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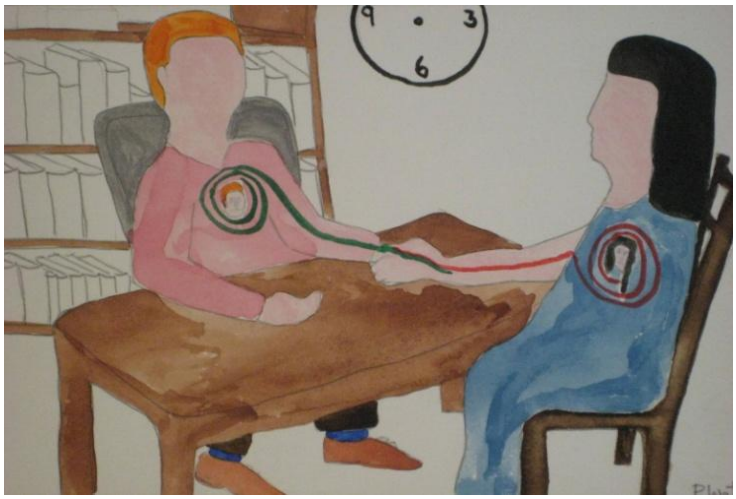
Medical School



From http://outofourheads.net/oooh/

GP Attachments for 3rd Year Medical Students

Student Guidebook
2013-14

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Here are some comments from last year's 3rd Year students

Extremely well organised, teaching of a high standard at appropriate level, good use of group brainstorming at the start of each session. Fantastic and varied patients-learnt a lot and always looked forward to GP!

Was able to run through an examination without fear of being told I should already know this- allowed me to practice skills and improve without judgement

Very well prepared and each session was tailored to our difficulties. Lots of patients to see with clear signs, which I will remember when I see future patients.

Different environment-more relaxed. Patients came to us! Made a big difference having patients selected with specific diseases

Comments on History taking and consultation skills

- I`ve learnt how to be more directed in my history taking skills and learnt a huge amount of communication skills.
- I am better equipped to do 10 minute consultations. Helped develop empathy.
- More confident about which symptoms need to be retrieved when talking to patients.
- Especially being sensitive in taking history from mental health patients.

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University of BRISTOL

Centre for Academic Primary Care

Welcome

Welcome to your 3rd year GP placements

GP placements present a unique learning opportunity. Patients are invited to the surgery for teaching purposes and are generally less unwell than in hospital. This often means that students feel more comfortable taking histories, examining patients and asking questions.

Teaching takes place in small groups which has many benefits. Students receive direct feedback from an experienced doctor and other students in their group. The GP teachers can be flexible and respond to students' requests to see patients with specific conditions or to practice particular examinations, for example using an ophthalmoscope.

Being a self-directed learner
Please have a look through this guidebook. It has the learning objectives for the GP attachments and some resources for deepening your understanding of consultation skills. You will have heard that we are expecting students to be active and self-directed learners. Read a bit more about it in this handbook and carry out your own learning needs analysis. There is a self-assessment checklist in this guidebook.

Please reflect on how your knowledge and skills are developing and ask your GP and peers for feedback how to progress and improve. Try writing down your own thoughts and the feedback from others throughout the GP sessions. It will help you to focus on your learning needs. There is a template in this handbook to help you with that.

Reflecting on your learning will help to prepare you for the future. Qualified doctors have an annual appraisal which is part of the five yearly **revalidation** process which applies to all doctors and started in January 2013. For their appraisal doctors are expected to reflect on their work and learning.

CAPs logbook
You will be learning some of the skills listed in the CAPS logbook in your GP attachments in relation to the patients you will be seeing. Your GP teacher will be able to observe you and sign your logbook. Getting skills signed off should not 'squeeze out' history and examination.

Prescribing
Prescribing is an important and frequent task for most doctors. It is important to be able to prescribe safely and to be aware of the many pitfalls in prescribing. To make sure that students can prescribe safely when they qualify a national prescribing skill assessment has been developed. It has been trialled for a couple of years and will be compulsory for fifth year students from this academic year onwards.

In year 3 you will be building on the history, examination and diagnosing skills you started to develop in Year 2. You will be thinking about investigations, how to manage patients with a variety of conditions and problems and the role of medication. The year 3 GP placements are a good place to develop a solid understanding of commonly used medications in common chronic conditions

Cardiovascular risk assessment
Assessing patients for risk factors for cardiovascular disease is a skill that all doctors should have. Most of this work is carried out in General Practice and this guidebook has an introduction to it.

Quality outcome framework (QOF)
The QOF scheme is intended to raise the standard of care for a number of conditions. It is an example of 'payment by results' and GPs are paid according to how they meet the targets. This guidebook aims to make you aware of QOF but you will not be examined on it.

References to 'Tomorrows' Doctor'
The Bristol medical curriculum is based on the 'framework' set by the GMC for all medical schools. This 'framework' is described in 'Tomorrow's Doctor' (TD) which you can access at http://www.gmc-uk.org/TomorrowsDoctors_2009.pdf_39260971.pdf. It is organised into three 'Outcomes' - 'The doctor as scholar and scientist', 'The doctor as a practitioner' and 'The doctor as a professional' and further divided into paragraphs. I have referenced most of the learning objectives to the relevant outcomes and paragraphs in TD, i.e. TD Outcome 2 13a) refers to 'take and record a medical history etc.' This shows which aspects of the curriculum are covered in the Year 3 GP attachments.

References to Vertical Themes (VT)
The teaching in Primary Care will touch on the VTs in many ways. I have identified obvious connections to the VT by placing the relevant symbols in the text.

Primary Care OSCE exam station
There will be one Primary Care OSCE station in the Junior Medicine and Surgery OSCE exam. This is a 10 minute station with an actor role playing the patient. The station will be based on the learning objectives in this handbook. You will be expected to be able to 'put it all together'. This means you will need to make a diagnosis on the basis of your history and examination and test results, tell the patient the diagnosis and outline a brief initial management plan. To help you prepare for this station we have created a mock OSCE. You can find this via Hippocrates or the Year 3 GP placement course in Blackboard. This is a video of a mock OSCE exam which puts you in the shoes of an examiner. There is a mark sheet for you to complete and you can compare your marks with that of experienced examiners. This gives you useful insight into how Primary Care OSCEs are being marked.

The guidebook for Year 3 GP attachments
Apart from all the above this guidebook also has a list of contacts, information how to organise your sessions and who to contact if you have problems. It should be read in conjunction with the Year 3 Handbook, Unit handbooks, Blackboard and Hippocrates learning resources and the Rules, Policies and Procedures handbook.

Wishing you an enjoyable time in your GP placements

Barbara Laue (GP Lead for Year 3)

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General Practice Placements

GP teaching sessions

- 8 half-day GP sessions over the academic year
- 2 half-day sessions in MDEMO and in Psychiatry & Ethics, 4 half day sessions in Junior Medicine and Surgery
- 2 different GPs, one in each Academy (4 sessions with each GP)
- Groups of 4 or 5 students
- Session length 2 ½ to 3 hours

Attendance at the GP sessions is compulsory and you should attend all sessions. Any absence must be reported on the day of absence. You need to follow the University procedure for any unplanned absence, read more here http://www.bristol.ac.uk/medical-school/staffstudents/howdoi. You should email medadmin-absence@bristol.ac.uk **and** phc-teaching@bristol.ac.uk, ideally before 9.30am. You also need to contact your GP teacher and tell him or her why you are not attending before the missed session. GP teachers keep an attendance register.

In year 3 you are entitled to Wednesday afternoons off for sports activities. If nobody in your group is involved in sport you could arrange a GP teaching session for Wednesday afternoon if that suited the group and the GP teacher.

Unit timetable				
	MDEMO 2.9.13-1.11.13	**Psychiatry & Ethics** 4.11.13-17.1.14	**Junior Medicine & Surgery** 20.1.14-13.6.14	
	Psychiatry & Ethics 2.9.13-1.11.13	**MDEMO** 4.11.13-17.1.14	**Junior Medicine & Surgery** 20.1.14-13.6.14	
	Junior Medicine & Surgery 2.9.13-17.1.14		**MDEMO** 20.1.14- 21.3.14	**Psychiatry & Ethics** 24.3.14-13.6.14
	Junior Medicine & Surgery 2.9.13-17.1.14		**Psychiatry & Ethics** 20.1.14- 21.3.14	**MDEMO** 24.3.14-13.6.14

Organising your GP teaching sessions

All students please contact your academy administrator to find out which GP practice you have been placed with. Your administrator will send the names of all the students in each group to the designated GP Teacher and nominate one student in each group to be the lead student. It is the **responsibility of the lead student** to communicate dates, times and any other information to the other students in the group.

Each Academy has its own way for organising the GP sessions. Please find out from your Academy administrator. For example in Gloucester/Cheltenham GP teaching days are fixed. In other academies they need to be arranged between the lead student and the GP Teacher.

If you are the **lead student** you should

- Contact the GP teacher/ practice before the end of Week 1 in each Unit
- Give the GP your mobile number
- The GP will suggest dates / times
- Check hospital timetable for clashes
- Discuss and agree sessions with your group
- Confirm session dates / times with your GP
- Please do this as quickly as possible

When starting a new unit, recheck your timetable for clashes straight away

Your GP needs lots of notice for booking sessions. He or she will have cancelled a surgery and invited patients for the session and may also have hired a locum. If you cancel at very

short notice or don't turn up you are also letting down the patients who have agreed to attend for the teaching session.

You will have some timetabled core teaching sessions. Please avoid these when you are booking your GP session.

Last year a group booked their final session on the day before their OSCE exam. They then cancelled it the day before as they wanted to do more studying for the exam. This meant they were letting the GP and patients down. Please avoid this situation.

Prompt communication is essential

Travel

It is essential that you allow plenty of time to get to the practice, which may be some distance away. Please do not agree to attend a ward round at lunchtime if you have to be at your GP practice for the afternoon.

Problems

If you experience problems with arranging your GP sessions, speak to your Academy Administrator, Unit Tutor and/or GP academy lead in the first instance. They will usually be able to help.

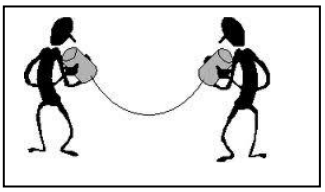
It is important that you act quickly and let somebody know ASAP if there is a problem. In the past we have had some instances where students had problems fixing their GP sessions but did not let anyone know for several weeks. This resulted in students missing out on teaching.

We expect our GP Teachers to invite two patients per session. Sometimes there may only be one patient for a number of reasons (home visit, complex patient, student request to do other things in addition to seeing a patient etc.). If you are not seeing any patients we need to know about that as soon as possible. Please contact your GP academy lead or the Year 3 GP lead.

Please don't

- Delay booking your GP sessions. Getting organised late in a Unit has in the past led to students missing out on their GP session.
- Cancel any sessions at short notice. This creates huge problems for your GP Teacher as they will have already booked patients to come in for the session.
- Book a GP session immediately before any exams. In our experience students tend to cancel sessions booked just before exams at short notice when anxiety about the exam is rising.

Please read your emails regularly and communicate promptly



Contact details

Queries about GP placements should first go to your Academy administrator who can refer to Melanie Butler, the overall Year 3 GP placement administrator, as required.

The first point of contact for teaching issues is your GP academy lead. In academies without a GP lead, please contact the Year 3 lead for GP placements barbara.laue@bristol.ac.uk.

