**University of Oxford Clinical Medical School**

**FOR FOURTH YEAR STUDENTS**

**during**

**District General Hospital Placements**

**INFORMATION FOR GP TUTORS**

***CLINICAL SKILLS TEACHING* in GENERAL PRACTICE**

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**GP teaching sessions**

**January – June 2020**

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***Course Contacts***

**Teaching Team at Department of Primary Care Health Sciences**

If you have any questions about the timetable or the logistics of GP placements, please contact:

**Course Administrator:**

Maria Luque

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If you have any other questions about the content of the course, please get in touch with:

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**Local Course Convenors**

There are four DGH placements, and each district has its own local lead GP tutor:

**Northampton**

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**Aims of the GP Teaching sessions during the DGH placement**

Students spend 3 half-day sessions in a GP surgery local to their DGH placement. These sessions aim to complement the hospital-based clinical skills teaching in Year 4.

**In the setting of primary care**, students should:

1. develop their history taking, examination, and communication skills
2. increase their knowledge of core medical conditions
3. consider the psycho-social impact of illnesses
4. develop their professional approach to patients and colleagues

**How these GP Teaching Sessions fit into the Oxford course**

These three GP tutor-led teaching sessions take place in the middle and final third of the fourth year of the Oxford medical course. The sessions are part of the “*District General Hospital (DGH) Placemen*t”, when students spend six-weeks at one of four DGHs located outside Oxfordshire (Swindon, Northampton, High Wycombe and Reading).

*Students’ Previous Clinical Experience*

The first three years of the Oxford degree focus on the biomedical sciences. During this time, students do have some early patient contact as part of the “*Patient & Doctor I Course*”. This involves eight sessions with a GP, talking to patients with a range of conditions, such as diabetes and cardiovascular disease. The aim is to appreciate the impact of the patient’s illness on their wellbeing, rather than learning formal clinical skills.

*Year 4 – the first year of the clinical course*

At the beginning of Year 4, before coming to this placement, students will have completed the six week “*The Patient & Doctor II Course”* which is an introduction to clinical medicine. This covers:

* An introduction to principles of history-taking and examination, including opportunities to practise these skills on hospital wards.
* Developing communication skills in sessions involving actors and role-play.
* Learning basic practical procedures in the simulated environment of the clinical skills lab (and sometimes in settings with real patients). These include hand washing, measurement of vital signs, phlebotomy and cannulation.

*The overall structure of Year 4:*

1. *The Patient Doctor II Course* (6 weeks): a foundation course introducing clinical skills and the workings of health care teams; a mixture of seminars, lectures and clinical attachments. Part of this course included a **one-week GP placement**, which aims to provide an introduction to the work of the PHCT, the spectrum of illness seen in the community, the psycho-social influences on health and disease and clinical skills practice.
2. *Laboratory Medicine Course (8 weeks*) just before Christmas. Students acquire knowledge and understanding of disease processes to enable them to apply and interpretlaboratory-based investigation of patients in the diagnosis and treatment of disease.
3. *Surgical Placement (6 weeks*): attachment to a surgical firm at Oxford Radcliffe hospitals.
4. *Medical Placement (6 weeks*): attachment to a medical firm in Oxford Radcliffe hospitals.
5. *District General Hospital Placement (6 weeks)*: Three weeks each of medicine and surgery. **During this placement students spend three half-day sessions in a local general practice**.
6. *Special study module (4 weeks):* students select a particular subject to study. Students choose options ranging from scientific projects, through chronic disease to medical humanities.

During Year 4 students also receive teaching in communication skills, medical ethics and law, evidence-based medicine, basic life support, human sexuality and complimentary therapy.

For the surgical, medical and DGH/Special Study module placements, the student body divides into 3 groups who rotate through each of the attachments in turn. Thus, some students will do the DGH placement first followed by medicine and surgery in Oxford, while for others the Oxford rotations will come first.

The overall aims of Year 4 are to acquire:

1. Basic clinical ***skills*** (e.g. communication, history, examination, case analysis, presentation) and to develop critical scientific skills.
2. ***Knowledge****:* an understanding of the core curriculum in medicine and surgery and an appreciation of the psycho-social influences on health and illness.
3. ***Attitudes***: to be able to interact professionally with patients and colleagues and to take responsibility for their own learning.

**Teaching & Learning Tasks**

**How the sessions will run and suggested lesson plans**

How you teach these sessions is up to you. We hope you can take into account your students’ specific needs and requests as much as possible. Before the first session your students will have been sent a ‘Learning Needs Self-Assessment’ Form. This document asks them to rate their confidence in various clinical areas (eg respiratory exam, history taking etc) and students are asked to email you these forms before the first session; we hope you can consider their learning needs when planning your session (although we realise this is not always going to be feasible to satisfy all). An example of the ***Learning Needs Self-Assessment*** for students is given in this handbook in the ‘resources’ section.

We welcome flexibility in how you teach the clinical skills required. For example, you may wish to run a ‘surgical lumps and bumps’ or dermatology session. You may also wish to run a session on a topic for which we have not provided you in the resources section of this handbook. It is important however that you are clear about your learning objectives and these relate to the key objectives of this DGH GP teaching.

Student feedback indicates a preference, where possible, to see patients with active problems and/or physical signs. So a completely stable patient with

asthma or irritable bowel syndrome presents fewer learning opportunities for the students.

GP tutors will arrange for patients with problems relevant to the system under study to attend the practice specifically for teaching. For each system, we have recommended symptoms and conditions suitable for student learning, selected on the basis of being important conditions commonly seen in primary care (see resources section) which includes suggested learning objectives and key points in clinical method. Tutors may use conditions other than these.

The students should meet with the patients and perform a clinical assessment (history and relevant physical examination). GP tutors will give feedback on their clinical method. The students will then analyse their findings and present them to their peers and tutor for feedback and discussion.

The learning objectives suggested for each system (see resources section) are comprehensive, we realise that it would be difficult to cover all of them in one session. They are merely there to guide you if you are running for example a neurology session. The objectives were compiled to illustrate the potential learning opportunities in each session, and we envisage that tutors will modify them to suit the students' individual needs e.g. greater concentration on history and examination skills for students at the beginning of the year. Student feedback suggests that, even at an early stage, they do not wish to be confined to history and examination, and like to consider all aspects of a problem (diagnosis, management etc.). We therefore recommend that each session begins by establishing the background of the student group and clarifying the objectives of the session in the light of their needs. Where relevant, we have suggested possible areas for discussion.

**Suggested session plan**

We have provided a suggested plan for organising individual sessions. This illustrates one way in which four students could all be involved within the time scale of the session. Tutors can adapt this for their own use. Please try to make direct observation and feedback a key feature of these sessions; student want more of this kind of teaching.

Tutors may find it helpful to keep a database of patients with appropriate conditions who are willing to be involved in teaching. Such patients can then be contacted in advance of the session to check their availability. Tutors may find it useful to provide patients with a written reminder of the date and time of the session together with information on what they can expect to happen - section 4 (page 14) contains an example letter. Tutors may also wish to consider having a process to thank the patient for their help afterwards.

***Introduction (10 min)***

Students and tutors meet to discuss the session/task and, if necessary, modify the objectives in the light of individual student needs.

##### ***Time with patients (45 min)***

Two (or more) patients attend the surgery specifically for teaching. Students divide into pairs and each pair interviews and examine a patient. One student takes responsibility for the history and the other for the examination. Tutor moves between the two groups, observing and offering feedback on clinical skills.

##### ***Student time without tutor or patient (15 min)***

Students organise their findings, assess patient's problems and attempt a management plan. Students formally present their cases to the tutor and each other. Usually, all 4 students see two patients briefly followed by presentation/discussion of the cases.

##### ***Break (10 min)***

##### ***Small group discussion (45 min)***

Subsequent discussion could focus on issues such as:

1. clinical skills
2. presentation (including differential diagnosis);
3. physical, psychological and social consequences of the illness
4. management of individual patients (pharmacology, monitoring, follow-up)
5. demonstration of technical devices if appropriate (e.g. asthma inhalers)
6. primary/secondary care interface: when and how to refer
7. Professional attitudes to patients and colleagues
8. Reminder that the patient as an expert in their condition and its impact

##### ***Wrap-up (10 minutes)***

Students identify future learning needs. Tutor and students plan next session.

Other session ideas popular with tutors include:

* Visiting a local nursing home for short cases
* Use ‘on the day’ patients as cases for students
* Bringing short cases into the surgery for students for the whole session
* Bringing one or two short cases for the end of the session
* In 3rd session of final block at end of year providing ‘mock’ OSCE exam practice (eg using ‘real exam timings’ of 8 minutes per case)

**Recommended approach to clinical skills teaching**

The key topics to consider for teaching are as follows:

* Cardiology
* Respiratory
* Gastroenterology
* Renal/Urology
* Neurology
* Diabetes
* Rheumatology
* Peripheral Vascular Disease Session

*With only 3 sessions available, we realise it is impossible to cover all these areas – so you can be selective*. Your choice of topics will depend on the patients you have available, and the needs of the students.

