel: 020 7581 3232  
Fax: 020 7225 3047  
www.rcgp.org.uk

**Joint Committee on Postgraduate Training  
for General Practice**

14 Princes Gate  
Hyde Park  
London SW7 1PU  
Tel: 020 7581 3232  
www.jcptgp.org.uk

**Royal College of Paediatrics & Child Health**

50 Hallam Street  
London W1N 6DE  
Tel: 020 7307 5600  
Fax: 020 7307 5601  
www.rcpch.ac.uk

**Royal College of Psychiatrists**

17 Belgrave Square  
London SW1X 8PG  
Tel: 020 7235 2351  
Fax: 020 7245 1231  
www.rcpsych.ac.uk

**Royal College of Radiologists**

38 Portland Place  
London W1N 4JQ  
Tel: 020 7636 4432  
Fax: 020 7323 3100  
www.rcr.ac.uk

**Faculty of A&E Medicine**

Royal College of Surgeons of England  
35-43 Lincoln's Inn Fields  
London WC2A 3PN  
Tel: 020 7405 7071  
Fax: 020 7405 0318  
www.faem.org.uk

**Faculty of Occupational Medicine**

6 St Andrews Place  
Regent's Park  
London NW1 4LB  
Tel: 020 7487 3414  
Fax: 020 7935 2259  
www.facocmed.ac.uk

**Faculty of Clinical Oncologists**

c/o The Royal College of Radiologists  
38 Portland Place  
London W1N 4JQ  
Tel: 020 7636 4432  
Fax: 020 7323 3100  
www.rcr.ac.uk

**Faculty of Pharmaceutical Medicine**

1 St Andrews Place  
Regent's Park  
London NW1 4LB  
Tel: 020 7224 0343  
Fax: 020 7224 5381  
www.fpm.org.uk

**Faculty of Public Health Medicine**

4 St Andrews Place  
Regent's Park  
London NW1 4LB  
Tel: 020 7935 0243/7468 8111  
Fax: 020 7224 5381  
www.fphm.org.uk

**Association for Palliative Medicine**

Bellis House,  
11 Westwood Road,  
Southampton SO17 1DL  
Tel: 023 8067 2888  
www.palliative-medicine.org

**Association of British Neurologists**

Ormond House  
27 Boswell Street  
London WC1N 3JZ  
Tel: 020 7405 4060  
Fax: 020 7405 4070  
www.theabn.org

**British Cardiac Society**

9 Fitzroy Square  
London W1T 5HW  
Tel: 020 7383 3887  
Fax: 020 7388 0903  
www.bcs.com

**British Association of Dermatologists**

19 Fitzroy Square  
London W1T 6EH  
Tel: 020 7383 0266  
Fax: 020 7388 5263  
www.skinhealth.co.uk

**British Geriatrics Society**

Admark House  
31 St John's Square  
London EC1M 4DN  
Tel: 020 7608 1369  
Fax: 020 7608 1041  
[www.bgs.org.uk](http://www.bgs.org.uk)

**British Society for Rheumatology**

41 Eagle Street  
London WC1R 4AR  
Tel: 020 7242 3313  
Fax: 020 7242 3277  
[www.rheumatology.org.uk](http://www.rheumatology.org.uk)

**British Society of Gastroenterology**

3 St Andrews Place  
Regent's Park  
London NW1 4LB  
Tel: 020 7935 2815  
Fax: 020 7487 3734  
[www.bsg.org.uk](http://www.bsg.org.uk)

**British Society for Haematology**

2 Carlton House Terrace  
London SW1Y 5AF  
Tel: 020 8643 7305  
Fax: 020 8770 0933  
[www.blackwell-science.com/uk/society/bsh/](http://www.blackwell-science.com/uk/society/bsh/)

**British Society of Rehabilitation Medicine**

c/o Royal College of Physicians  
11 St Andrews Place  
Regent's Park  
London NW1 4LE  
Tel: 01992 638865  
Fax: 01992 638865  
[www.bsrm.co.uk](http://www.bsrm.co.uk)

**British Thoracic Society**

17 Doughty Street  
London WC1N 2PL  
Tel: 020 7831 8778  
Fax: 020 7831 8766  
[www.brit-thoracic.org.uk](http://www.brit-thoracic.org.uk)

**Diabetes UK**

10 Parkway  
Camden  
London NW1 7AA  
Tel: 020 7424 1010  
[www.diabetes.org.uk](http://www.diabetes.org.uk)

**Medical Society for the Study of Venereal Diseases**

Secretariat  
1 Wimpole Street  
London W1M 8AE  
Tel: 020 7290 2968/3904  
Fax: 020 7290 2989  
[www.mssvd.org.uk](http://www.mssvd.org.uk)

**Hospital Infection Society**

**Head Office**

162 Kings Cross Road  
London WC1X 9DH  
Tel: 020 7713 0273  
Fax: 020 7713 0255  
[www.his.org.uk](http://www.his.org.uk)

**The Renal Association**

Triangle House  
Broomhill Road  
London SW18 4XH  
Tel: 020 8875 2413  
Fax: 020 8875 2424  
[www.renal.org](http://www.renal.org)

**National Counselling Service for Sick Doctors**

[www.helpdoctor.co.uk](http://www.helpdoctor.co.uk)

A confidential, independent advisory service for sick doctors supported by the BMA and the medical royal colleges. If a doctor is concerned about his or her health or the health of a colleague, confidential advice is available from senior doctors in all branches of the profession. To obtain the name of an appropriate adviser please telephone the national contact point on 0870 2410 535.