For support outside your Unit please contact the Faculty Student Adviser Emma Teakle 0117 928 8444, med-support@bristol.ac.uk or the Director of Clinical Studies the Reverend Mr. Nigel Rawlinson Nigel.Rawlinson@bristol.ac.uk Tel: 0117 928 9057

GP ACADEMY LEADS	ACADEMY ADMINISTRATORS
Bath **Academy Dean: Clare Taylor Clare.Taylor3@nhs.net**	
Melanie Blackman m.blackman@nhs.net Tel: 08444 770919	Daniele Fawkner-Corbett Danielefawkner-Corbett@nhs.net Tel 01225 82 5486
North Bristol **Academy Dean: Justin Morgan Justin.Morgan@nbt.nhs.uk**	
Barbara Laue barbara.laue@bristol.ac.uk Tel: 0117 928 7267	Rosalind Shoebridge Rosalind.Shoebridge@nbt.nhs.uk Tel Southmead 0117 323 2368 Tel Frenchay 0117 340 6764
South Bristol **Academy Dean: Jane Sansom jane.sansom@UHBristol.nhs.uk**	
Sarah Jahfar Tel 0117 9557474 sarahjahfar1@gmail.com	Suzan Fowweather Suzan.Fowweather@UHBristol.nhs.uk Sue.bamford@UHBristol.nhs.uk Tel: 0117 3423912
Gloucester and Cheltenham **Academy Dean: Peter Fletcher Peter.Fletcher@glos.nhs.uk**	
TBC	Emily Matthews emily.L.Matthews@glos.nhs.uk Tel: 0300 422 6233
North Somerset/Weston **Academy Dean: Bee Martin Beemartin@nhs.net**	
TBC	Lissette Lock Lissettelock@nhs.net Tel: 01934 881319
Somerset **Academy Dean: Stephen Hunter Stephen.Hunter@ydh.nhs.uk**	
Taunton	
Charles Macadam charles.macadam@canningtonhc.nhs.uk Tel: 01278 652335	Doreen Burnell doreen.burnell@tst.nhs.uk Tel: 01823 344731
Yeovil	
Andy Eaton andy.eaton@martocksurgery.nhs.uk Tel: 01935 822541	Caroline Bayliss Caroline.bayliss@ydh.nhs.uk Tel: 01935 384585

Assessment

Assessment can be formative or summative**. Formative** assessment gives you feedback how you are doing and how you can improve. **Summative** assessment tests whether you have reached a certain standard and are ready to progress. The feedback you receive during your GP attachments is formative. The Primary Care OSCE station is part of a summative exam.

Professional Behaviour Assessment
GP teachers have been asked to assess your professional behaviour. If they have concerns they should discuss these with you and give you a chance to improve. If you do not act on the feedback or if the concern is of a particularly serious nature the GP will complete a ***student concern form*** and send this to the faculty office. In our experience this is a rare event. Please see section on professionalism below for more info.

Attendance register
The GP sessions are compulsory and GPs keep an attendance register, which is returned to the Primary Care Teaching Office. Our database holds information about students' attendance at GP sessions for years 1-5. This means that we can easily identify students who regularly fail to attend GP sessions.

If you are unable to attend a GP session you need to let your GP teacher know in advance of the session. If you do not provide a timely and satisfactory explanation for not attending your GP session your GP Teacher will complete a student concern form.

We follow up all non-attendance if no legitimate reason has been given.

Year 3 Primary Care OSCE station and Mock OSCE (MOSCE)
There will be one Primary Care station in the Year 3 Junior Medicine and Surgery OSCE. This station is 10 minutes long and involves consulting with a patient played by an actor. The consultation takes place in a GP surgery and usually you will be asked to put yourself in the role of an F2 doctor. Your task is to find out why the patient has come, make a diagnosis and suggest investigations and/or an initial management plan.

To help you prepare for this, we have filmed a MOSCE. This is in Blackboard (Year 3 GP placements) and can also be accessed via Hippocrates. We have given you the mark sheets for this MOSCE. It is very similar to mark sheets used for the real exam. You need to print out the mark sheet and then view and mark the MOSCE. This puts you into the role of an examiner. After entering your marks online you can click to compare your marks with the average mark of a group of experienced examiners.

You can also work through the MOSCE more slowly to deepen your knowledge and understanding of the consultation process with the help of the Cambridge Calgary Consultation Skills Guide.

Tips for passing the Primary Care OSCE station

- Read the instructions carefully before starting the consultation
- Explore each symptom fully. For example if the patient says they are SOB you need to ask follow up questions, i.e. 'how is it affecting you?', 'how long has it been going on', 'does it stop you doing anything', 'can you lie flat at night?' etc. before moving on.
- Check how the patient is on the day of the consultation. 'How are you today?'
- Don't forget to ask about smoking, drinking and medication
- Remember to ask about work and family. Are they single, married, could their work have an effect on the condition etc.
- Advise sensible follow up. For example if the patient has just been diagnosed with Diabetes mellitus they need to be seen again within the next couple of weeks or sooner, not months

Professionalism

Students should adhere to the GMC code of practice for clinical students at all times. You can find it here http://www.bristol.ac.uk/medical-school/staffstudents/rulesandpolicies

The professional code includes

- Treating all patients with respect (including respecting confidentiality)
- Treating all staff and colleagues with respect (incl. not disrupting their teaching)
- Attending all teaching on time and adhering to the clinical dress code
- Being honest and handing in all required paperwork/assessments to deadlines
- Taking care of your health and seeking help if your health may impact on patient care
- Make clear arrangements with your teacher/colleagues and communicate promptly
- Introduce yourself as a medical student, correct patients who refer to you as 'doctor'

The following list gives some examples of poor professional behaviour which would trigger a student concern form.

- *Relationships with patients* – e.g. not respecting confidentiality, being impolite to patients, not informing patients that they are seeing a student, persistently not complying with the clinical dress code
- *Working with others* – e.g. failing to follow instructions, being disrespectful towards other healthcare professionals and students, persistently disrupting teaching
- *Probity* – e.g. fraudulent behaviour, requesting money/gifts from patients
- *Learning* – e.g. persistent lateness or non-attendance, not responding to feedback
- *Health* – e.g. a drinking or drugs problem (may be referred to the Disability & Health Panel)

Boundaries

Patients sometimes ask more of you than you can comfortable do. Setting boundaries is part of professional growth.

- Use your judgment and be courteous, saying "No" politely if necessary
- Don't give medical advice - suggest the patient speaks to the GP
- Avoid involvement with the patient or family outside the attachment
- You may be asked for your views and beliefs. You are entitled to these, but do not impose them on the patient or your colleagues

Confidentiality and Consent

Informed consent means making the nature and extent of the patient's involvement clear at the outset. Always obtain consent for interactions with patients.
Confidentiality fosters trust and allows truth, fear and uncertainty to be expressed. Trust is a critical part of the doctor-patient relationship and is destroyed if confidentiality is breached. It is imperative that you respect confidentiality at all times. Never discuss what you have heard, even anonymously, outside the appropriate setting (clinical/teaching). Particular care should be taken in public areas (on a bus for example) and with written or taped records.

Ensure your own safety and that of others

- In an unfamiliar area, take care after dark, get good directions, and try to go accompanied
- If you are going somewhere unaccompanied, let someone know where you are
- If you feel uncomfortable about a situation, let your GP teacher know.

Medical indemnity and learning with patients

Throughout the five year course you will have contact with patients, starting in year 1 with your GP attachments. You need to have medical insurance in case of any mishaps. As a student, you can be a member of the MDU or MPS for free. You are expected to register for this free indemnity. Please visit their websites for information.

Learning in Primary Care

In Primary Care we have huge diversity and a tremendous teaching resource in our patients.
Particular strengths are:

- Patients are usually less severely ill and have come especially for the session. This often makes the patient-student relationship more comfortable.
- Long term relationships between the practice and its patients provides insight into longitudinal care
- You will be seeing patients in a setting familiar to the patients or even in the patients' own homes. This will help you to better understand patients as individuals and appreciate the impact of illness on their lives and families.
- It is an opportunity for you and your GP teacher to experience patients in a teaching role and as experts in their condition.
- GPs will be able to get to know you as learners and will be able to give constructive feedback in a supportive atmosphere to help you in your professional development.

What to expect from your GP teachers

- To be welcoming
- To discuss your learning needs and help you achieve your learning objectives
- To start the sessions on time
- To invite 2 or more patients/session
- To observe you directly consulting with patients and examining patients
- To give you feedback during the sessions and individually in session 4 and 8

What your GP teachers expect of you

- To communicate promptly regarding the organisation of the sessions
- To arrive on time for the sessions
- To show professional behaviour towards patients, staff and peers
- To actively contribute to the session and to reflect on your own learning
- To be flexible in your learning
- To give constructive feedback to your peers and your teacher

Self -directed learning in Primary Care

Medicine is a huge topic and you may at times feel overwhelmed with information or weighed down by everything you need to learn. It can be very helpful to take a few minutes to take stock of what you already know. To help you with this we have given you two forms which are at the back of this guidebook and in Blackboard

Student self-assessment checklist

This is a checklist based on the suggested teaching topics. It is designed to help you self-assess your progress and to tailor your learning to your needs. A copy of this form is in Blackboard and at the back of this guidebook.
The checklist is **yours**. It does not form part of a formal assessment process. Be honest!

Try to complete it on 3 occasions

- Before GP session 1 (at the start of year 3)
- Before GP session 4 (end of 1st GP attachment)
- Before GP session 8 (end of 2nd GP attachment)

Consider using the checklist

- When planning the sessions with your GP teacher
- When receiving feedback from your GP teacher
- To plan and focus your learning
- When preparing for OSLERs / OSCEs

Student self-assessment form

Try to reflect on your strengths and learning needs at the end of each Unit. It is also a good idea to take this form along to the final session in each of your attachments. Your GP teachers will be giving you individual feedback at the end of session 4 and 8. Please make a note of their feedback on your form and share your own reflections on your progress with your GP teacher. You may want to add this form to your e-portfolio.
A copy of this form is in Blackboard and at the back of this guidebook.

Reflective diary of patients seen in your GP attachments

This is a table for you to record the patients you are seeing in General Practice. Please take a moment to reflect on what you have learned from these patients and what further learning needs you have identified. You may find it helpful to share this with your peers and your GP Teacher and it could be used to plan future GP sessions.

Why use these forms?

Apart from helping you with your learning in Year 3 it will also give you some insight into the annual appraisal and revalidation process that you will be part of as a qualified doctor. Being able to realistically assess your skills and knowledge, reflecting on them and planning your own learning are important skills for professionals.
Consultations with patients regularly take us to the limit of our knowledge and we need to be able to identify our learning needs and take action. Doctors have to demonstrate in their yearly appraisals how they identify learning needs and what they have done about them.

Learning styles

You may find some learning experiences more enjoyable than others. This may relate to the quality of teaching but can also reflect preferred learning styles. For example if you are very much a 'hands on person' and prefer trying things out straight away rather than reading about it first you are probably an 'activist'. People with an 'activist' learning style get bored easily when they have to listen passively. Completing a learning styles questionnaire may shed some light on your learning preferences and give you insight how you learn best

Probably the best-known learning styles classification is the one by **Honey and Mumford**

Activist	Open-minded, try anything, like new challenges, but get bored quickly
Pragmatist	Down to earth, like problem solving, get impatient with open-ended discussion
Theorist	Like to adapt and integrate observations into logical maps, like to analyse
Reflector	Likes to thoroughly examine information and take time to think things through

There is a free learning styles questionnaire based on a similar classification at
http://www.ncsu.edu/felder-public/Learning_Styles.html
Click: Index of Learning Styles then ILS questionnaire
Print the results then go to Learning Style Descriptions to interpret them. There are tips on how to learn more effectively according to your style.

Learning groups

In clinical medicine one can easily feel overwhelmed by patient encounters, ward rounds and the vast amount of factual knowledge one needs to assimilate. It can also be challenging to remember what you are learning. You may find it helpful to form a learning group, getting together with a few peers on a regular basis, with the purpose of sharing information gathering and talking through diseases and clinical presentations. This active process of discussion will help to fix new knowledge in your memory and may also help to make you more aware of blind spots in your knowledge. GPs in training do this to help them assimilate the vast GP curriculum

Feedback

Feedback is a vital part of the learning process and can take many forms. Without it, it would be difficult to know how to improve our skills. In this attachment you and the other students in your group will receive feedback from your GP teacher during the sessions and individually at the end of session 4 and 8. You are also expected to give feedback to the other students in your group and your GP teacher. Please read this section so you understand how to make your feedback constructive and non-threatening for the receiver. These feedback rules are evidence based.

Feedback rules

No doubt you have already found out it is much easier to feedback positive observations than tell another person that they need to change some aspect of their behaviour or attitude.