The ***resources section*** at the end of this handbook contains the learning objectives for each clinical topic and is immediately followed by the key points in clinical methods for that area. These materials given later in this handbook were developed in consultation with the relevant specialists. **We stress that they are a resource, and we are not expecting you to teach every detail of physical examination described there**. For example, in the neurology session, please do not try to work through detailed examination of the cranial nerves. Pick a common condition and concentrate on the most relevant areas (e.g. features of an upper motor neurone lesion). It is important to encourage the students to follow a systematic approach, although you may discuss which approaches you personally find most helpful in practice.

For those who want a further reference source, there are a variety of physical examination texts and key clinical points listed in the resources section of this handbook (including a suggested web resource - Clinical Skills Online’s YouTube pages).

**Assessment and Evaluation**

**Feedback and the GP Tutor Report**

Students highly value feedback on their performance during these sessions. Because you will have contact with the students, and will observe their performance, you are in a good position to identify students who may not be achieving competence in dealing with patients. If you have serious concerns about a student's performance please notify Julian Hancock (julian.hancock@phc.ox.ac.uk) promptly so we can inform the medical school and make plans to help.

At the end of each block, tutors should set aside time to give feedback and complete a formal report for each student. This should be done with each student individually. The report is not a ‘pass or fail’ assessment, instead the aim is to help students plan their further development. Please concentrate on feedback that notes strength as well as areas needing extra work.

The Tutor Report is now completed electronically. Each student will email you a ‘ticket code’ that will allow you to open and write your report online. These reports will then be sent automatically to the medical school and will also become embedded into the students’ own e-Portfolios. An example of the report is given in this handbook in the ‘resources’ section.

Please complete a report for every student, including anyone who misses the last session.

**Student evaluation of the course**

Student evaluation of these sessions is undertaken by questionnaire at the end of each block. An example of the form students will use is given in this handbook in the ‘resources’ section. Your student will complete this feedback electronically on their e-portfolio (and copies will be sent to the teaching team in Oxford).

**Resources**

On the following pages:

* Cardiology - and key points about clinical method
* Respiratory - and key points about clinical method
* Gastroenterology - and key points about clinical method
* Renal/Urology - and key points about clinical method
* Neurology - and key points about clinical method
* Diabetes - and key points about clinical method
* Rheumatology Session - and key points about clinical method
* Peripheral Vascular Disease Session – and key points about clinical method

## Cardiology

### **Aims**

To provide students with the opportunity to practise clinical skills appropriate to the care of patients with cardiac disease.

### **Learning Objectives**

At the end of the session students should be able to:

1. Interview a patient with cardiac disease and explore the physical, psychological and social impact of that disease
2. Describe and elicit the risk factors for ischaemic heart disease
3. Examine the cardiovascular system, including blood pressure
4. Organise and record their findings
5. Analyse their findings from the history and examination to reach a provisional assessment of the patient’s problems and begin to formulate plans for further investigation and management
6. Present their findings

### **Suggested symptoms and conditions**

1. chest pain
2. breathlessness
3. palpitations
4. blackouts/dizziness
5. ischaemic heart disease
6. heart failure
7. hypertension
8. valvular heart disease
9. common dysrhythmias e.g. AF

N.B. Students are often overly anxious about their ability to pick up cardiac murmurs and concentrate all their attention on this to the exclusion of the rest of the cardiac examination; it is probably more important that they learn to diagnose ischaemic heart disease and cardiac failure.

## *Key points in clinical method (Cardiology)*

### *Key points in cardiac history*

**Presenting symptoms**

1. Chest pain - frequency, onset, duration, site, radiation, character, intensity, precipitating and relieving factors, associated symptoms, exercise tolerance, limitation of lifestyle
2. Breathlessness-at rest, exertional (exercise tolerance), orthopnoea, paroxysmal nocturnal dyspnoea
3. Ankle swelling
4. Palpitations-get patient to tap rhythm out; fast/slow, regular/irregular, frequency, mode of onset, duration, associated symptoms, precipitating factors, relieving factors (e.g. valsalva)
5. Blackouts/dizziness- circumstances when occur, any warning, ?actual loss of consciousness, duration, associated. symptoms, self-injury, recovery, frequency. Importance of eyewitness account.
6. Intermittent claudication

**Past medical history**

1. Risk factors for ischaemic heart disease (HBP, DM, smoking, hyperlipidaemia, previous IHD, cerebrovascular disease or PVD)
2. Rheumatic fever
3. Recent dental work (infective endocarditis)

**Family history**

1. Ischaemic heart disease
2. Hyperlipidaemia
3. Cardiomyopathy
4. Sudden death
5. Congenital heart disease

**Social history**

1. Smoking
2. Alcohol
3. Occupation
4. Housing
5. Exercise
6. Effects of condition on daily life

**Therapeutic history**

Including drugs for cardiac disease and drugs with cardiac side effects.

### *Key points in cardiac examination*

Position patient at 45 degrees

**General inspection**

1. Well or ill
2. Breathless (at rest or on minimal exertion)
3. In pain

**Hands**

1. Clubbing
2. Splinter haemorrhages
3. Peripheral cyanosis

**Pulse**

Radial and carotid

1. Rate
2. Rhythm
3. Volume- assess at carotid
4. Character- assess at carotid
5. Radio-femoral delay- in coarctation of aorta

**Blood pressure**

For detailed technique see end of this section.

**Jugular venous pressure**

1. Position-vertical height in cm above the manubriosternal angle (normal 1-2cm)
2. Waveform *(need to insert diagram of the waveform)*
3. Prominent a waves in R atrial hypertrophy
4. Cannon a waves in complete heart block
5. Prominent v wave in tricuspid regurgitation
6. Kussmaul's sign (increase in JVP on inspiration) and Friedrich's sign (sharp y collapse and ascent) in constrictive pericarditis and cardiac tamponade.

**Face**

1. Anaemia
2. Central cyanosis
3. Teeth (infective endocarditis)
4. Malar flush

**Praecordium**

*Inspection*

1. Scars from previous surgery
2. Visible pulsation

*Palpation*

Palpate at apex, sternal edge, 2nd intercostal space on left (pulmonary area) and 2nd intercostal space on right (aortic area).

Apex beat

*Position* (displacement may be due to cardiac enlargement or mediastinal shift, check tracheal position)

*Character-* sustained in LVH, tapping in mitral stenosis, hyperdynamic in volume overload

Parasternal heave in RVH

Thrills

*Auscultation*

Positions

1. At apex
2. Lower left sternal edge
3. 2nd intercostal space on left
4. 2nd intercostal space on right
5. At apex with patient rolled on left (for mitral stenosis)
6. At lower left sternal edge with patient sat forward in expiration (for aortic regurgitation)
7. Over the carotids

Use the bell (low pitched sounds) and diaphragm (high pitched) at the apex and the diaphragm elsewhere.

Comment on

*S1*

Synchronous with carotid pulsation. Closure of mitral and tricuspid valves. Increased in mitral stenosis

*S2*

Closure of aortic and pulmonary valves. Aortic component increased in systemic hypertension and decreased in aortic stenosis. Pulmonary component increased in pulmonary hypertension.

*Splitting of S2*: listen in pulmonary area; pulmonary valve normally closes after aortic and separation is increased with inspiration. Reversed splitting (aortic valve closes after pulmonary and sounds get closer on inspiration) in aortic stenosis and left bundle branch block. Wide fixed splitting in atrial septal defect.

*S3*

Low pitched sound heard at apex. Caused by rapid ventricular filling. Normal in young, otherwise sign of heart failure and hyperdynamic states e.g. severe mitral regurgitation.

*S4*

Low pitched sound heard at apex. Caused by atrial contraction delivering a bolus of blood into the ventricle. May occur in healthy elderly, but usually sign of heart failure or left ventricular hypertrophy.

*Clicks*

Early systolic click (ejection click)-opening of congenitally abnormal aortic or pulmonary valve.

Mid systolic click- billowing of mitral valve leaflet in mitral valve prolapse.

*Snaps*

Opening of stenotic mitral valve- high pitched noise occurring in early diastole (earlier than S3), heard at apex and base, and followed by murmur of mitral stenosis.

*Murmurs*

Comment on

1. Timing-systolic or diastolic
2. Nature- ejection systolic, pansystolic etc.
3. Point of maximal intensity

Apex- mitral regurgitation and stenosis

LLSE- VSD, aortic regurgitation (patient sitting forward in expiration), cardiomyopathy

2nd intercostal space on right-aortic stenosis and sclerosis

2nd intercostal space on left-ASD, pulmonary stenosis, pulmonary hypertension

1. Radiation

 to axilla in mitral regurgitation

 to carotids in aortic stenosis

1. Behaviour on inspiration-right sided murmurs increase on inspiration
2. Intensity-soft or loud (grading out of 6 unnecessary)

**Lung bases**

crackles of LVF

**Ankle and sacral oedema**

**Liver**

enlarged in RHF, pulsatile in tricuspid regurgitation.

**Peripheral pulses**

**Feel for abdominal aortic aneurysm**

### *Key points in taking blood pressure*

1. Explain procedure to patient
2. Position patient appropriately

Sitting in chair, arm exposed and resting on a surface with elbow slightly flexed and palm facing upwards.

1. Select appropriate cuff size
2. Apply cuff correctly
3. Obtain an approximation of the systolic pressure

Palpate the radial pulse, inflate cuff until pulse disappears and deflate cuff gradually until pulse becomes palpable again

1. Locate brachial artery in antecubital fossa and position stethoscope over this
2. Inflate the cuff to at least 30 cm Hg above the approximate systolic pressure
3. Slowly deflate the cuff (rate of approx 2 mm Hg per second)
4. Measure systolic and diastolic pressures accurately

 systolic pressure- first appearance of sounds (Korotkoff 1)

 diastolic pressure- disappearance of sounds (Korotkoff 5)

1. Record pressures to nearest 2mm Hg
2. Remove cuff
3. Interpret result (need a number of measurements over time to draw conclusions)
4. Explain result to patient and answer any questions

## Respiratory

### **Aims**

1. To provide students with the opportunity to practise clinical and technical skills appropriate to the care of patients with respiratory disease.

### **Learning Objectives**

At the end of the session students should be able to:

1. Interview a patient with respiratory disease and explore the physical, psychological and social impact of that disease
2. Examine the respiratory system
3. Measure peak flow peak expiratory flow rate
4. Organise and record their findings
5. Analyse their findings from the history and examination to reach a provisional assessment of the patient’s problems and begin to formulate plans for further investigation and management
6. Present their findings

### **Suggested symptoms and conditions**

1. Breathlessness
2. Cough
3. Asthma
4. Chronic obstructive pulmonary disease
5. Lung cancer

### **Key points in clinical method (Respiratory)**

### *Key points in respiratory history*

1. **Presenting Symptoms**
2. Cough
3. Sputum
4. Haemoptysis
5. Breathlessness; acute or chronic, episodic or constant, severity, precipitants
6. Wheeze
7. Chest pain
8. Fever
9. Night sweats
10. Hoarseness
11. Daytime sleepiness, snoring (obstructive sleep apnoea)
12. Morning headaches (chronic ventilatory failure)
13. Current and past management-including understanding and compliance
14. Oedema- Cor pulmonale
15. **Smoking history** including passive smoking
16. **Past medical history**- TB, HIV, CXR abnormalities, cancer at other sites, connective tissue diseases (fibrosis)
17. **Family history**-atopy (asthma, eczema, rhinitis), TB, cystic fibrosis, emphysema, connective tissue diseases
18. **Social history**
19. **Occupational history-** detailed current and past history essential. Key finding is relationship between work exposure and symptoms. Look for causes of occupational asthma (e.g. isocyanates, allergens from animals, insects, flour and grains); extrinsic allergic alveolitis (e.g. Farmers' lung, bird fanciers' lung)-symptoms occur several hours after exposure; pulmonary fibrosis (e.g. asbestosis, silicosis); lung cancer (e.g. asbestosis); Q fever (animals); Psittacosis (birds)
20. **Hobbies-** as for occupation
21. **Alcohol**-pneumonia
22. **effects of condition on daily life**
23. **Therapeutic history** - B blockers, aspirin and NSAIDS as precipitants of air flow limitation, steroids and TB etc., IV drug abuse-lung abscess, HIV

### *Key points in respiratory examination*

Patient should be undressed to the waist

**General Appearance**

1. Well or ill (sweaty/grey in respiratory failure)
2. Temperature
3. Cachexia
4. Breathless at rest or on minimal exertion e.g. undressing
5. Stridor
6. Hoarseness

**Hands**

1. Nicotine staining
2. Clubbing
3. Pulse
4. Flapping tremor chronic carbon dioxide retention in severe chronic obstructive pulmonary disease
5. Wasting of small muscles lung cancer involving brachial plexus
6. Wrist tenderness (Hypertrophic pulmonary osteoarthropathy)

**Neck**

1. JVP
2. Lymph nodes
3. Trachea position

Trachea is pulled towards the side of the lesion in upper lobe collapse and fibrosis and pushed away from the lesion in massive pleural effusion and tension pneumothorax. Also displaced by upper mediastinal masses such as retrosternal goitre

**Face**

1. Central cyanosis
2. Anaemia
3. Ptosis and constricted pupil- Horner's syndrome (apical cancer)

**Chest**

Examine anteriorly and posteriorly by inspection, palpation, percussion and auscultation.

Compare the left and right sides at each stage.

Try to localise any abnormality to the lobe involved.

**Inspection**

1. Shape of chest wall and spine (scoliosis affects respiration, kyphosis doesn't)
2. Scars (radiotherapy or surgery)
3. Prominent veins (Superior vena cava obstruction)
4. Respiratory rate and rhythm
5. Chest wall movement with breathing
6. Intercostal or subcostal indrawing

**Palpation**

1. Tenderness
2. Position of apex beat

Pulled to side of lesion in lower lobe collapse, pushed away from side of lesion in pleural effusion and pneumothorax.

May be impalpable in hyper-expansion secondary to chronic obstructive pulmonary disease

1. Chest wall expansion affected side always moves less
2. Tactile vocal fremitus -the only useful finding is the absence of this over a pleural effusion

**Percussion**

1. Demonstrate correct technique
2. Remember to percuss over clavicles and into axillae and not over erector spinae
3. Check upper level of liver dullness (normally 6th rib in right mid-clavicular line, resonance below this level indicates hyper-expansion),
4. Decreased note in consolidation, effusion, collapse, fibrosis and over a raised diaphragm. It is not possible to detect a difference between a normal and increased percussion note.

**Auscultation**

Use diaphragm of stethoscope (unless patient very thin or hairy), remember to include supraclavicular fossae (use bell) and axillae.

1. Diminished/absent breath sounds: effusion, collapse, consolidation with blocked airway, fibrosis, pneumothorax, raised diaphragm.
2. Bronchial breathing: consolidation, above a pleural effusion, dense fibrosis
3. Added sounds
4. wheeze
5. crackles -analyse crackles by their position in lung fields (localised in infection, bilateral and basal in pulmonary oedema and fibrosis)
6. rub
7. Vocal resonance

***NB Vocal resonance, whispering pectoriloquy and tactile vocal fremitus very rarely used in practice; only helpful if find a decreased percussion note and trying to find out whether consolidation or effusion***

**Post chest**

1. Signs of Cor Pulmonale: oedema, raised JVP, hepatomegaly, tricuspid regurgitation
2. PEFR
3. Examine sputum

## Gastroenterology

### **Aims**

1. To provide students with the opportunity to practice clinical skills appropriate to the care of patients with gastrointestinal disease.

### **Learning Objectives**

At the end of this session students should be able to:

* Interview a patient with gastrointestinal disease and explore the physical, psychological and social impact of that disease.
* Examine the gastrointestinal system
* Organise and record their findings
* Analyse their findings from the history and examination to reach a provisional assessment of the patient’s problems and begin to formulate plans for further investigation and management
* Present their findings

### **Suggested symptoms and conditions**

1. Dyspepsia
2. Dysphagia
3. Jaundice
4. Abdominal pain
5. Change in bowel habit
6. Rectal bleeding
7. Gastro-oesphageal reflux disease
8. Peptic ulcer
9. Irritable bowel syndrome
10. Inflammatory bowel disease
11. Bowel cancer
12. Diverticular disease
13. Gall bladder disease
14. Pancreatic disease
15. Chronic liver disease

##

## *Key points in clinical method (Gastrointestinal System)*

### *Key Points in GI history*

**Presenting Symptoms**

1. Abdominal pain
2. acute or chronic
3. frequency
4. duration
5. site and radiation
6. character
7. aggravating and relieving factors
8. nocturnal pain
9. Weight and/or appetite change
10. Nausea and/or vomiting
11. Heartburn and/or acid regurgitation
12. Problems swallowing (pain or difficulty-solids/liquids)
13. Change in bowel habit (describe bowel habit and stools)
14. Bleeding (haematemesis, melaena, rectal bleeding)
15. Jaundice
16. Dark urine, pale stools
17. Abdominal/ankle swelling
18. Pruritis
19. Lethargy

**Also ask about genitourinary symptoms**

1. Dysuria, frequency, urgency, haematuria, hesitancy, poor flow, dribbling, urinary retention, polyuria, nocturia, anuria, urinary incontinence
2. Urethral or vaginal discharge
3. LMP, possibility of pregnancy, vaginal bleeding

**Past medical history**

Previous episodes of abdominal pain, abdominal surgery, hepatitis

**Family history**

Bowel Ca, inflammatory bowel disease, liver disease

**Social History**

1. Occupation (health care workers and exposure to hepatitis; toxins and chronic liver disease)
2. Alcohol
3. Travel abroad (hepatitis and GI infections)
4. Drug use, blood transfusions, tattoos (hepatitis)
5. Sexual history (hepatitis)
6. Smoking (GORD and PUD)
7. effects of condition on daily life

**Therapeutic history**

Include treatment for GI conditions and drugs which have GI side effects.