Giving feedback is a skill that can be learned and educational research has crystallised out some basic rules for effective and non-threatening feedback. This is a brief summary of these evidence-based rules.

Giving feedback

- Observe directly
- Time the feedback appropriately
- Be descriptive, specific and non-judgemental
- Offer ideas rather than advice
- Focus on changeable behaviour
- "Sandwich" negative feedback and end on a positive note
- Beware of your body language; is it leaking a different message?

Examples

Observe directly

Poor: 'Dr. X said you spent time taking a careful history yesterday….'

Good: '**I** noticed that you allowed the patient a lot of time to…'
When you were examining the patient you came across as…Why do you think that is? ' How do you think the patient found that experience?'

Be non-judgemental

Poor: 'Your history taking was poor…"

Good: 'I noticed that you did not ask the patient about side effects…'
'I noticed that you did not make eye contact with the patient…'
'I noticed that you interrupted the patient several times…'

Be specific…

Poor: 'You seem to have a problem establishing rapport…'

Good: 'I noticed that you do not greet your patients at the start of the consultation….'
'I noticed that you looked at your notes and not the patient for most of the interview. What effect do you think this have on the patient?'

Focus on changeable behaviour' (not personality)

Poor: 'You are very paternalistic with your patients….'

Good: 'I noticed that you chose the treatment option for your patient….'

Offer ideas, not dogmatic advice…

Poor: 'In that situation you should always do …'

Good: 'What I sometimes find useful…'
'I wonder about…'

Receiving feedback

- Listen carefully
- Accept the feedback as genuine and consider it
- Tell giver of the feedback how they can help
- Thank the person giving you feedback

Feedback from your GP Teacher

Your GP teacher will give feedback (comments, suggestions how to improve) throughout the sessions and to you individually at the end of the last session. To help you focus on your learning you are expected to complete the student self-assessment form and take it with you to the last GP session in each Academy, session 4 and 8. Please add the GP's feedback to your form.
A copy of this form is in Blackboard and at the back of this guidebook.

Please take the completed self-assessment form from the end of your first GP attachment to your first GP session in your second Academy. This can help you and your second GP Teacher to avoid duplication, to build on your previous learning and to plan the sessions.

Feedback to your GP Teacher

GP Teachers are keen to know how they can best help you learn in your attachments. Please tell them what works well for you in the sessions and what you think might best be done differently. Do this from the outset so you, your peers and GP teacher can tailor the sessions to the needs of your particular group

We are also asking you to evaluate your attachment in a more formal way by completing a teaching evaluation form (copy at the back of this guide). The criteria on this relate to the expectations we have of our GP Teachers and there is space for your comments. Please make sure that you complete this form and tell us what you like and what we need to change. Student feedback is a critical part of quality management in GP teaching.

We take note of what you tell us and act on it.

Each student in the group should complete this evaluation form at the end of the last GP session in each Academy. Your GP will provide the forms and envelope to post them in. The feedback from the group will be returned to the GP but it will not be possible to trace individual comments to individual students as the forms are anonymous.

'Feed forward' - What will you do with the feedback you have received?

It is a good idea to make some notes of the feedback that you have been given by your GP Teacher and your peers. Take a moment to reflect on it. Add your reflections to your E-portfolio.
The following statements may help to guide you into that reflection

- The part of the feedback that puzzles me the most …
- The comment that rang most true for me…
- I would welcome more advice on…
- I didn't get what X said…

Learning objectives in Primary Care

General learning objectives

By the end of your GP sessions you should have

1. Been observed practicing clinical skills and received feedback from peers and your GP teachers

2. Understood the relationship between medical history taking and consultation skills

3. Gained experience with common clinical problems and chronic conditions which are mainly managed in Primary Care

4. Practiced clinical reasoning and making a diagnosis

5. Developed knowledge of appropriate investigations and initial management of common conditions

6. Developed knowledge of medications used for common conditions including contraindications and common side effects

7. Reflected on and deepened your understanding how social, psychological and environmental factors interact with physical health

8. Discussed and reflected on how presentations and management approaches differ between hospital and Primary Care and how longitudinal care differs from acute management

9. Gained some understanding of the skill mix and inter-professional working in General Practice

10. Added to your knowledge and experience of the vertical themes

11. Participated in self-assessment and the feedback process and reflected on your own learning, including learning styles

<u>You need to be flexible in your learning</u>

Your GP teachers depend on patients being willing and free to come in for the teaching sessions. Sometimes patients cancel at short notice and the GP will try and find another patient. You will therefore not always know in advance what problems the GP patients have.

Alternatively, you may prefer not to know in advance what problem the patient has to make history taking and diagnosing more challenging; or you may want to see patients with particular conditions that you want to learn about. You and your GP need to discuss how best to manage the sessions and patients to maximise your learning.

<u>Mixed placements</u>
For administrative reasons and shortages of placements we occasionally have to mix students from different Units and place them as one group with a GP. This could mean that you may be learning about musculoskeletal problems in General Practice when you are in the Psychiatry Unit at the hospital. Please be flexible, we can learn something from every single patient encounter whether we were prepared for it or not.

Suggested teaching topics

GP Teachers have been asked to find patients with problems or diseases relevant to your current Unit. Occasionally you may see patients with conditions not directly relevant to the Unit. There is usually a good reason for this – **please be flexible**.

This is a list of suggestions for General Practice based teaching. They tend to be more chronic or stable conditions. Possible teaching areas are grouped in rows (Complaint – Condition – Skill). If there is an area you would especially like to cover, discuss this with your GP and your group. This list is not exhaustive.

Complaint	Condition	Relevant Clinical Skill
Junior Medicine and Surgery		
	Hypertension	Cardiovascular examination
Chest pain	Angina/MI	Respiratory examination
Ankle swelling	Cardiac Failure	Taking a pulse and BP
Leg pains on walking	Peripheral Vascular Disease	Measuring ABPI
Shortness of breath	CCF COPD Asthma	Measuring PEFR/spirometry Demonstrating MDI/spacer Using a thermometer
Ear discharge	Chronic Otitis Media	Using an otoscope
Blocked nose	Allergic Rhinitis	Applying nose drops
Abdominal pain	Irritable Bowel Syndrome Inflammatory Bowel Disease Diverticular disease	Abdominal examination
Heartburn	Gastro-oesophageal Reflux	
Tiredness	Hypothyroidism Anaemia Low mood	Screening questions for depression
Thirst, high sugars	Diabetes	Blood glucose testing
Tremor	Parkinson's Disease	Neurological examination
Tingling legs	Multiple Sclerosis	
Facial or limb weakness	TIA, Stroke	
Vertigo Dizziness	Menières Disease BPPV Postural hypotension	Using an otoscope Measuring BP
Nausea	Chronic Renal Failure	Dipstick urinalysis
MDEMO		
Joint pain	Osteoarthritis Rheumatoid Arthritis	Hip examination Knee examination Ankle examination
Stiff shoulders	Polymyalgia Rheumatica	Shoulder examination
Back pain	Mechanical Back Pain	Spine examination
Spinal deformity	Osteoporosis	-
Poor vision	Macular Degeneration Cataracts	Using an ophthalmoscope
Psychiatry/Ethics		
Crying all the time	Depression	Risk assessment PHQ-9 questionnaire
Unable to sleep	Anxiety	-
Hearing voices	Schizophrenia	Mental state examination
Forgetting things	Dementia	Mini-mental state exam.
Alcohol/drug abuse		CAGE/AUDIT questionnaire
Unable to lose weight	Obesity	Calculating BMI
Stress	A carer Resource issues Been made redundant	Four principles ethics

Common chronic diseases and their management

Chronic diseases affect a large number of patients and all doctors need to have a basic understanding how to diagnose and manage them. Year 3 GP placements are a good place to learn about them. We have asked your GP teacher to invite patients with the following conditions during the Junior Medicine and Surgery GP placement

- Hypertension
- Cerebrovascular disease (stroke, TIA)
- Ischaemic heart disease (Angina, MI, heart failure)
- Diabetes
- COPD/Asthma

These are all huge topics. To help you learn how to manage patients with these conditions we have defined learning objectives from a Primary Care perspective. You will learn more about investigations, acute management and management of the most serious forms or stages of these conditions in hospital.
Please note, the information in this guidebook is not exhaustive and needs to be read in conjunction with textbooks, guidelines, the BNF, hospital based teaching and resources in Blackboard and Hippocrates.

Please liaise with your GP Teacher regarding the patients it would be most useful for you to see in Primary Care.

Prescribing

You may have heard from more senior students that a national prescribing exam is being trialed. When you get to Year 5 this will be mandatory. The purpose of this national exam is to ensure that newly qualified doctors have a sound grasp of common medications and are safe prescribers when they start their F1 posts.

You will have been given a BNF and will have noticed that it has been printed on very thin paper, has very small print and weighs in at about 668g (Sept.11 edition). There is an awful lot of information in this book! The good news is that you don't need to know all of it by heart. But you do need to develop a good grasp of what safe prescribing means, common drugs and their indications, contraindications, precautions and side effects.

Here are some suggestions to develop your prescribing skills and knowledge

- Please take a good look at your BNF. It has masses of concise essential information including how to write a prescription, brief summaries of NICE guidance for certain conditions, prescribing in special situations, for example pregnancy, renal failure etc and much more. It is really helpful to take an hour early in Year 3 and leaf through the pages so you know how it is organised and how to look up information.
- When you clerk a patient get a full list of medications including over the counter medication (OTC) and look up the drugs in your BNF
    - What are they for?
    - What class of drugs do they belong to?
    - Common side effects?
    - Monitoring requirements?
    - Precautions and contraindications?
- Have an in depth conversation with the patient about the medication
    - How is the patient taking them?
    - Is the patient taking it as prescribed?
    - Any side effects?
    - What concerns does the patient have about the medication?

Try and do this for each patient you clerk. It won't take much time looking up the drugs and the knowledge will stick better because you are associating it with a specific patient. You will gradually build up a good knowledge base of drugs for common conditions and begin to recognise what class a drug belongs. You are not expected to know all drugs in detail but need to be familiar with drugs commonly used and their commonest side effects.

Using the BNF

Please read the relevant chapter in the BNF for each chronic disease you encounter in a patient. There is a lot of information there incl. NICE guidelines for some of them. You do not need to remember fine detail at this stage but it will give you a good overview of medications used for these conditions.

There are more drugs listed in the BNF than you will find in common use.

Task – In relation to the chronic conditions you will encounter discuss with your GP or hospital teacher which drugs are most commonly used and why. Considerations may be cost, side effect profile, interactions with other drugs, patient issues, i.e. renal failure etc.

Resources for learning about prescribing

Finn Caitling, who is now a fifth year medical student, created an online resource for passing the national Prescribing Skills Assessment (PSA) in year 5. You may want to take a look at this so you can see the level and detail of prescribing knowledge you need to have developed by the end of Year 5.

You can find the resource here www.prepareforthepsa.com

10 stages of prescribing template' (see below)
Try using this template to practice your prescribing skills. Here are some scenarios to practice with. If there is time you may find it useful to discuss prescribing for the patients below with your GP Teacher. (read sections on DM, HT and COPD below before tackling these scenarios)

Patient 1
65 year old retired postman, overweight, diagnosed 3/12 ago with Type2 Diabetes mellitus. He has made some changes to his diet including reducing sugar. He has not increased his physical activity, doesn't like sport. His fasting sugar is usually 15 and his HbA1c is 74.9 (9mmol/l).

Patient 2
A 72 year old black Afro-caribbean retired lawyer was found to have a BP of 180/108 when he came for his routine Asthma check. His ABPM was 160/98 (see chapter on Hypertension how to diagnose HT)

Patient 3
A 47 year old female bank clerk had been found to have a BP of 182/108 when she attended for a cervical smear test. Her ABPM is 169/100 (see chapter on Hypertension how to diagnose HT)

Patient 4
A 62 year old cleaner who had taken early retirement because of COPD attended with shortness of breath, increased cough and brownish/greenish thick phlegm. Temp. 38, P100/regular, Chest examination: resonant with scattered wheezes, Peak flow rate 160 (260 when her chest is good). Current medication Salbutamol MDI 2 puffs prn, Seretide 500 Accuhaler 1 puff bd.