Many drugs affect the GI tract and liver e.g. NSAIDs (GI bleeding); antidepressants (constipation); antibiotics (diarrhoea).

### *Key points in GI examination*

**General Appearance**

1. Well or ill
2. In pain
3. Temperature
4. Cachexia
5. Jaundice
6. Confusion (hepatic encephalopathy)

**Hands**

1. Clubbing
2. Leuconychia (liver disease and other causes of low albumin)
3. Koilonychia (iron deficiency)
4. Palmar erythema (liver disease, pregnancy, thyrotoxicosis, rheumatoid arthritis)
5. Dupuytren's contracture (alcohol, manual workers, familial)
6. Liver flap
7. Pulse

**Face**

*Eyes*

1. Anaemia
2. Jaundice
3. Iritis (inflammatory bowel disease)
4. Kaiser-Fleischer rings (corneal copper deposits in Wilson's disease)
5. Xanthomata (chronic cholestasis)

*Parotids*

1. Enlarged in alcohol abuse

*Mouth*

1. fetor (alcohol, liver failure, uraemia)
2. stomatitis
3. ulcers
4. telangiectasia (hereditary haemorrhagic telangiectasia)
5. localised pigmentation (Peutz-Jeger's syndrome- bowel polyps and Ca)

**Neck**

1. Lymph nodes
2. JVP

**Chest**

1. loss of body hair
2. gynaecomastia
3. bruising (seen elsewhere)
4. spider naevi (seen elsewhere)
5. scratch marks (seen elsewhere)
6. slate grey pigmentation of haemochromatosis (seen elsewhere)

**Abdomen**

Examine with the patient lying flat with 1 pillow

*Inspection*

1. Shape: distension, localised masses
2. Scars
3. Visible peristalsis (thin normal, gastric outflow obstruction, bowel obstruction)
4. Prominent veins ( IVC obstruction, portal hypertension- determine direction of flow)
5. Bluish discoloration (periumbilical in pancreatitis and Ca pancreas (Cullen's) and in flanks in pancreatitis (Gray Turner's))

*Palpation/percussion*

Palpate each quadrant systematically, superficial and then deep palpation looking for tenderness, guarding, rebound tenderness and masses.

Liver

Start in LIF and move towards RUQ with radial border of R hand. Confirm any enlargement with percussion (percuss upper border to see if displaced downwards by hyper-expanded lungs). If enlarged state size (cm below costal margin), texture (hard or soft), whether regular or irregular, whether tender, whether pulsatile.

Gallbladder

If distended palpable below R costal margin.

Spleen

Start in RIF and move towards LUQ. Roll patient on R side if spleen not felt initially. Confirm any enlargement with percussion.

Kidneys

Palpate bimanually

Check for abdominal aortic aneurysm

Check for ascites (dullness in flanks, shifting dullness)

Bladder

Groins

1. Lymph nodes
2. Herniae (get patient to stand)

*Auscultate*

Bowel sounds, listen over liver, spleen and renal areas for bruits and rubs.

**Genitalia**

**Rectal examination (test for faecal occult blood)**

**Vaginal examination**

**Urinalysis**

## Renal/Urology

### **Aims**

1. To provide students with the opportunity to practise clinical skills appropriate to the care of patients with renal/urological disease.

### **Learning Objectives**

At the end of this session students should be able to:

1. Interview a patient with renal/urological disease and explore the physical, psychological and social impact of that disease
2. We do not expect you to teach pelvic or rectal examination, but you should discuss when they are appropriate
3. Organise and record their findings
4. Analyse their findings from the history and examination to reach a provisional assessment of the patient’s problems and begin to formulate plans for further investigation and management
5. Present their findings

### **Suggested conditions**

1. Benign prostatic disease
2. Prostatic cancer
3. Bladder cancer
4. Chronic renal failure

## *Key points in clinical method (Renal/Urology)*

### *Key points in the Renal/Urology session*

**Presenting Symptoms**

1. dysuria
2. frequency
3. urgency
4. strangury
5. oliguria/anuria
6. polyuria
7. nocturia
8. abnormalities of character of stream (male patients): hesitancy, poor flow, terminal dribbling
9. retention of urine
10. incontinence of urine
11. red discoloration of urine (haematuria, haemoglobinuria, myoglobinuria, beetroot, rifampicin)
12. stones/gravel in urine
13. pain: loin, groin or suprapubic - ?radiation to the groin or scrotum
14. fever
15. symptoms suggestive of chronic renal failure: anorexia, vomiting, fatigue, hiccup, insomnia, itching, bruising, oedema, anuria, oliguria, nocturia, polyuria.
16. testicular pain
17. scrotal swelling
18. menstrual history
19. menarche, menopause
20. length and regularity of cycle
21. LMP
22. dysmenorrhoea; menorrhagia; intermenstrual, post-coital or post menopausal bleeding
23. pregnancy: number and any complications
24. infertility
25. sexual history
26. sexual contacts
27. contraception
28. urethral or vaginal discharge or irritation
29. genital rash
30. dyspareunia
31. impotence
32. loss of libido

**Past medical history**

1. urinary tract infection (recurrent/childhood)
2. urinary tract calculi
3. abnormalities on urinalysis
4. diabetes
5. gout
6. hypertension
7. vascular disease
8. previous surgery

**Family history**

1. diabetes
2. hypertension
3. inherited renal disease e.g. polycystic kidneys, Alport’s syndrome (deafness and renal impairment)

**Social History**

1. occupation (exposure to nephrotoxic substances)
2. smoking
3. alcohol
4. effects of condition on daily life- especially important in chronic renal failure

**Therapeutic history**

1. therapeutic drugs and nephrotoxic drugs
2. dialysis
3. fluid and dietary restrictions in patients with chronic renal failure

### *Key points in genitourinary examination*

**General inspection**

1. well or ill?
2. hydration status
3. any signs of chronic renal failure (CRF)? - sallow complexion; hyperventilation; hiccups, fetor, drowsiness (all late signs)

**Hands**

for signs of CRF

1. nails: leuconychia, brown lines
2. vascular shunts
3. asterixis (flapping tremor in terminal uraemia)

**Skin**

1. signs of CRF: bruising, pigmentation, scratch marks
2. clues to aetiology of renal disease e.g. vasculitic rash

**Face**

1. signs of CRF: uraemic fetor, anaemia, jaundice, band keratopathy in eyes
2. clues to aetiology of renal disease e.g. rash (SLE), skin tethering (scleroderma), diabetic or hypertensive fundi (hypertension may also be consequence of renal disease)

**Neck**

1. JVP (hydration status, raised in CRF due to salt and water retention and cardiac failure)
2. carotid artery bruits (vascular disease)

**Cardio-respiratory**

1. blood pressure
2. signs of CRF: pericarditic rub, pulmonary oedema, peripheral oedema

**(Other signs in CRF include:**

**musculoskeletal:** myopathy, bony tenderness

**neurological:** carpal tunnel syndrome, peripheral neuropathy)

**Abdomen**

Examine with the patient lying flat with 1 pillow

*Inspection*

1. shape: distension (polycystic kidneys, ascites), localised masses (e.g. transplanted kidney)
2. scars (nephrectomy, renal transplant, peritoneal dialysis)

*Palpation/percussion*

Palpate each quadrant systematically, superficial and then deep palpation looking for tenderness and masses.

1. **kidneys**

Palpate bimanually

1. **liver**

may be enlarged due to hepatic cysts in polycystic kidney disease

1. **spleen**

Confirm any enlargement of liver or spleen with percussion.

1. **check for abdominal aortic aneurysm**
2. **check for ascites** (shifting dullness)
3. **bladder** (confirm enlargement with percussion)
4. **groins**

lymph nodes

*Auscultate*

1. bruit in renal artery stenosis

**Genitalia**

**Rectal examination-not to be practised in this session**

**Vaginal examination-not to be practised in this session**

**Urinalysis**

##  Neurology

### **Aims**

1. To provide students with the opportunity to practise clinical skills appropriate to the care of patients with neurological disease.

### **Learning Objectives**

At the end of this session students should be able to:

1. Interview a patient with neurological disease and explore the physical, psychological and social impact of that disease
2. Perform a basic screening neurological examination
3. Organise and record their findings
4. Analyse their findings from the history and examination to reach a provisional assessment of the patient’s problems and begin to formulate plans for further investigation and management
5. Present their findings

### **Suggested presentations and conditions**

1. Weakness
2. Fits/funny turns
3. Stroke
4. Multiple sclerosis
5. Peripheral nerve lesion

Note that the students have a separate neurology attachment in Year 5.

##

## *Key points in clinical method (Neurology)*

### *Key points in neurological history*

*The key to neurological diagnosis is* ***anatomy first, disease second****. The first task is therefore to localise the level of the lesion(s) within the nervous system; aim to distinguish between the brain, spinal cord, peripheral nerve and muscle, rather than to worry too much about the minutiae of cerebral localisation.*

 Establish whether patient right or left handed

**Presenting Symptoms**

1. headache
2. facial pain
3. fits, faints or funny turns (importance of eye witness account)
4. dizziness or vertigo
5. visual disturbance
6. hearing disturbance
7. abnormalities of smell/taste
8. speech difficulties
9. problems swallowing
10. difficulty walking
11. weakness in a limb(s)
12. sensory disturbance
13. involuntary movements or tremor
14. problems with sphincter control (bladder/bowels)
15. disturbance of higher mental functions

**Past medical history**

1. Risk factors for cerebrovascular disease (hypertension, smoking, diabetes, hyperlipidaemia, AF, family history), previous ischaemic heart disease or peripheral vascular disease
2. Previous meningitis, encephalitis, head or spinal injuries, epilepsy, HIV, syphilis.

**Family history**

Neurological or mental illness

**Social history**

1. Occupation- exposure to toxins e.g. heavy metals
2. Smoking
3. Alcohol
4. Effects of condition on daily life

**Therapeutic history**

Include treatment for neurological conditions and drugs which may have neurological side effects.

### *Key points in neurological examination*

*Neurologists perform a basic screening examination on all patients and reserve extended examination for special situations. Students should concentrate on acquiring competency in the basic examination which is described below.*

*A method for more detailed examination is included for reference; it contains useful information on technique and the causes of abnormal signs.*

***Basic screening examination***

**1. Conscious level**

**2. Cranial nerves**

**II, III, IV, VI**

1. visual fields
2. pupils (shape, size, reaction to light and accommodation)
3. eye movements
4. fundoscopy

**V**

1. sensory (light touch in 3 divisions)
2. motor (masseters and pterygoids)

**VII**

1. muscles of facial expression

**IX ,X**

1. ask patient to say "ah" ; look for symmetrical movement of soft palate

**XI**

1. shoulder shrug against resistance; feel trapezius

**XII**

1. inspect the tongue in the mouth (wasting, fasciculation)
2. tongue protrusion

**3. Upper limbs**

**Inspection**

1. in resting position (abnormal posture, abnormal movement, wasting, skin changes)
2. with arms held out in front, palms upwards and eyes closed (observe for drift)

**Tone**

1. flexion/extension at elbow and wrist
2. pronation/supination of forearm

**Power**

1. oppose active movement at the main joints.
2. grade power 0-5

**Reflexes**

1. biceps
2. triceps
3. brachioradialis

**Co-ordination**

1. finger-nose
2. rapid alternating movements

**Sensation**

*Only perform detailed sensory testing if the patient has sensory symptoms or you suspect a sensory abnormality. If no sensory symptoms are reported, you need only test joint position sense and proprioception at the ankle.*

**4. Lower limbs**

**Gait**

**Stance**

Romberg's test

**Inspection**

**Tone**

1. flexion at the knee and roll the leg watching the foot's movement.
2. ankle clonus.

**Power**

1. oppose active movement at the main joints.
2. grade power 0-5

**Reflexes**

1. knee jerk
2. ankle jerk
3. plantar response

**Co-ordination**

1. Heel-shin test

**Sensation**

1. joint position sense at ankle
2. proprioception at ankle

*Only perform detailed sensory testing if the patient has sensory symptoms or you suspect a sensory abnormality.*

***Method for detailed examination***

1. **Higher mental function**
2. **Cranial nerves**
3. **Upper limbs**
4. **Lower limbs**
5. **General**

**1. Higher mental function**

Never routinely examined.

**2. Cranial nerves**

**I** Not routinely assessed.

**II**

 *Visual acuity*

Only test if patient has visual symptoms (then test formally using Snellen chart and correcting for refractive errors).

 *Visual fields*

Test by confrontation using fingers (red and white pins not necessary). Test each eye separately.

 *Fundoscopy*

 Check anterior structures, red reflex and then fundus.

With fundus check colour of disc and state of optic cup, retinal vessels, whether haemorrhages, exudates, pigmentation etc.

**III, IV, VI**

*N.B. not only testing the three cranial nerves here but the whole brain from the frontal lobes through the basal ganglia, cerebellum, supra, inter- and intra-nuclear fibres, the nuclei, cranial nerves, muscles, the orbits: need to emphasise this or everything gets analysed as being a cranial nerve lesion*

 *Pupils*

 Shape, relative sizes, any associated ptosis.

 Reaction to light, both direct and consensual.

Assess for afferent pupillary defect with swinging flash light test (in severe retinal or optic nerve lesion pupil dilates when torch is moved from normal to affected eye).

 Reaction to accommodation.

 *Eye movements*

Check for deviation at rest. Ask patient to look left and right, up and down looking for gaze palsies. To test individual muscles ask patient to follow your hat pin/finger in an H pattern (laterally to the right and left, testing for elevation and depression with the eyes adducted/abducted). Look for failure of movement and nystagmus. Ask about diplopia.

 lateral rectus (VI) abducts the eye

 medial rectus (III) adducts

 superior rectus (III) elevates in abduction

 inferior rectus (III) depresses in abduction

 superior oblique (IV) depresses in adduction

 inferior oblique (III) elevates in adduction

**V**

 *Sensory*

 Test facial sensation in 3 divisions, ophthalmic, maxillary and mandibular.

 Light touch and pinprick

 *Motor*

 Masseters-clench the teeth while you feel the masseter muscles.

 Ptergoids-open the mouth while you try to force it closed. A unilateral lesion

 causes the jaw to deviate towards the weak side on opening the mouth.

 *Corneal reflex*

 Sensory component V, motor VII. Ask patient whether the touch was felt.

 *Jaw jerk*

 Increased in pseudobulbar palsy

**VII**

 *Muscles of facial expression*

 Raise eyebrows, shut eyes tightly, blow cheeks out, show teeth

N.B. upper part of face is spared in unilateral upper motor neurone lesion due to bilateral cortical representation.

 *Taste on anterior 2/3 of tongue*

 Not routinely tested.

**VIII**

 *Hearing*

Whisper a number 60cm from each ear (while blocking sound in the other ear by rubbing your finger on the tragus). Perform Rinne's and Weber's tests if indicated

 *Vestibular function*

 Not routinely tested.

**IX ,X**

Examine the palate, and fauces for pooling of saliva and food residue.

Ask patient to say "ah" and look for symmetrical movement of the soft palate. With a unilateral tenth nerve lesion the soft palate is pulled towards the unaffected side.

Do not test the gag reflex (sensory IX, motor X) routinely.

Taste on posterior third of the tongue (IX) is not routinely tested.

**XI**

Ask the patient to shrug the shoulders against resistance and feel trapezius.

Ask the patient to turn the head against resistance and feel sternomastoid.

**XII**

Inspect the tongue in the mouth looking for wasting and fasciculation.

Ask the patient to protrude the tongue. With a unilateral lesion the tongue deviates to the affected side.

**3. Upper limbs**

**Inspection**

*In resting position*

Wasting, abnormal posture (e.g. flexed posture of UMN lesion), abnormal movement (e.g. tremor, fasciculation), skin changes (neurofibromatosis, atrophic changes, ulceration).

*With arms held out in front, palms upwards and eyes closed*. Observe for drift (UMN lesion, cerebellar lesion or dorsal column loss).

**Tone**

Flexion/extension at elbow and wrist; pronation/supination of forearm; cog wheeling at wrist.

Increased tone in pyramidal (spastic) and extrapyramidal lesions (rigid).

Decreased tone in LMN lesions, recent UMN lesions and cerebellar lesions.

**Power**

Oppose active movement at the main joints.

*Grade power*

5 full power

4 movement against gravity and resistance

3 movement against gravity

2 movement with gravity eliminated

1 flicker of contraction

0 no movement

Root values of movements

*Shoulder*

Abduction C5

Adduction C6,C7,C8

*Elbow*

Flexion C5,C6

Extension C6,C7,C8

*Wrist*

Dorsiflexion C6,C7,C8

Palmar flexion C6,C7,C8

*Fingers*

Extension C7

Flexion C8

Abduction/adduction T1

**Reflexes**

Biceps C5,C6

Triceps C7,C8

Brachioradialis C5,C6

Finger jerks C8

Increased jerks in UMN lesion

Decreased/absent jerks in breach of any part of reflex motor arc (muscle, motor nerve, anterior spinal cord root or anterior horn cell) or sensory arc (sensory root or sensory nerve).