10 Stages of Prescribing

		Example
1	**Make a diagnosis**	Depression
2	**Establish therapeutic goal**	Prevention of self harm Improvement in mood Coping with work (holding a job down, looking for work etc) Coping with family life (i.e. taking the children to school, cooking dinner etc) etc
3	**Choose therapeutic approach**	Shared decision making – involve the patient Self help, i.e. groups, online, book etc) Talking therapy Medication Admission Section
4	**Choose the drug**	Consider suicide risk Side effect profile Particular conditions – Liver or renal failure, pregnancy etc) Monitoring requirements (Venlafaxine – ECG, Lithium – blood tests etc)
5	**Choose dose, route & frequency**	Am or pm Supervision needed?
6	**Choose duration of therapy**	Based on research evidence – first episode 4-6/12 Evidence versus patient's wishes Assessing progress clinically When to follow up, how often
7	**Write prescription**	For how long? Often a good idea to give only 1-2/52 supply and reassess (effect, side effects and suicide risk)
8	**Inform the patient**	How to take medication Possible side effects Assess intention of the patient to take medication Next appointment Longterm follow up When to expect improvements
9	**Monitor drug effects**	Agree follow up with patient Assess effect and side effects
10	**Review/alter prescription**	According to history, findings, patient's wishes at follow up

From British Pharmacological Society 2012

For pages 19-40 the following TD learning outcomes apply Outcome 1- 8a-g)

Hypertension

Learning objectives

Skills - You should

- Be able to take a comprehensive cardiovascular history
- Be able to perform a competent cardiovascular examination
- Be able to assess cardiovascular risk
- Be able to competently assess a pulse and take a blood pressure reading
- Be able to explain HT to a patient without using jargon

Knowledge – You should

- Understand the importance of detecting and treating hypertension
- Have an understanding of some of the common causes of hypertension
- Be able to investigate a patient with raised BP appropriately
- Be able to diagnose Hypertension on the basis of BP readings
- Have an understanding of what malignant hypertension is and be aware that this is a medical emergency
- Be able to outline the management of hypertension including commonly used medications
- Know which different drugs we use as first, second, third and fourth line dependent on the patient's age and ethnicity (NICE guidelines)
- Know examples of the main classes of drugs used to treat hypertension as well as their common contraindications, side effects and blood monitoring (if indicated)
- Have an understanding of "treating to target" and what those targets are
- Know when to consider starting statins in a hypertensive patient
- Be able to outline how HT should be monitored
- Be aware that there are QOF points available for meeting treatment targets

Why it is important for us to know about hypertension

It is a major risk factor for cardiovascular disease and is often asymptomatic until it has caused end organ damage. It is very common and the aim is to detect and treat before any end organ (heart, brain, kidneys, eyes) damage can occur. The higher the blood pressure, the greater the cardiovascular risk. Patients sometimes struggle with being told they are hypertensive as they often have no symptoms. You need to be able to explain that hypertension does not mean they are ill but that we need to treat it to reduce their risk of having a serious problem (i.e. stroke etc.) later.

How to measure blood pressure

- The patient should be at rest. Seat the patient and support their arm at the level of the heart
- Use a right size cuff. If the cuff is too small the measured BP will be falsely higher
- Measure BP in both arms (use arm with higher measurement for future readings)
- Measure when standing as well if any symptoms suggest postural hypotension
- Systolic is the level at which the sounds appear, diastolic is the level at which the sounds disappear completely
- Use a calibrated sphygmomanometer

For more information on validated BP measuring devices, how to take BP with different devices, the right cuff sizes and a tutorial go to http://www.bhsoc.org//index.php?cID=162 accessed 1.8.13

Should we measure BP in both arms?
Definitely yes, when you take the BP for the first time in a patient. Research has shown that an interarm difference of ≥10mmHg predicts increased all cause mortality and cardiovascular events (BMJ2012;344:e1327)
Measuring BP in both arms should be part of a cardiovascular assessment (Lancet 2012;379;872)
For follow up measurements and monitoring of patients on anti hypertensive treatment measure BP in the arm with the higher reading.

How to diagnose HT

Some patients feel quite nervous when they have their BP measured and the BP can be falsely raised. This is called "white coat hypertension" which has a prevalence of around 10%. This makes it tricky to diagnose HT in clinic settings and can lead to overtreatment of blood pressure. Therefore new guidelines for making a diagnosis of HT have been developed. You can read the guidelines at http://www.nice.org.uk/nicemedia/live/13561/56015/56015.pdf accessed 1.8.13

A good investment of learning time
Taking and interpreting BP and taking action (investigating and prescribing) is a common and important job we do. It is therefore essential that you have a firm understanding how to take a BP, how to interpret the results and when to diagnose HT. We suggest that you read the above NICE quick reference guide. It is clearly written and easy to read.

If the first reading is ≥140/90 repeat the reading. If this is still ≥140/90 offer ABPM (ambulatory BP monitoring) or HBPM (home BP monitoring).

Stage 1 hypertension
Clinic blood pressure is 140/90 mmHg or higher **and** subsequent ambulatory blood pressure monitoring (ABPM) daytime average or home blood pressure monitoring (HBPM) average blood pressure is 135/85 mmHg or higher.
Stage 2 hypertension
Clinic blood pressure is 160/100 mmHg or higher **and** subsequent ABPM daytime average or HBPM average blood pressure is 150/95 mmHg or higher.
Severe hypertension Clinic systolic blood pressure is 180 mmHg or higher, **or** clinic diastolic blood pressure is 110 mmHg or higher.

If HT is not diagnosed offer to measure the patient's BP every 5 years

Causes
- Unknown/ essential hypertension (up to 95%).
- Renal disease (chronic pyelonephritis, diabetic kidney disease, glomerulonephritis etc) Commonest cause, least amenable to treatment
- Endocrine diseases (Primary Hyperaldosteronism (low K^+, high Na), Acromegaly, Cushings, Phaeochromocytoma etc.)
- Pregnancy
- Coarctation of the aorta
- Connective tissue disorders (scleroderma, vasculitis)

Examination and investigations to look for causes of HT and to identify end organ damage

Examination:	BP, heart size, heart sounds, look for any evidence of heart failure, check peripheral circulation, examine fundi
Bloods:	FBC, U&E, glucose, lipid profile, urine dip for blood and protein, consider GGT if excess alcohol consumption
ECG	12 lead ECG, look for LVH (left ventricular hypertrophy) Some patients need additional investigations such as an Echocardiogram

Management of hypertension

- Education (explaining HT, the causes and risk factors and what can be done)
- Non drug treatments such as smoking cessation, weight loss, decreasing alcohol, salt and caffeine intake, increasing fresh fruit and vegetables, relaxation and stress management
- Complete a formal cardiovascular risk assessment for the patient, see page 34
- Treat modifiable risk factors for cardiovascular disease
- Medication

DASH diet (Dietary Approaches to Stop Hypertension)
The DASH diet is a diet low in sodium and fat and rich in fruit and vegetables. A trial showed impressive reductions of BP on this diet – 11.4 systolic and 5.5 diastolic (NEJM2010:362;2102).
In this study the aim was to keep Sodium <2.3g/day=5.8g of salt/day
The authors of this trail concluded that 'borderline hypertensive' patients should have a 6 months trial of lifestyle changes before starting medication.

Advice on salt for patients

- 80% of dietary salt is hidden in processed food. Bread, cereals and table sauces tend to be high in salt.
- Advise patients to read food labels and look for <300mg salt/100g

When to start medication for HT

Stage 1 hypertension
Offer antihypertensive drug treatment to people aged under 80 years with stage 1 hypertension who have one or more of the following:
− Target organ damage (retinopathy, proteinuria etc)
− Established cardiovascular disease (MI, stroke etc)
− Renal disease
− Diabetes
− A 10-year cardiovascular risk equivalent to 20% or greater.
Stage 2 hypertension
Offer antihypertensive drug treatment to people of any age with stage 2 hypertension. For people aged under 40 years with stage 1 hypertension and no evidence of target organ damage, cardiovascular disease, renal disease or diabetes, consider seeking specialist evaluation of secondary causes of hypertension and a more detailed assessment of potential target organ damage. This is because 10-year cardiovascular risk assessments can underestimate the lifetime risk of cardiovascular events in these people.
Severe hypertension
Consider starting antihypertensive drug treatment immediately, without waiting for the results of ABPM or HBPM, for people with severe hypertension.

Refer people to specialist care the same day if they have: − accelerated hypertension (blood pressure usually higher than 180/110 mmHg with signs of papilloedema and/or retinal haemorrhage) **or** − suspected phaeochromocytoma (labile or postural hypotension, headache, palpitations, pallor and diaphoresis).

Consider the need for specialist investigations in people with signs and symptoms suggesting a secondary cause of hypertension.

For a simple flow diagram of when to treat HT see page 6 of the NICE HT guideline at http://www.nice.org.uk/nicemedia/live/13561/56015/56015.pdf

Treat to target

Blood pressure targets
Clinic blood pressure

- People aged under 80 years: lower than 140/90 mmHg
- People aged over 80 years: lower than 150/90 mmHg
- In patients with diabetes, chronic renal disease or established CVD aim for <130/80 (these are NICE guidance targets).

Daytime average ABPM or average HBPM blood pressure during the person's usual waking hours

- People aged under 80 years: lower than 135/85 mmHg
- People aged over 80 years: lower than 145/85 mmHg

Medications used for treating Hypertension

Four different classes of anti-hypertensive medication

- Calcium channel blockers (Amlodipine, Felodipine…)
- Thiazide diuretics (Indapamide, Chlortalidone)
- ACE inhibitors (Ramipril, Lisinopril, Perindopril…)
- ARB Angiotensin II receptor blockers (Losartan, Candesartan…)

Please read the BNF sections about these different classes of drugs. With some of them it is easy to know what class they belong to as the names have the same ending, i.e. –pril. Get to know the commonest side effects for these classes of drugs and any precautions and monitoring requirements. Carefully check the lists of drugs for the patients you are clerking and look up any drugs you don't know. This will help you to familiarise yourself with the medication for the common chronic conditions.

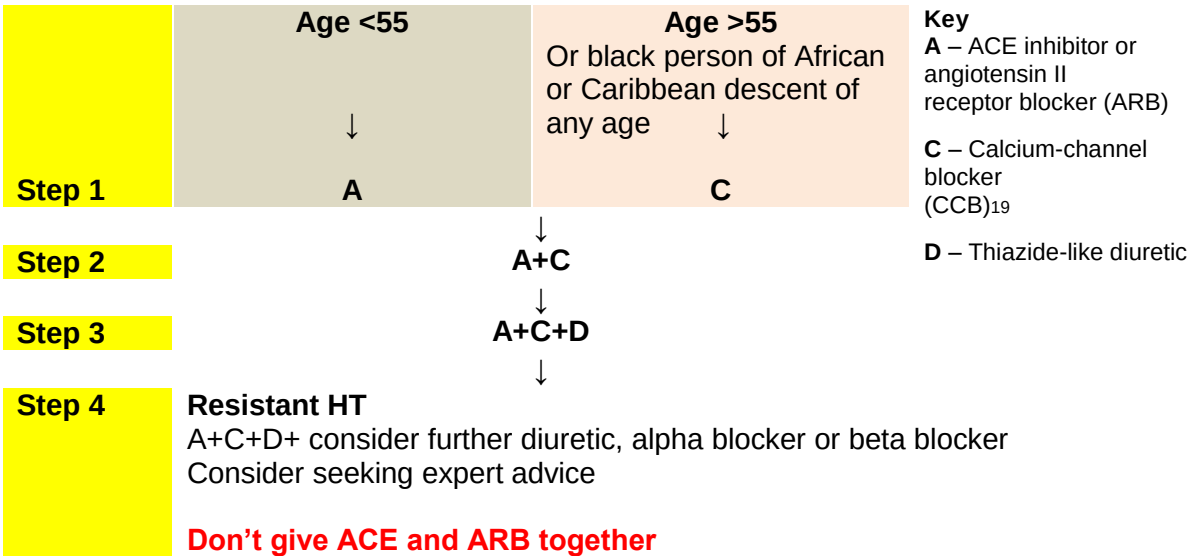
When you are clerking patients, ask them about their medication. What are they taking? How is the medication affecting them? How do they feel about taking medication? How do they remember to take it? What is the most difficult thing about taking medication for them?