**Coordination**

Finger-nose (intention tremor and past pointing in cerebellar disease).

Rapid alternating movements (disdiadochokinesis in cerebellar disease).

**Sensation**

*Only perform detailed sensory testing if the patient has sensory symptoms or you suspect a sensory abnormality. If no sensory symptoms reported, just test joint position sense and proprioception at the ankle.*

Test with patient's eyes closed.

Look for evidence of abnormality and site of lesion causing abnormality; dermatomal (cord or nerve root lesion), peripheral nerve, peripheral neuropathy (glove), hemisensory (cortical or cord).

Spinothalamic (pain and temperature)

*Pinprick*

Begin proximally on the upper arm, testing in each dermatome and comparing left and right. Map any area of dullness by going from dull to sharp.

*Temperature*

Not routinely tested.

Dorsal columns (vibration and proprioception)

*Vibration*

128 Hz tuning fork. Start distally on a DIP joint. If abnormality detected, test more proximally to determine the level of the lesion.

*Proprioception*

Test the DIP joint of the index finger . Move proximally if abnormality detected.

**Light touch**

Carried in dorsal columns (ipsilateral) and spinothalamics (contralateral) so not very discriminatory.

**4. Lower limbs**

**Stance**

Romberg's test is positive when unsteadiness increases when the eyes are closed (dorsal column loss).

**Gait**

**Inspection**

As for upper limbs

**Tone**

Test flexion at the knee and roll the leg watching the foot's movement.

Test for ankle clonus.

**Power**

Root values of movements

*Hip*

Flexion L1,L2,L3

Extension L5,S1,S2

Adduction L2,L3,L4

Abduction L4,L5

*Knee*

Extension L3,L4

Flexion L5,S1

*Ankle*

Dorsiflexion L4,L5

Plantar flexion S1,S2

*Foot*

Inversion L4,L5

Eversion L5,S1

*Big toe*

Dorsiflexion L5

**Reflexes**

Knee jerk L3,L4

Ankle jerk S1,

Plantar response

**Co-ordination**

Heel-shin test- poor co-ordination in cerebellar and dorsal column disease, the latter is made worse if the eyes are closed.

**Sensation**

*Only perform detailed sensory testing if the patient has sensory symptoms or you suspect a sensory abnormality.*

1. Pin prick
2. Vibration (start at ankle)
3. Proprioception (start at big toe)
4. Light touch

If there is a sensory loss try to establish a sensory level on the trunk.

**Straight leg raise test**

Movement limited by back pain and reproduction of nerve pain in the leg occurs in lumbar disc prolapse.

**5. General**

1. Temperature
2. Neck stiffness and Kernig's sign if suspect meningism
3. Skull and spine- deformities, scars, tenderness.
4. Risk factors for cerebrovascular disease e.g. HBP, AF, carotid bruits

##  Diabetes

### **Aims**

1. To provide students with the opportunity to practise clinical and technical skills appropriate to the care of patients with diabetes.

### **Learning Objectives**

At the end of this session students should be able to:

1. Interview a patient with diabetes and explore the physical, psychological and social impact of the disease.
2. Perform a physical examination to assess for diabetic complications
3. Perform urinalysis
4. Organise and record their findings
5. Analyse their findings from the history and examination to reach a provisional assessment of the patient’s problems and begin to formulate plans for further investigation and management
6. Present their findings

### **Suggested patients:**

Patients with type 1 or type 2 diabetes. If possible, one patient with each would allow more wide-ranging discussion.

This is a large topic! Discussion should be focused on the problems of the patients seen but might include discussion of: diagnostic criteria, dietary treatment, importance of blood pressure control, pharmacology of oral hypoglycaemics and the organisation of care. Tutors may wish to consider involving the practice nurse, for example to discuss how care is structured in the practice and to demonstrate glucose testing.

## *Key points in clinical method (Diabetes)*

### *Key points in diabetes history*

1. Presentation - polyuria, thirst, fatigue, infections
2. Patient's understanding of disease and their management
3. Management: diet, oral hypoglycaemics, insulin. Side effects and compliance
4. Monitoring
5. Control: symptoms, hypos (include warning symptoms of hypos)
6. Primary care contacts
7. Secondary care contacts
8. Complications

*Physical*: macrovascular (cardiovascular, cerebrovascular and peripheral vascular disease), microvascular (eyes, renal, neuro), injection sites.

Assess other risk factors for vascular disease.

*Psychological* (adjustment to diagnosis, compliance)

*Social* (effects on job, driving, family)

1. **PMH**
2. DM/large baby in pregnancy
3. Other endocrine problems
4. Pancreatic disease
5. Other risk factors for vascular disease
6. **FH**

Of diabetes and other endocrine disease and vascular disease.

1. **Social history**
2. Effects of condition on daily life
3. Smoking and alcohol
4. **Therapeutic history**: drugs for treatment of diabetes and drugs affecting glucose tolerance e.g. steroids, thiazide diuretics. Diet.

### *Key points in diabetes examination*

**General Inspection**

1. Weight-obesity, signs of recent weight loss
2. Hydration
3. Injection sites
4. Endocrine facies -Cushings, Acromegaly
5. Conscious level (coma in dehydration, acidosis, plasma hyperosmolality)
6. Kussmaul's breathing (DKA)
7. Ketones smell on breath (DKA)
8. Injection sites

**Lower Limbs**

*Inspection*

1. Skin- hair loss, atrophy, infection, ulceration, pigmented scars, necrobiosis
2. Injection sites
3. Muscle wasting (quads- diabetic amyotrophy due to femoral nerve mononeuritis)

*Palpation*

1. Evidence of peripheral vascular disease - temperature, pulses (posterior tibial, dorsalis pedis)
2. Neurological examination- tone, power, reflexes, sensation: light touch, pinprick and vibration (dorsal column loss, peripheral neuropathy)

**Upper Limbs**

1. BP-lying and standing (postural hypotension)

**Eyes**

1. Visual Acuity
2. Retina through dilated pupils

**Urinalysis**

## Rheumatology

### **Aims**

To provide students with the opportunity to practise clinical skills appropriate to the care of patients with rheumatological disease.

### **Learning Objectives**

At the end of this session students should be able to:

1. Interview a patient with rheumatological disease and explore the physical, psychological and social impact of that disease
2. Examine the rheumatological system
3. Organise and record their findings
4. Analyse their findings from the history and examination to reach a provisional assessment of the patient’s problems and begin to formulate plans for further investigation and management
5. Present their findings

### **Suggested conditions**

1. Rheumatoid arthritis
2. Osteoarthritis

## *Key points in clinical method (Rheumatology)*

## Key points in the Rheumatological history

**Presenting symptoms**

1. Pain: may originate from joints, bones, muscles, ligaments, tendons or nerve compression. (arthralgia- joint pain without swelling, arthritis-pain with swelling)
2. Joint swelling
3. Early morning stiffness

Establish whether symptoms are acute or chronic; distribution (one joint or many, symmetrical or asymmetrical); nature of onset (sudden or gradual); precipitating factors (e.g. trauma, infection, drugs); effects of rest and exercise.

1. Systemic manifestations: e.g. rash, fever, fatigue, mucosal ulceration and Raynaud’s phenomenon in connective tissue diseases, iritis in seronegative arthropathies, rash in psoriasis, dry eyes and mouth in Sjogren’s syndrome, weight loss and diarrhoea in scleroderma. See systemic enquiry.

**Functional assessment**

How independent is the patient at home and at work? Can they manage activities of daily living? What help do they need? Which aids and appliances do they use?

**Past medical history**

1. Trauma
2. Recent infection (including hepatitis, rubella, dysentery, gonorrhoea, non-specific urethritis, streptococcal, TB)
3. Tick bites (Lyme disease)
4. Inflammatory bowel disease
5. Psoriasis

**Family history**

1. Rheumatoid arthritis
2. Primary OA
3. Gout
4. HLA B27 associated diseases e.g. seronegative arthropathies and psoriasis or inflammatory bowel disease without joint involvement.

**Social history**

1. Occupation may be relevant in aetiology e.g. soft tissue rheumatism, OA, PVC workers and systemic sclerosis.
2. Effects of condition on daily life-functional assessment.

**Therapeutic history**

1. Document all current and previous anti-arthritic medications (including side effects) and physiotherapy and joint surgery.

**Systems enquiry**

Many rheumatological diseases are multi-system in nature.