Try and answer the following questions

- What factors increase adherence to taking medication?
- What factors interfere with adherence to taking medication?

Few patients' BP is controlled on only one drug, most will need more. The following shows the currently advised algorhythm for choice of drugs.

Summary of antihypertensive treatment



Follow up

Once blood pressure is controlled, a patient with Hypertension needs at least annual reviews. At the annual review

- Discuss symptoms and medications
- Reinforce non drug treatments – lifestyle factors
- Pulse (check for arrhythmias, especially AF)
- BP
- Look for signs of end organ damage
    - Eyes – check fundi for changes secondary to HT, for example 'av nipping'
    - Kidneys – test the urine for blood and protein
    - Heart – exam: check for enlargement, ECG if indicated: Left ventricular hypertrophy
    - Brain – check history for TIA/Stroke, if positive carry out appropriate neurological examination
- Assess and treat other modifiable CVD risk factors (i.e. cholesterol, smoking)
- Blood test for U+E, Cholesterol, others if indicated

Cutaneous markers of increased cardiovascular risk

BMJ2011;343;d5497
This study asked whether cutaneous lipid based deposits (xanthelasma and arcus senilis) were predictive of higher cardiovascular risk.

Xanthelasma

Arcus senilis

Results: Xanthelasma are predictive of higher cardiovascular risk independent of blood lipid levels. In contrast, arcus is not an important predictor of risk.

QOF
There are QOF points available for diagnosing and treating HT

References

- Oxford Handbook of General Practice, Second edition. Simon, Everitt, Kendrick.
- www.nice .org.uk
    - Quick reference guide to hypertension at http://www.nice.org.uk/nicemedia/live/13561/56015/56015.pdf Accessed 1.8.13
- British National Formulary

Cerebrovascular disease - Stroke and TIA

Learning objectives

Skills - Students should

- Be able to take a coherent history including assessing ability in activities of daily living and psychosocial factors.
- Be able to assess cardiovascular risk factors
- Be able to perform a complete neurological examination including cranial nerves
- Be able to assess the possibility of a stroke using the FAST model
- Be able to assess a possible TIA with the ABCD2 scoring system
- Be able to explain stroke and TIA in non-jargon language

Knowledge - Students should

- Know the typical presentation of a stroke and a TIA and differential diagnoses
- Be able to define stroke and TIA
- Have an understanding of how strokes are classified depending on pathogenesis (infarct vs. haemorrhage) and/or the specific anatomical area affected
- Be aware of current treatment guidelines for stroke and TIA
- Have an understanding of prognosis and the possible psychosocial consequences following a stroke or TIA
- Have an understanding of primary and secondary prevention and when treatment is indicated
- Be aware of QOF points in stroke/TIA management.

Stroke

Definition

Focal or global disturbance of cerebral function lasting for 24 hours or more or leading to death with no other apparent causes other than that of vascular origin

Statistics

- One in four people can expect to have a stroke if they live to 85 years
- Strokes account for 11% of deaths in England and Wales
- Around half of stroke sufferers are left dependent on others for everyday activities

Risk factors for infarction

Hypertension, diabetes mellitus, AF, previous CVA or TIA, previous MI, heart failure, artificial heart valves, hyperviscosity syndromes, smoking, alcohol, obesity, low physical activity

Classifications

85% caused by infarction i.e. atherosclerotic occlusion or emboli

- Posterior (vertebrobasilar) circulation (20%)
- Anterior (carotid) circulation (65%)

15% of strokes accounted for by intracerebral or subarachnoid haemorrhages (SAH)

- Primary cerebral haemorrhage (10%) High mortality, often poor functional outcome

Subarachnoid haemorrhage (5%) High chance of early recurrent strokeSAH – frequently fatal (10-15% die prior to reaching hospital). 70% due to Berry aneurysm rupture.

Rare causes of infarction: sudden drop in blood pressure, sickle cell crises, vasculitis, venous sinus thrombosis, carotid artery dissection.

Presentation
Sudden onset of central nervous system symptoms or stepwise progression of symptoms over a period of days. Conscious level may be normal or decreased. There will be neurological signs.
SAH Thunderclap headache, often occipital, with vomiting, possible LOC (loss of consciousness), sometimes seizures and possibly focal neurology

Triage – FAST quick check for diagnosing a stroke advertised to the public.
- **F** facial weakness (can they smile, has mouth or eye dropped)
- **A** rm weakness (can they raise both arms)
- **S** peech (can the person speak clearly and understand what you say)
- **T** ime (get help fast, get the person to hospital fast for consideration of thrombolysis)

Key examination
Pulse (rate and rhythm), BP, listen for heart murmurs and carotid bruits, assess consciousness level, exclude low blood sugar

Differential diagnosis
Space occupying lesion, trauma, epileptic seizure/post ictal, migraine, MS

Acute management
Admit to hospital, speed is imperative, needs imaging urgently to rule out a haemorrhage Thrombolysis within 4.5 hours of onset of symptoms reduces death and long term disability. It has also been found that thrombolysis within 6 hours improved functional outcomes, including in patients aged >80. Lancet2012;379:2352

Patients should be admitted to a specialised stroke unit

Screen the person's swallowing before giving any oral food, fluid or medication

Prognosis
Loss of consciousness at the time of stroke, severe motor deficit, cognitive deficit, lack of early improvement and poor swallowing ability after 3 weeks are poor prognostic signs. Outcome tends to be worse in patients with diabetes, heart disease, previous stroke or disability, incontinence, visual or other sensory loss or an abnormal ECG.

After care needs to cover
Secondary prevention, psychosocial issues, aids and appliances, benefits, specialist rehabilitation, depression screen

Post haemorrhagic stroke
- Antiplatelets and statins not routinely recommended
- BP lowering non-acutely

Secondary prevention post ischaemic stroke

Antiplatelet therapy
- If in AF, for anticoagulation
- Otherwise Clopidogrel 75mg firstline
- Dipyridamole MR plus Aspirin if Clopidogrel contraindicated
- Dipyridamole MR alone if both Aspirin and Dipyridamole contraindicated

Statins
- Irrespective of cholesterol level

BP lowering
- Evidence supports offering antihypertensive therapy to all patients irrespective of their starting BP (PROGRESS trial- ACE and Indapamide), appropriate target 130/80)
- Initiate 2/52 post stroke, do not lower BP acutely in CVA

Carotid endarterectomy
All patients without significant disability should have urgent (within a week) carotid imaging and offered surgery if stenosis of >50% in men and >70% in women

TIA

Definition Focal or global disturbance of cerebral function lasting less than 24 hours

- History of TIA gives you a 20% risk of stroke in the first 72 hours.
- Amaurosis fugax is a form of TIA due to emboli passing through the retina. It leads to a brief loss of vision described by patients as a "curtain descending".

In patients with 'TIA', if they have ongoing symptoms (>24 hours) however mild, treat as CVA and admit.

Risk scoring system for TIAs – ABCD2 score

Age	**1** point if 60 years old or more
B lood pressure	**1** point if systolic 140 or more or diastolic 90 or more
C linical features	**1** point for speech disturbance without weakness **2** points for unilateral weakness
D uration	**1** point if 10-59 minutes, **2** points if 60 or more minutes
D iabetes	**1** point if diabetic

High risk score = 6 or more. Medium risk score is 4 or more. Low risk score 3 or less.

How to manage patients with TIA

1. Assess risk of stroke after TIA using the ABCD2 scoring system

High risk of stroke • $ABCD_2$ score of 4 or more • people with crescendo TIAs		**Lower risk of stroke** • $ABCD_2$ score of 3 or below • presenting more than 1 week after symptoms have resolved
⬇		⬇
Specialist assessment within 24 hours of symptom onset, including decision on brain imaging (admission to hospital)		Specialist assessment[c] within 1 week of symptom onset, including decision on brain imaging
⬇		⬇
If vascular territory or pathology is uncertain[d], refer for urgent brain imaging		If vascular territory or pathology is uncertain, refer for brain imaging

2. Start daily aspirin (300 mg) immediately if not admitting the patient
3. Introduce measures for secondary prevention as soon as the diagnosis is confirmed, including discussion of individual risk factors.

Investigations

- Bloods - FBC, renal and liver function, lipid profile, Plasma viscosity or ESR, glucose, clotting screen
- ECG, ECHO if indicated
- Brain imaging
- Carotid dopplers

Primary and secondary prevention of stroke and TIA

- Lifestyle measures – smoking, diet and obesity, alcohol, exercise
- Antiplatelet drugs
    - *Secondary prevention* – start once haemorrhagic stroke excluded
    - Give Dipyridamole MR 200mg bd and Aspirin 75mg Longterm
    - Aspirin alone if Dipyradamole not tolerated
- Anticoagulation
    - Primary prevention - start if identified potential causes of cardiac thromboemboli (rheumatic mitral valve disease, prosthetic heart valve, dilated cardiomyopathy, AF associated with valvular heart disease or prosthesis and possibly lone AF if high risk
    - Secondary prevention – all patients who have had a stroke and have persistent or paroxysmal AF or a major source of cardiac embolism should be anticoagulated
- Hypertension – treat to target as defined by NICE guidelines, no need to wait 2 weeks as in stroke patients
- Cholesterol – treat to target.
- Diabetes – treat to target.
- Carotid endarterectomy improves outcome in some patients

NB. Patients disabled following stroke are at risk of pneumococcal infection and influenza – offer annual influenza and five yearly pneumococcal vaccinations.

Atrial fibrillation and risk assessment

- AF is the commonest sustained cardiac arrhythmia you will see in clinical practice. Prevalence is estimated around 5% in 65 year olds and 10% in the >80 year olds.

It is not a benign condition

- AF confers a 5-fold risk of stroke, and one in five of all strokes is attributed to this arrhythmia
- $CHADS_2$ is a tool for scoring and stratifying stroke risk in patients with AF
- AF is classified into 5 categories, each with particular evidence based management protocols.

Principles of treatment

- Rhythm or rate control
- Prevention of thrombotic complications

Rhythm control

- Medication – (Flecainide, Sotalol, Amiodarone)
- Cardioversion

Rate control

- Medication (βblockers, Calcium channel blockers or Digoxin)

AF can cause emboli which can lead to stroke and TIA. The degree of risk of embolic complications depends on what other risk factors may be present, i.e. high blood pressure. To stratify the risk for thrombotic events and the need for anticoagulation the CHADS2 criteria have been developed (a risk assessment tool)

$CHADS_2$ criteria		Score
C	Congestive heart failure	1
H	Hypertension	1
A	Age ≥ 75	1
D	Diabetes mellitus	1
S_2	Stroke or TIA	2

0=low risk	Start Aspirin
1=intermediate	Start Aspirin or Warfarin
2=high risk	Start Warfarin

QOF points

Points for primary and secondary prevention and offering vaccinations (influenza and pneumococcal)

Prescribing

Please note that some classes of drugs can be used for multiple indications, i.e. calcium channel blockers can be used for Hypertension, pulse rate control, Angina and some other indications

References

NICE guidelines quick reference guide for AF
http://www.nice.org.uk/nicemedia/live/10982/30054/30054.pdf accessed 1.8.13

Oxford Handbook of General Practice, Second edition. Simon, Everitt and Kendrick

Ischaemic heart disease and heart failure

Learning objectives and essential skills

Skills - Students should

- Be able to take a cardiac history including assessing acute chest pain and breathlessness
- Be able to perform a competent cardiovascular examination including assessment of JVP and measuring blood pressure
- Be able to assess cardiovascular risk

Knowledge - Students should

- Be able to diagnose and differentiate between different causes of chest pain including an MI, unstable angina, stable angina, oesophageal reflux
- Understand what is implied by the term acute coronary syndrome and be able to outline a management plan
- Be aware of appropriate investigations to assess chest pain
- Be able to spot major ECG abnormalities
- Be able to outline long term treatment following an MI
- Understand the difference between primary and secondary prevention and be aware of appropriate interventions
- Be able to outline management of an acute MI, stable angina and unstable angina
- Be able to appropriately diagnose heart failure and to understand investigations that may be helpful
- Be able to outline the management of heart failure.
- Be able to name examples of drugs used to treat MI, Angina and heart failure and also some common side effects, contraindications and any appropriate blood monitoring that is required.
- Be aware that QOF points are available for appropriate treatment targets.