### *Key points in Rheumatological examination*

**General inspection**

1. Gait ?painful, ?difficult
2. Posture
3. Ease of undressing and dressing, sitting down, getting onto couch.
4. ?Cushingoid appearance (steroids)
5. Pattern of joint involvement (e.g. symmetrical in RhA, asymmetrical in psoriatic arthropathy and gout)

**Examination of the joints**

For the sake of brevity the technique for examination of individual joints will not be described. General message is ‘Look, feel, move’

General points:

1. Do not confine your examination to the apparent site of the symptoms: rheumatological symptoms may originate from bones, muscles, ligaments, tendons and nerve compression as well as joints and pain may be referred e.g. hip pain to the knee.
2. Always compare the corresponding joints on the 2 sides of the body.
3. Look for evidence of active inflammation (swelling, erythema, warmth, tenderness)

**Inspection**

1. Swelling
2. Deformity
3. Muscle wasting
4. Skin changes: erythema (active arthritis, infection), atrophy (underlying chronic disease), scars (previous surgery), rashes (psoriasis, vasculitis), nail changes (psoriasis).

**Palpation**

1. Temperature (warm- active synovitis, infection, crystal deposition)
2. Tenderness- does it originate from the joint or surrounding structures e.g. tendons?
3. Swelling: determine nature of swelling; effusion (fluctuant), synovitis (soft and spongy), bony (hard and immobile)

**Movement**

*Passive movement (ask patient to relax and let examiner move the joint) is more informative than active movement (useful in assessing function).*

1. Establish degree of tenderness first
2. Range of movement: may be limited by pain (secondary to muscle spasm), tense effusion or fixed deformity. Estimate the degree of movement from the defined neutral or zero position (rheumatologists use goniometers).
3. Stability: attempt to move joint gently in abnormal directions
4. Crepitus: joints in OA, tendon sheaths in tenosynovitis

**Patterns of joint involvement in various rheumatological conditions**

*Primary OA*: hands (DIP and PIP joints and thumb carpometacarpal joints), knees, feet and hips.

*RhA*: bilateral symmetrical peripheral polyarthritis- hands (PIP and MCP joints) and feet, wrists and ankles, knees and elbows, shoulders and cervical spine.

*SLE*: small joint arthropathy, aseptic necrosis of hip.

*Psoriatic arthropathy*: 5 distinct groups: monoarticular and oligoarticular arthritis of hands and feet, RhA pattern, DIP involvement with psoriatic nail changes, arthritis mutilans (destructive polyarthritis) and sacroilitis with or without peripheral joint involvement.

*Ankylosing Spondylitis*: back- loss of lumbar lordosis and increased thoracic kyphosis, limited spinal flexion and reduction in chest expansion; sacroiliitis; peripheral polyarthritis

**Systemic examination**

*Skin*

RhA: nodules, vasculitic lesions (e.g. nail fold infarcts and ulceration), ankle oedema.

SLE: photosensitivity, butterfly rash, vascultitis, urticaria, purpura, Raynaud’s.

Psoriasis: skin lesions may be minimal, psoriatic nail changes (pitting and onycholysis) usually present.

Gout: tophi (ear helix and over joints)

*Eyes*

RhA: Sjogren’s, scleritis, episcleritis, scleromalacia perforans, anaemia, drug induced cataracts.

SLE: scleritis

Seronegative spondyloarthropathies: iritis, conjuctivitis (Reiter’s)

*Lymph nodes*

lymphadenopathy (septic arthritis and RhA)

*Cardiovascular system*

RhA: pericarditis, valve lesions

SLE: pericarditis, endocarditis, aortic valve lesions

Ankylosing spondylitis: aortic regurgitation

*Respiratory system*

RhA: effusion, fibrosis, infarction, infection, nodules (and Caplan’s syndrome)

SLE: pleurisy, effusion, restrictive lung defect

Ankylosing spondylitis: decreased chest expansion, apical fibrosis

*GI system*

RhA: splenomegaly

SLE: tenderness, hepatosplenomegaly

*GU system*

Reiter’s Syndrome: urethral discharge, circinate balanitis, prostatitis

RhA (amyloid, analgesic nephropathy) and SLE (glomerulonephritis): abnormalities on urinalysis

*Nervous system*

RhA: entrapment neuropathy (carpal tunnel), mononeuritis multiplex, cervical cord compression, peripheral neuropathy

SLE: ataxia, hemiplegia, peripheral neuropathy, cranial nerve lesions

Ankylosing spondylitis: cauda equina compression (rare)

*Muscles*

RhA: muscle wasting round affected joints

SLE: proximal myopathy

##  Peripheral Vascular Disease

### **Aims**

1. To provide students with the opportunity to practise clinical skills appropriate to the care of patients with peripheral vascular disease.

### **Learning Objectives**

At the end of this session students should be able to:

1. Interview a patient with peripheral vascular disease and explore the physical, psychological and social impact of that disease
2. Examine the peripheral vascular system
3. Organise and record their findings
4. Analyse their findings from the history and examination to reach a provisional assessment of the patient’s problems and begin to formulate plans for further investigation and management
5. Present their findings

### **Suggested conditions**

1. Peripheral arterial disease
2. Varicose veins

## *Key points in clinical method (Peripheral vascular disease)*

### *Key points in peripheral vascular disease history*

**Presenting symptoms**

*Arterial disease*

1. pain in the leg muscles on walking: establish which muscles are involved (calf, thigh, buttock), the claudication distance, whether the pain is so bad it necessitates stopping or whether it can be walked through and how long the pain takes to go away.
2. leg pain at rest: which part is affected, does it disturbs sleep, do any positions relieve the pain?
3. leg paraesthesiae (tingling or numbness)
4. cold extremities
5. impotence

*Venous disease*

1. leg pain: dull ache in varicose veins, sudden onset severe pain in deep venous thrombosis
2. swelling: mild oedema in varicose veins, more marked swelling in DVT (amount depends on level of thrombosis)
3. unsatisfactory cosmetic appearance: dilated superficial veins and skin changes (pigmentation, eczema, ulceration) in varicose veins

**Past medical history**

*Arterial disease*

1. other vascular disease: ischaemic heart disease, cerebrovascular disease
2. risk factors for vascular disease: smoking, DM, HBP, hyperlipidaemia
3. possible embolic sources: atrial fibrillation, mitral stenosis, recent MI with mural thrombus, infective endocarditis, aneurysmal disease, peripheral atherosclerosis (ulcerated plaque)
4. trauma

*Venous disease*

1. varicose veins: DVT, pregnancy, pelvic mass
2. DVT: recent surgery, childbirth, hypercoagulable states e.g. polycythaemia, thrombocythaemia, malignancy

**Family history**

*Arterial disease*

1. vascular disease
2. hyperlipidaemia
3. diabetes

*Venous disease*

1. varicose veins

**Social History**

1. smoking
2. effects of condition on daily life- occupation, housing, home support etc.

**Therapeutic history**

Including therapeutic drugs and drugs with vascular side effects e.g. B blockers and arterial disease, OCP and DVT.

### *Key points in examination of the peripheral arterial system*

**General inspection**

1. In pain?
2. Peripheral signs of hyperlipidaemia e.g. xanthelasma, xanthoma, premature arcus

**The lower limbs**

*Inspection*

1. abnormal colour: pale, peripheral cyanosis (particularly extremities)
2. venous guttering
3. trophic changes: thickened skin, purple or black discoloration, blistering, ulceration, gangrene- found over the pressure areas (heel, malleoli, head of 5th metatarsal, tips of toes, ball of foot).
4. Achilles tendon xanthoma

*Palpation*

1. temperature
2. Buerger’s test: with patient lying flat, raise the leg to 90 degrees or to the level at which it becomes white (the vascular angle). Normally the leg will stay pink at 90 degrees, a vascular angle less than 20 indicates severe ischaemia.
3. capillary filling time: after elevating the legs and estimating the vascular angle, ask patient to hang their legs over the side of bed. Normal legs will remain pink, but an ischaemic leg will turn slowly from white to pink and then purple. The time to turn pink is the capillary filling time and depends on degree of obstruction.
4. capillary refilling time: press the tip of a nail or pulp of toe for 2 seconds then release; observe the time taken for the blanched area to turn pink.
5. peripheral pulses: establish whether present, weak or absent and whether any aneurysmal dilatation (femoral, popliteal)
6. femoral
7. popliteal
8. dorsalis pedis
9. posterior tibial

N.B. The popliteal pulse can be difficult to locate and 3 methods should be tried before declaring it absent.

1. Flex knee to 135 degrees with heel resting on couch. Place thumbs on tibial tuberosity and fingers over lower part of popliteal fossa. Move fingers from side to side until neurovascular bundle is located. Press bundle against lower surface of tibia until pulse is felt.
2. With leg straight, place one hand round the knee with the finger tips on the midline of the popliteal fossa. Hyperextend the knee against this hand and the couch with the other hand.
3. Ask the patient to lie prone, feel along the line of the artery with both fingers (most reliable method)

*Auscultation*

Listen over femoral and popliteal arteries for bruits.

**N.B. Musculoskeletal and neurological examination** of the lower limbs may be necessary if the diagnosis is in doubt.

**The following should also be examined:**

1. **Abdomen**

Palpate for aneurysm

Listen for bruits: aortic bifurcation, iliac, renal arteries

1. **Blood pressure**
2. **Carotids**

Pulse rate and rhythm, listen for bruits

1. **JVP**

Cardiac failure

1. **Heart**

LVH, murmurs

*Key points in the examination of varicose veins*

Ask the patient to stand up with their legs fully exposed

**Inspection**

1. tortuous dilated veins: long saphenous vein runs from below femoral vein in thigh to medial side of lower leg, short saphenous vein runs from popliteal fossa to back of calf and lateral malleolus.
2. venous stars
3. oedema
4. brown pigmentation, eczema, ulceration (affects lower medial 1/3 of the lower leg first)

**Palpation**

1. feel along the course of the veins: ?tense, ?tender (thrombophlebitis), ?hard (thrombosis)
2. cough impulse test- place fingers in turn over the sapheno-femoral junction in the groin (medial to femoral vein which is medial to femoral artery) and the sapheno-popliteal junction. Ask patient to cough: a fluid thrill is felt if the valves in the subcutaneous veins which protect these junctions are incompetent.
3. feel along the medial side of the lower leg for tender defects in the deep fascia (sites of incompetent superficial to deep communicating veins)
4. check for pitting oedema
5. *Trendelenberg test*

Elevate leg with patient lying down until all the blood has drained from the superficial veins. Apply firm pressure (fingers or tourniquet) over the saphenous opening in the groin and then ask patient to stand. If the veins stay empty until the groin pressure is released, there is incompetence at the sapheno-femoral junction. If the veins fill despite groin pressure, the incompetent valves are lower down in the thigh or calf; the test can then be repeated with pressure at various levels (upper thigh, knee, over perforators in calf) to determine the presence and site of the incompetent valves.

1. *Perthes test*

Repeat Trendelenberg’s test but when the patient stands allow some blood to be released. Then ask the patient to stand up and down on their toes a few times. The veins will become less tense if the perforating calf veins are patent and the valves are competent i.e. the muscle pump is working.

**Percussion**

Place the fingers of one hand on the lower limit of the visible veins and tap them at their upper limit. A palpable percussion impulse indicates a dilated incompetent vein between the sites of percussion and palpation

*You may need to check for secondary causes of varicose veins (e.g. pelvic mass) especially if the pattern of veins is unusual (examine abdomen, pelvis, testes).*

**ADDITIONAL RESOURCES**
Books

Clinical Examination: A Systematic Guide to Physical Diagnosis
by Nicholas J. Talley and Simon O'Connor (7th edition 2013)



Macleod's Clinical Examination

 by [J. Alastair Innes](https://www.uk.elsevierhealth.com/author/j_alastair_innes) & [Anna R Dover](https://www.uk.elsevierhealth.com/author/anna_r_dover) & [Karen Fairhurst](https://www.uk.elsevierhealth.com/author/karen_fairhurst) (14th Edition 2018)



Online resources

See *Clinical Skills Online* on YouTube. This is a St Georges University of London project aimed at providing online videos demonstrating core clinical skills.

**Clinical Skills Year 4 - Student Self-Assessment Checklist**

**Please complete and send to your GP tutor before your GP teaching sessions**

Please consider the areas listed below and rate your confidence by putting a figure on a scale of 1 - 4 in the relevant column for each topic. This should help your GP tutor adapt the sessions to meet the learning needs of you and the other students in your group. You may wish to repeat this process after the GP sessions are completed.

1= Not confident at all 2 =Fairly Confident 3 = Confident 4 = Very confident

|  |  |  |
| --- | --- | --- |
| **Clinical Skills** | **NOW (before GP DGH teaching**) | After GP sessions |
| Taking a history  |  |  |
| Knowledge of core medical conditions |  |  |
| Considering the psycho-social impact of illness |  |  |
| Taking a professional approach to patients and colleagues |  |  |

|  |  |  |
| --- | --- | --- |
| **Clinical Method** | **NOW (before GP DGH teaching**) | After GP sessions |
| CVS Examination |  |  |
| RS Examination |  |  |
| Abdomen/Gastro Examination |  |  |
| Neurology Examination |  |  |
| Peripheral Vascular Examination |  |  |
| Lumps and Bumps Examination |  |  |
| Other (specify): |  |  |

**What do you feel are your main learning objectives for this attachment?**

**How do you prefer to learn?**(For example, doing, reading, thinking / reflecting on an event)

**Once complete please email this form to your GP tutor**

# Year 4 – DGH GP teaching sessions Tutor Report

.

**Student Name** ………………………………….

**Tutor Name** ……………………………………… **Tutor Email Address**...............................

Tutors will set aside time to go over this report with each student at the end of the course. The report is not a ‘pass or fail’ assessment, the aim is to help students plan their further development. Please concentrate on feedback that notes strength as well as areas that need extra work. Comments should focus on specific behaviours and relate to the objectives of the course.

**(1) Tutor’s Overall Assessment**

Please make a **global** assessment of the student's performance over the three sessions in terms of their clinical skills, knowledge and understanding:

**Overall Assessment** (circle one)

 **SATISFACTORY POSSIBLE CONCERN DEFINITE CONCERN**

**Comments** about overall performance:

**(2) Tutor’s Review of Professional Behaviours**

Please make an assessment of the student's **professional behaviours** over the three sessions, considering each of three areas below.

(a) Tutor’s assessment of **ATTENDANCE**:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Satisfactory** | **Possible concern** | **Definite concern** |
| **Attendance** | Consistently reliable and punctual Apologises for any absences in a timely fashion | Late more than onceSingle unauthorised absence | Repeated lateness or unauthorised absence |

Please circle one box in each row below, using the examples above to guide you:

**Overall Assessment** (circle one)

 **SATISFACTORY POSSIBLE CONCERN DEFINITE CONCERN**

Additional comments about ATTENDANCE (optional):

(b) Tutor’s assessment of ENGAGEMENT:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Satisfactory** | **Possible concern** | **Definite concern** |
| **Engagement** | Motivated, engaged with learning, conscientious | Variable participation in teaching.  | Does not engage with teaching. Poor response to feedback |

Please circle one box in each row below, using the examples above to guide you:

**Overall Assessment** (circle one)

 **SATISFACTORY POSSIBLE CONCERN DEFINITE CONCERN**

Additional comments about ENGAGEMENT (optional):

(c)Tutor’s assessment of interaction with COLLEAGUES and PATIENTS:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Satisfactory** | **Possible concern** | **Definite concern** |
| **Interactions with colleagues & patients** | Respectful of patients.Communicates and interacts appropriately with patients  | Single episode of disrespectful behaviour of inappropriate communication  | Repeated disrespectful behaviour or failures to communicate appropriately |

Please circle one box in each row below, using the examples above to guide you:

**Overall Assessment** (circle one)

 **SATISFACTORY POSSIBLE CONCERN DEFINITE CONCERN**

Additional comments about PATIENTS (optional):

**This form is an example. You will complete the actual report online - your student will email you a ‘ticket code’ to allow you to access the report.**

**Year 4 GP Teaching sessions during DGH placement 2019/2020**

**STUDENT EVALUTATION FORM**

**Your GP Tutor’s Name: : …………………………………**

*Please take some time to fill in this questionnaire after your final GP session of the DGH placement. We value your comments, as your input will help us develop the course in future.*

Here is a reminder of the Aims of these three sessions:

**In the setting of primary care**, students should:

1. develop history taking, examination, and communication skills
2. increase knowledge of core medical conditions
3. consider the psycho-social impact of illnesses
4. develop professional approach to patients and colleagues

Please rate the following aspects of the course, using the scale:

**A = excellent, B = Good, C = satisfactory, D = unsatisfactory E = poor**

1. Overall Impression A B C D E

2. Developing your history taking A B C D E

3. Developing your examination & communication skills

 A B C D E

4. Improving your knowledge of medical conditions

 A B C D E

5. Understanding the psycho-social impact of illnesses

 A B C D E

6. Quality of teaching from your GP tutor A B C D E

7. Feedback on your performance A B C D E

**Please comment about things that went well:**

**Please comment about things that you feel need to be changed:**

**The actual form will be submitted online via the student’s e-Portfolio**

# Sample letter for patients

Dear

Thank you for agreeing to help with the teaching of medical students from the University of Oxford Medical School.

Please attend your GP surgery at am/pm on day/month/year.

The teaching session will last approximately 2 hours.

You will be meeting between two and four students who are in the fourth year of their studies and are beginning to learn about a range of medical conditions and how these affect patients.

The students will talk to you about your condition and how it is treated and will be particularly keen to hear how your illness and its treatment have affected you. The students will examine you under the supervision of your GP. They will discuss your case with your GP but will not discuss it with anyone else.

Your help in the education of medical students is extremely valuable and we would welcome any comments you might offer to the students about their performance.

If you have any concerns about the teaching programme and your part in it, please feel free to raise these with your GP.

On behalf of the Medical School and the students I would like to thank you very much for your help in this teaching.

## Yours sincerely