Stable angina

Diagnosis is based on history and Investigations. The type of investigation depends on the estimated probability of coronary artery disease (CAD) being present.

Anginal pain

Typical features

- Constricting discomfort in the front of the chest, neck, shoulders, jaw or arms
- Precipitated by physical exertion
- Relieved by rest or GTN in about 5 minutes

Assessing probability of Angina

- People with typical angina have all the above anginal pain features
- People with atypical angina have two of the features
- People with non-anginal chest pain have one or none of the features

Patients may have associated palpitations, sweating and breathlessness and there will most likely be cardiovascular risk factors present

Factors making stable angina more likely (than a non-cardiac cause) include increasing age, male gender and the presence of cardiovascular risk factors, including smoking, diabetes, hypertension, dyslipidaemia, family history of premature CAD, a history of established CAD (e.g. previous myocardial infarction, coronary revascularisation), and other cardiovascular disease.

Features which make a diagnosis of stable angina unlikely

- Chest pain is continuous or very prolonged
- Unrelated to activity
- Worse on inspiration
- Associated with symptoms such as dizziness, palpitations, tingling or difficulty swallowing

Symptoms that should prompt urgent hospital admission

- Pain at rest (may occur at night)
- Pain on minimal exertion
- Angina that seems to be progressing rapidly despite increasing medical treatment

Specifically ask for these symptoms in your history

Investigations

The diagnosis of stable angina is based on clinical assessment alone or clinical assessment with diagnostic testing (i.e. anatomical testing for obstructive coronary artery disease (CAD) and/or functional testing for myocardial ischaemia).

If there are typical features of angina based on clinical assessment and their estimated likelihood of CAD is greater than 90% further investigation is unnecessary and the patient should be managed as having angina.

The NICE guidelines for Chest pain of recent onset show a table for assessing the likelihood of CAD and flow diagrams for choosing the most appropriate investigation.
http://www.nice.org.uk/nicemedia/live/12947/47918/47918.pdf accessed 2.8.13
(You are not expected to know the details of this guideline)

Treatments for angina

The management of angina includes modification of cardiovascular risk factors and specific treatment for angina. Treatment of angina should not wait for exercise testing or referral to a cardiologist, even if the drugs have to be stopped for the test.

Management of angina symptoms

- The patient must be informed of the diagnosis and its implications
- The patient should be advised that, when an attack of angina occurs, they should
    - Stop what they are doing and rest.
    - Use glyceryl trinitrate (GTN) spray or tablets as instructed
    - Take a second dose of GTN after 5 minutes if the pain has not eased
    - Take a third dose of GTN after a further 5 minutes if the pain has still not eased
    - Call 999 for an ambulance if the pain has not eased after another 5 minutes (i.e. 15 minutes after onset of pain), or earlier if the pain is intensifying or the person is unwell

Prevention of angina symptoms

- Offer either a beta-blocker or calcium-channel blocker as first-line treatment
- If the symptoms are not adequately controlled (or the patient cannot tolerate one option) consider switching to the other option, or using a combination of the two
- If a patient's symptoms are not adequately controlled on one drug and the other is either contra-indicated or not tolerated, consider adding
    - A long-acting nitrate.
    - Ivabradine (a selective inhibitor of sinus node pacemaker activity)
    - Nicorandil
    - Ranolazine (reduces myocardial ischaemia by acting on intracellular sodium currents)

Acute coronary syndromes (ACS) (MI and unstable angina)

You will learn more about the diagnosis and management of acute coronary syndromes in hospital.
If patients phone the GP surgery with symptoms suggesting an acute coronary syndrome GPs will advise them to dial 999 for an emergency ambulance. This is to reduce the time to thrombolysis should that be indicated.

MI

- Band like chest pain around the chest or central crushing chest pain/dull ache possibly radiating to shoulders, arms (mainly left arm), neck and/or jaw
- Associated nausea, sweating and/or SOB
- May have risk factors for CV disease (smoking, diabetes, dyslipidaemia, family or personal history of CV disease)
- Examination often normal but may be hypo- or hypertensive and may have signs of LVF
- ECG – typically ST elevation, may show arrhythmias see relevant textbook for ECG changes

Unstable angina

- Pain on minimal or no exertion
- Pain at rest or at night
- Angina which is rapidly worsening in intensity, frequency or duration

Differential diagnosis of acute chest pain
Pericarditis, dissecting thoracic aneurysm, PE, pleurisy, pneumothorax, oesophageal spasm or oesophagitis, other intra-abdominal causes, musculoskeletal pain, shingles, Bornholm's disease (Coxsackie virus infection), idiopathic chest pain.

Acute treatment: MONA
M orphine/pain relief
O xygen (if sats<94%)
N itrates (GTN spray)
A spirin 300mg orally stat unless contraindicated

- Admit to hospital via 999. In hospital, investigations include serial ECGs and cardiac enzymes. Thrombolysis may be indicated
- In the community do an ECG if possible and send ahead or with the patient but do not delay transfer

Drug treatment following acute coronary syndrome - SAAB

- **S** tatin e.g. simvasatin
- **A** spirin
- **A** CE inhibitor e.g. ramipril
- **B** eta blocker e.g. atenolol

All have proven benefits to prevent future events.

Remember to tell the patient to inform the DVLA if they drive

Heart failure

Causes
Hypertensive heart disease, IHD, valvular disease, primary cardiac muscle diseases, high output states (i.e. chronic anaemia, hyperthyroidism, nutritional deficiencies).

Presentation
Symptoms - lethargy and fatigue, breathlessness, reduced exercise tolerance, orthopnoea, paroxysmal nocturnal dyspnoea, ankle swelling
Signs - peripheral oedema, crepitations at lung bases, raised JVP, increased adrenergic activity (tachycardic, cold clammy peripheries), hepatomegaly, pleural effusion, ascites

Diagnosis
Mainly clinical. Blood tests mainly to exclude other causes of symptoms (FBC, U and E's, LFTs, TFTs, lipid profile, BNP or N-terminal pro-BNP), ECG, CXR, ECHO.

Classification
- ECHO - Uses ejection fraction to grade severity
- NYHA – uses symptoms to grade severity (grade I to IV)
  At http://www.abouthf.org/questions_stages.htm accessed 22.8.13

Class	Patient Symptoms
Class I (Mild)	No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, or dyspnoea (shortness of breath).
Class II (Mild)	Slight limitation of physical activity. Comfortable at rest, but ordinary physical activity results in fatigue, palpitation, or dyspnoea.
Class III (Moderate)	Marked limitation of physical activity. Comfortable at rest, but less than ordinary activity causes fatigue, palpitation, or dyspnoea.
Class IV (Severe)	Unable to carry out any physical activity without discomfort. Symptoms of cardiac insufficiency at rest. If any physical activity is undertaken, discomfort is increased.

Management
- General advice – cardiac rehabilitation, vaccination (influenza and pneumococcal), inform DVLA.
- Non drug measures – diet and weight, smoking, alcohol, exercise, reduce salt
- Drug treatment.
  - Stage 1 – loop diuretic (such as furosemide) and ACE inhibitor (e.g. ramipril).
  - Stage 2 – add in beta blocker (such as Bisoprolol) and then possibly spironolactone
  - Stage 3 – increase loop diuretic and consider digoxin (digoxin should be first line treatment if heart failure is due to AF)
- If symptoms persist despite the above then refer. Loop diuretics just provide symptom control but all the other drugs offer prognostic benefits.

QOF
Points are available for appropriate treatment and vaccinations if necessary.
NB. You need to be aware of examples of drugs used to treat cardiac conditions. You also need to be aware of common contraindications and side effects of these drugs. This information is not given here, please refer to the BNF.

References
Oxford Handbook of General Practice, Second edition. Simon, Everitt, Kendrick.
Chest pain of recent onset http://www.nice.org.uk/nicemedia/live/12947/47918/47918.pdf accessed 2.8.13

Type 2 diabetes

Learning Objectives

Knowledge - Students should

- Understand the basic mechanism of the disease and be aware of secondary causes
- Be able to diagnose type II diabetes on the basis of history and blood tests
- Be able to describe tests including random glucose, fasting glucose and the glucose tolerance test.
- Be able to give relevant lifestyle advice
- Be able to list possible complications from diabetes and know how to check for them
- Understand the importance of controlling blood pressure and cardiovascular risk factors
- Be able to list medication used in the management of Type2 DM, their common side effects and interactions
- Be able to list what tests and examinations are carried out at the annual DM check
- Understand the importance of patient education

Skills - Students should

- Be able to identify emergency and chronic presentations of type II diabetes
- Be able to assess cardiovascular risk
- Be able to use and interpret urine dipsticks
- Be able to carry out a finger prick test for glucose and interpret the result

Presentation

Acute:	Ketoacidosis or hyperosmolar non-ketotic coma.
Sub-acute:	Weight loss, polydipsia, polyuria, lethargy, irritability, infections, genital itching, blurred vision, tingling in hands/feet. Beware – can be a very slow insidious onset
With complications:	Skin changes including necrobiosis lipoidica, neuropathy, nephropathy, arterial or eye disease
Asymptomatic:	i.e. picked up on screening tests

Diagnosis This can be based on plasma glucose or HbA1c

- HbA1c of 48 mmol (6.5%)
- Random plasma glucose of ≥11.1mmol/l
- Fasting plasma glucose ≥ 7mmol/l
- Glucose tolerance test (GTT)
    - Glucose ≥ 11.1mmol/l 2 hours after 75g of glucose the patient is diabetic
    - 7.8mmol/l to <11.1mmol/l patient has impaired glucose tolerance
    - < 7.8mmol/l the patient is not diabetic

Causes

- Impaired insulin secretion and insulin resistance in the liver, adipose tissue and skeletal muscle.
- Secondary causes – drugs (steroids and thiazides), pancreatic disease (pancreatitis, surgery, cancer, haemochromatosis, cystic fibrosis), endocrine disease (Cushing's disease, acromegaly, thyrotoxicosis, phaeochromocytoma), others (glycogen storage diseases, insulin receptor antibodies).

Treatment and treatment targets

Glucose and HbA1c

Aim for an HbA1c of 48mmol (6.5%). Agree the blood glucose target with your patient.

- Education – Patients need to understand their condition and how they can best manage it
- All patients with Type 2 DM need lifestyle advice – diet, exercise, weight, smoking, alcohol
- Discuss that the patient needs to notify the DVLA if they are starting medication.
- There is an algorhythm for the treatment of Type2DM which you can find on page 9 at http://www.nice.org.uk/nicemedia/pdf/CG87QuickRefGuide.pdf accessed 2.8.13

There is stepwise progression to treatment

1. Attempt to control the blood sugar with diet and other lifestyle measures
   ↓
2. Add in Metformin (or Sulphonylurea)
   ↓
3. Add second drug, a Sulphonylurea if you started with Metformin or add a DPP4 inhibitor (Gliptin) if Sulphonylurea not tolerated
   ↓
4. Add insulin or Exenatide to Metformin and Sulphonylurea

NB. You should be aware of mode of action and common side effects of some drugs commonly used for Type 2 DM i.e. Biguanide (Metformin), Sulfonylurea (Gliclazide) and DPP4 inhibitors (Gliptins – Sitagliptin) Please refer to the BNF.

Glucose lowering – to what level? How tight should glucose control be?

- Several trials have looked at this
- Target of 59 (7.5%) is optimal if it is appropriate and achievable
- Lower levels may be appropriate for some individuals in the early stages
- Lifestyle change is always the first and also ongoing intervention

Blood pressure

- Blood pressure target
  - <140/80 if no complications
  - 130/80 if microalbuminuria, cerebral vascular disease or retinopathy present
- Lifestyle measures then add an ACE inhibitor then add in a calcium channel blocker or a diuretic or both if needed, next step would be an α blocker, β blocker or potassium sparing diuretic or all if needed and refer
- ACE inhibitors are thought to be extremely beneficial if microalbuminuria present.

Lipids

- Statins for most patients
- If <40 years and poor risk factor profile→offer statin
- If >40 years and Low cardiovascular risk→use CV risk calculator and offer statin if risk>20%
- If >40 years and normal to high CV risk→offer statin

Aspirin for cardiovascular disease prevention?

- Yes if established cardiovascular disease (secondary prevention)
- For primary prevention guidelines recommend low dose Aspirin if high cardiovascular risk but benefit not proven

Assess cardiovascular risk factors and treat if indicated

Complications

- Cardiovascular disease
  Diabetics are at increased risk of MI, stroke and peripheral vascular disease. Be vigilant to cardiovascular risk factors but remember you are unable to use the usual cardiovascular risk prediction charts on diabetics! Consider aspirin, statins and blood pressure treatment.
- Eye disease
  Blurred vision may occur if there is poor glycaemic control. Cataracts are more common in diabetics. Diabetes is a risk factor for developing glaucoma. A large concern is retinopathy. This is the most common cause of blindness of people of working age in industrialised countries. Small retinal blood vessels become blocked, swollen or leaky leading to exudate formation, oedema or new vessels. Diabetic retinopathy is classified as background retinopathy, mild non proliferative retinopathy, severe no proliferative retinopathy, proliferative retinopathy and advanced diabetic eye disease. Diabetics therefore require formal eye examinations annually.
- Renal disease
  Urinary tract infections are more common in diabetics and could possibly lead to renal scarring. Nephropathy is the most common cause of end stage renal failure in adults starting dialysis in the UK. It is characterised by proteinuria, hypertension and a progressive decline in renal function. Prior to overt nephropathy, there is a phase where the urine contains traces of protein not detected by dipsticks, send urine samples to the lab for microalbumin:creatinine ratios and be vigilant. Be aware that diabetic nephropathy is nearly always associated with retinopathy. Ensure tight diabetic control, treat hypertension, modify diet and use an ACE I even if not hypertensive as they are renal protective. Refer to secondary care.
- Neuropathy
  Symmetrical sensory progressive polyneuropathy (glove and stocking distribution); mononeuritis multiplex/mononeuropathies; amyotrophy (painful wasting of quadriceps muscles); autonomic neuropathy (can lead to postural hypotension, urinary retention, diarrhoea, erectile dysfunction, gastric paresis, gustatory sweating).
- Skin changes
  Infections, pruritis, neuropathic and ischaemic ulcers, fat atrophy if injecting, necrobiosis lipoidica (small dusky red nodules usually on shin that then flatten and turn brownish), dermopathy (pigmented scars over shins), granuloma annulare (link with diabetes controversial), diabetic cheirothropathy (waxy skin thickening on the hand)

The diabetic foot

Foot problems are very common among patients with diabetes. 5% develop a foot ulcer in any given year. Foot problems are due to

- Peripheral neuropathy with decreased foot sensation and
- Peripheral vascular disease leading to pain and ulceration. Patients need to self care and self monitor. Patient education is key.

The annual review

Much research has been carried out to assess whether very tight blood sugar control with HbA1c readings ≤6.5 improves outcomes. The result showed that the risk of hypoglycaemia outweighs the potential benefit. It is important to involve the patient in the decision what level of glucose control to aim for.

Most patients with Diabetes die from macrovascular complications – stroke and MI. It is therefore very important to reduce the risk factors for macrovascular disease as much as possible – no smoking, lipid and blood pressure control, exercise and weight control

The main aim of the annual review is to check patient understanding, check control and prevent complications. There is a strong evidence base that good control of blood glucose levels, blood pressure levels and the use of statin therapy reduces the risk of developing microvascular (retinopathy, nephropathy and foot problems) and macrovascular (MI and strokes) complications.

- Blood tests to be completed prior to the annual review
    - U& E's and eGFR (estimated glomerular filtration rate), LFTs, HbA1c, Lipid profile
- Welcome – general questions, ask regarding smoking status.
- Educate – ensure they have been referred to a structured group education programme, update education on one to one basis.
- Measure – blood pressure, dip urine for proteinuria, send of first pass urine sample for an albumin: creatinine ratio if the dipstick is positive for protein
- Check feet and give foot education – any ulceration? Inspect with shoes and socks off. Palpate peripheral pulses. Use 10g nylon monofilament to detect any loss of protective pain sensation. Consider podiatry.
- Check no underlying symptoms of depression (common with chronic disease).
- Ask about attendance for eye screening – Screening for retinopathy is by digital retinal photography through dilated pupils. Check results are on computer system.
- Discuss glycaemic control, blood pressure control and lipid control results. Discuss any changes needed.
- Agree targets to achieve
- Ensure appropriate follow up is arranged

Patient education

You need to address many topics with a patient with newly diagnosed Diabetes

- General knowledge - discuss
  - Diagnosis, potential complications and how to delay or prevent them
  - Aims of treatment
  - All the local diabetic services and how to access them
  - If requiring medication, they are entitled to free prescriptions
  - How to get an alert bracelet
  - Diabetes UK – membership, information
  - Possible medical equipment that they may wish to use such as Glucometer
- Diet
  - 50% or more of their dietary intake should come from fibre rich carbohydrate with minimal fat, refined carbohydrate and alcohol
  - Low salt
  - Encourage consumption of fresh fruit and vegetables
  - Advise them to look at diet sheets online from Diabetes UK. Warn about hidden sugar in processed foods and readymade meals
- Offer immunisations (pneumococcal and influenza).
- Psychological problems: Patients may struggle with the diagnosis and this may impact on their mental health – be vigilant.
- Exercise: Encourage regular exercise.
- Smoking: Always offer smoking cessation assistance if required.
- Foot care: discuss worrying signs to look out for and podiatry services
- Patient to inform DVLA especially if on insulin. Also be aware that if requiring insulin, certain jobs such as working on scaffolding, operating certain machinery, police, armed services and driving heavy good vehicles will no longer be possible.

References

Oxford Handbook of General Practice, Second edition. Simon, Everitt and Kendrick
Type 2 Diabetes NICE Guidelines at
http://www.nice.org.uk/nicemedia/pdf/CG87QuickRefGuide.pdf accessed 2.8.13, they are currently being reviewed
British National Formulary

Assessing risk for the prevention of cardiovascular disease

Learning objectives
Knowledge - Students should
- Understand the difference between primary and secondary prevention
- Understand risk factors for cardiovascular disease
- Be aware of cardiovascular risk prediction scores
- Understand the limitations of the current risk prediction charts
- Be aware that there is a new cardiovascular risk prediction tool called the QRISK2
- Understand how cardiovascular risk scores affect our clinical practice.

Skills - Students should
- Be able to use the cardiovascular risk prediction charts in the back of the BNF and the online QRISK2 calculator

A number of risk calculators are in use. The one at the back of the BNF is based on the Framingham study. To make the risk calculation more accurate newer tools have been developed which include additional information i.e. ethnicity, postcode

An online Framingham calculator for both coronary heart disease risk and cardiovascular risk can be found at www.framinghamheartstudy.org/risk/hrdcoronary.html accessed 2.8.13

Try assessing risk with the table at the back of the BNF and the online QRISK2 tool, how do they compare? You can find **QRISK2** at http://www.qrisk.org/index.php

Primary prevention
Aims to prevent the development of disease
- Population based strategies try to influence factors throughout a whole population i.e. smoking ban in public places, increasing the cost of smoking above inflation etc
- Targeting individuals: Identify those patients at high risk and attempt to decrease their risk, for example identify smokers and offer smoking cessation advice
- Consider opportunistic screening for CV risk factors of all patients > 40 years old
  - If cardiovascular risk over 10 years is 20% or more, intervention is justified (for example modification of lifestyle, starting statin therapy etc)

Secondary prevention
*A*ims to stop progression of existing cardiovascular disease
- Smoking – Drug therapy increases smoking cessation rates by nearly 2 times. Refer patients to a “smoking cessation” service.
- Blood pressure control – the higher the BP the greater the risk of CVD
- Hyperlipidaemia – lowering cholesterol is of proven benefit in primary and secondary prevention of CHD. Weight loss can also lower lipid levels – if a person with a BMI of 30 loses 10kg in weight, this would result in a 7% decrease in LDL and 13% increase in HDL. Currently, start a statin if CV risk over 10 years is ≥20%. If patient is diabetic then start statin at 40 years or older or when younger if the patient has one or more cardiovascular risk factors such as retinopathy or family history of premature CHD. If intolerant of statins, consider fibrates.
- Control of diabetes. Patients with Diabetes are at 2-5 times increased risk of MI. Control their blood pressure to the recommended guideline, consider statin and consider aspirin.
- Diet and obesity
- Exercise

COPD

The impact of COPD is immense. It is the fifth commonest cause of death in the UK, the second biggest cause of emergency admissions to hospital and accounts for 9% of certified sickness (BMJ2011;342;d1674).

Learning objectives

Knowledge - Students should

- Understand causes of COPD
- Understand the role of smoking in COPD
- Know about smoking cessation services and how to refer patients

Skills - Students should

- Be able to complete a competent history and examination of the respiratory system
- Be able to demonstrate use of a peak flow meter and interpret results
- Be able to demonstrate how to use an MDI with and without spacer device
- Be able to diagnose COPD
- Be able to demonstrate use of a nebuliser

Definition

COPD is a mixture of small airways disease and emphysema leading to reduced airflow. 'Small airways disease' is the narrowing of small airways due to chronic or repeated inflammation, scarring and hypersecretion. Emphysema is the breakdown of alveoli leading to a reduction of the area available for gas transfer.
The airflow obstruction is not fully reversible and tends to get worse over time.

Prevalence

- COPD accounts for 1 million hospital bed days per year.
- An estimated 3 million people have COPD in the UK.
- Most people are not diagnosed until they are in their fifties.

Causes

~95% of COPD are due to smoking. 10-20% of smokers develop COPD. A rarer cause is Alpha 1 antitrypsin deficiency. Consider this if patient with COPD is <40 years old.

Symptoms

- Chronic cough
- Regular sputum production
- Wheeze
- SOBOE
- Frequent 'winter bronchitis'

Signs

- Hyperinflated chest
- Poor chest expansion
- Reduced crico-sternal distance
- Hyperresonant chest with reduced cardiac dullness
- Use of accessory muscles
- Pursing of lips on expiration
- Cyanosis
- Peripheral oedema
- Raised JVP
- Cachexia

Diagnosing COPD

There is no single diagnostic test for COPD. The diagnosis is made on the basis of the history, physical examination and spirometry showing airflow obstruction. COPD should be considered in all smokers >35 who have at least one of the symptoms in the box.

Red flag symptoms of acute SOB, haemoptysis, hoarse voice, chest pain and rapid weight loss are not often found in COPD – you need to consider other diagnoses and exclude malignancies.

If there is a suspicion of lung cancer the patient should be referred to a specialist under the '2 week wait system'.

Investigations

Spirometry can be used to diagnose COPD and to assess severity and predict prognosis. It is not so good at measuring quality of life. Measurements are taken after bronchodilator therapy has been given and repeated 3 times. At least 2 readings should be within 100mls or 5% of each other (good technique needed)

FEV_1 Volume of air patient can exhale in the first second of forced expiration
FVC Total volume of air the patient can forcibly exhale in one breath
FEV_1/FVC Ratio of FEV_1 to FVC expressed as percentage
A diagnosis of airflow obstruction can be made if

Investigations

FEV_1/FVC	is < 0.7 (70%) (even if FEV_1 is >80%)
CXR	for all patients suspected to have COPD to exclude other diagnoses
Blood tests	FBC (anaemia can make SOB worse, polycythaemia) and U+E (Salbutamol can lead to hypokalaemia)
BMI	
Other tests	as indicated by history, for example Alpha-1 antitrypsin

Classification of COPD (NICE guidelines)

	FEV_1/FVC	FEV_1
Mild	<0.7	>80%
Moderate	<0.7	≥50-79%
Severe	<0.7	≥30-49%
Very severe	<0.7	<30

Management

Stopping smoking is the single most important intervention

Non drug therapy

- **Advise patient to stop smoking**
- Pulmonary rehab – to improve exercise capacity and reduce breathlessness
- Influenza and pneumococcal immunisation

Severity	**Symptoms**	**FEV_1**	**Medication**
Mild	Breathlessness and/or exercise limitations		SABA
Moderate	Exacerbations or persistent breathlessness	≥50	LABA or LAMA
		<50	LAMA or LABA+ICS in combination inhaler
Severe	Persistent exacerbations or breathlessness	<30	LAMA+LABA+ICS Consider Theophylline

SABA Short acting beta agonist (Salbutamol)
SAMA Short acting muscarinic antagonist (Ipratropium)
LABA Long acting beta agonist (Salmeterol)
LAMA Long acting muscarinic antagonist (Tiotropium)
ICS Inhaled corticosteroid (Beclometasone)

- Consider mucolytic therapy if patient has chronic productive cough. Assess and stop if no improvement
- Long term oxygen therapy is indicated if arterial partial pressure of oxygen is <7.3 kPa when stable and requires assessment by a respiratory physicia

Routine review for patients with COPD

Symptoms	Include objective measures such as MRC dyspnoea scale ▪ Improvements in symptoms ▪ Activities of daily living ▪ Exercise capacity ▪ Speed of symptom relief (short-acting bronchodilators only)
Smoking status	Record and advise
Exacerbations	Numbers and circumstances
Medication	Use, problems, side effects, inhaler and spacer technique
Examination	Objective measures of lung function – spirometry, O2 saturation, BMI
Education	Treatment, smoking, exercise, diet
Immunisation	Offer flu and pneumococcal immunisations
Goals and review	

Management of exacerbations

- Careful history and examination including oximetry if available
- Increase frequency of bronchodilators, use nebuliser if needed
- If sputum is purulent use antibiotics
- Prednisolone 30mg for 7-10 days if significant increase in breathlessness

Medical Research Council dyspnoea scale

Athttp://www.nice.org.uk/usingguidance/commissioningguides/pulmonaryrehabilitationserviceforpatientswithcopd/mrc_dyspnoea_scale.jsp accessed 2.8.13

Grade	Degree of breathlessness related to activities
1	Not troubled by breathlessness except on strenuous exercise
2	Short of breath when hurrying or walking up a slight hill
3	Walks slower than contemporaries on level ground because of breathlessness, or has to stop for breath when walking at own pace
4	Stops for breath after walking about 100m or after a few minutes on level ground
5	Too breathless to leave the house, or breathless when dressing or undressing

Adapted from Fletcher CM, Elmes PC, Fairbairn MB et al. (1959) The significance of respiratory symptoms and the diagnosis of chronic bronchitis in a working population. British Medical Journal 2:257-66.

Reference

NICE guidelines at http://www.nice.org.uk/nicemedia/live/13029/49399/49399.pdf
Accessed 2.8.13

Asthma (Adults)

Learning objectives

Knowledge - Students should

- Be able to explain asthma in non jargon language to a patient
- Understand how to diagnose asthma
- Know how to manage asthma including drug therapies

Skills - Students should

- Be able to complete a competent history and examination of the respiratory system
- Be able to demonstrate use of a peak flow meter and interpret results
- Be able to demonstrate how to use an MDI with and without spacer device
- Be able to demonstrate use of a nebuliser

Definition

Asthma is a condition of paroxysmal, reversible airways obstruction caused by an underlying inflammatory process with characteristic features of reversible airway narrowing and airway hyper-responsiveness to many stimuli.

- Asthma varies from mild symptoms to a mortal illness. 1100 patients died from Asthma in the UK in 2005
- Asthma is a clinical diagnosis and there are tests that can aid the diagnosis. Diagnosis can be difficult as there are no symptoms that are exclusive to asthma
- Personal history of atopy makes a diagnosis of asthma more likely in patients with respiratory symptoms
- More than 200 industrial materials are known to cause occupational asthma

Diagnosing Asthma

- Objective tests should be carried out before starting long-term medication
- A normal test when the patient is asymptomatic does not exclude the diagnosis

Symptoms

- Wheeze
- Breathlessness
- Chest tightness
- Cough
- Symptoms worse at night/early hours of the morning
- Symptoms in response to triggers (pollen, cold air etc)

Signs (in symptomatic patients)

- Wide spread bilateral polyphonic wheeze, more pronounced on expiration
- Hyperinflated chest in chronic severe asthma

Life threatening

- Central cyanosis
- Silent chest
- PFR <than a third of predicted or best
- Hypotension
- Bradycardia
- Exhaustion

Peak flow measurement

- Ask the patient to stand up, hold PF meter horizontally, check indicator is at zero
- Ask the patient to take a deep breath and blow out forcefully into the peak flow meter. You need to make sure that the patient's lips are firmly sealed around the PF meter.
- Read the PEFR off the meter. Record best attempt and compare with expected reading for age, sex and height.

Interpretation of PF measurements

50-80% of predicted or best – moderate exacerbation
33-50% of predicted or best – severe exacerbation
<33% of predicted or best – life threatening asthma

Spirometry

Patients with asthma may have a reduced FEV_1 /FVC ratio (an obstructive picture). This is expected to fluctuate much more than in COPD where it tends to be fixed.

CXR Consider this for patients with new, atypical or additional symptoms

Management

The aim of asthma management is to control the disease. Good control means

- No daytime symptoms
- No night time awakening due to asthma
- No need for rescue medication
- No exacerbations
- No limitation on activities including exercise
- Normal lung function (FEV_1 or PEF >80% predicted or best)

Non drug measures

- Advise patient to stop smoking as this can exacerbate or trigger symptoms
- Advise obese patients to lose weight – there is some evidence that weight loss can lead to improved symptoms
- Allergen avoidance

Prescribing

Medication is prescribed in a stepwise fashion and can be stepped up or down.

Step1

Inhaled short acting bronchodilator as required (Salbutamol)

Poor symptom control ↓

Step2 Add inhaled corticosteroid 200-800mcg (start at dose that is appropriate for symptoms/patient, 400mcg is a good starting dose for most patients)

Poor symptom control↓

Step3

Add inhaled long acting $beta_2$ agonist LABA (Salmeterol)

Poor response to LABA – increase dose of inhaled corticosteroid to 800mcg

Add 3rd drug (Leukotriene receptor agonist (Montelucast) or SR Theophylline)

Poor symptom control↓

Step 4

Consider increasing inhaled corticosteroid to 2000mcg

Add 4th drug (LRTA, SR Theophylline, oral beta agonist)

Poor symptom control↓

Step5

Use daily steroid table in lowest dose in addition to inhalers

Refer for specialist care

Routine review for patients with asthma

- Check symptoms since the patient was last seen. See list above for good control, ask the Royal College of Physicians 'three questions'[1]
  In the last month
  1. Have you had difficulty sleeping because of your Asthma symptoms (incl. cough)?
  2. Have you had your usual Asthma symptoms during the day (cough, wheeze, chest tightness or breathlessness)?
  3. Has your Asthma interfered with your usual activities (work, school etc)?
- Record smoking status and ask about smoking in other members of household
- Review effectiveness and acceptability of medication with patient
- Be prepared to step up or down with treatment according to symptoms
- Offer influenza and pneumococcal immunisation
- Review objective measures – PFR
- Check inhaler/spacer technique
- Plan review and formulate written action plan what to do if asthma gets worse

Management of exacerbations

Assess patient's level of distress, clinical examination and pulse oximetry

High doses of Salbutamol via nebuliser, add nebulised ipratropium if poor response to Salbutamol, give 100% oxygen via non-rebreathe mask, give oral steroids 40-50mg

[1]Pearson, M, Bucknall, C, editors. Measuring clinical outcomes in Asthma: a patient focussed approach. London: Royal College of Physicians, 1999

For pages 41-42 the following TD learning outcomes apply: Outcome 1-9a, b, d, e, g)

Psychiatry

Low mood and depression

Learning objectives

Knowledge – you should

- Be able to recognise symptoms of depression
- Know the screening questions for depression
- Know how to assess the severity of depression
- Know how to assess suicide risk
- Understand when and why to prescribe medication
- Know treatments for depression
- Have basic knowledge of medication commonly used in depression
- Know the symptoms of Lithium toxicity

Skills – you should

- Be able to use a depression questionnaire, for example the PHQ9

It is estimated that 2.3 mill. people in the UK suffer from depression at any one time and that 1:10 people attending a GP have it. Depression is a heterogeneous condition and often associated with anxiety.

When you suspect depression ask these <u>screening questions</u>
During the last month have you often been bothered by

- Feeling down, depressed and hopeless?
- Having little pleasure or interest in doing things?

If the answer is 'yes' to either question you need to carry out a further assessment which you will learn about in your Psychiatry Unit.

- When making a diagnosis of depression, do not rely on symptom count alone, make a holistic assessment.
- If the answer is 'no' to both questions this does not necessarily exclude depression.

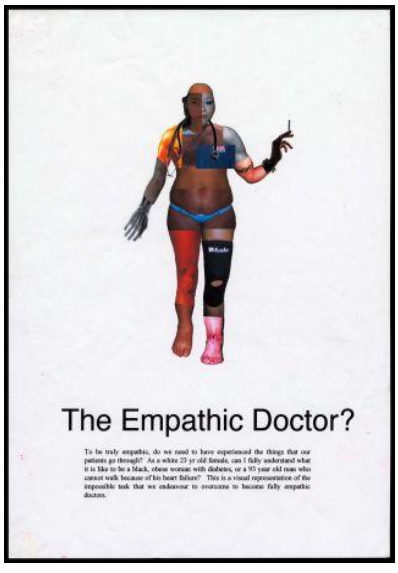
Several questionnaires are being used to <u>assess the severity of depression</u>. In General Practice the most commonly used questionnaire is the PHQ9. You can find it here http://www.integration.samhsa.gov/images/res/PHQ%20-%20Questions.pdf accessed 2.8.13

<u>Prescribing</u>
You need to have basic knowledge of drugs commonly used for depression

- SSRIs (Citalopram for example)
- Tricyclics (Amitriptyline for example)
- Mirtazepine
- Venlafaxine
- Lithium
- OTC (over the counter) – St John's Wort

<u>Discussion points for your GP sessions</u>

- It is estimated that 30-50% of depression is not detected. What do you think may be the reasons for that?
- How would you assess suicide risk?



- Problems with St. John's Wort?
- The consultation as a therapeutic intervention
- How to manage mental health problems in the 10 minute consultation
- First assessment and use of time for diagnosis and management
- Compliance/adherence
- Role of empathy in understanding the patient experience

Reflection
To be truly empathetic, do we need to have experienced the things that our patients go through? As a white 23 year-old female, can I fully understand what it is like to be a black, obese woman with diabetes, or a 93 year-old who cannot walk because of heart failure? This is a visual representation of the impossible task that we endeavour to overcome to become fully empathetic doctors.
Anon
At http://www.outofourheads.net/oooh/handler.php?p=homepage accessed 27.8.13

Alcohol and drug dependence

Learning objectives

Skills – you should
- Have a basic understanding of the principles of motivational interviewing.

Motivational interviewing
This is designed to help people make behaviour changes and is another tool to add to your 'consultation skills toolbox'. It has strong links with counselling approaches.
http://www.motivationalinterview.org/Documents/1%20A%20MI%20Definition%20Principles%20&%20Approach%20V4%20012911.pdf accessed 27.8.13

Schizophrenia

In your GP attachment you may be seeing patients who have lived and struggled with Schizophrenia for many years. Try and
- Focus on their 'stories' rather than 'taking a history' (a conversation)
- Find out from them how the approaches to management and medication may have changed over the years
- What has been the effect on their lives?
- How have they coped with it?
- What has helped them the most?
- How do they view the care they have received and the services they have used?
- What medication have they taken?
- Any therapies?
- How are they now? etc

Quality and Outcomes Framework (QOF)

Please note:
You are not expected to memorise any details of the QOF and there will not be any exam questions on the QOF but you should understand in broad terms what it is

Learning objectives

Knowledge - Students should

- Be aware of QOF, what it is and why it was introduced
- Have an understanding of the 5 domains that makes up QOF
- Have an understanding of how points lead to monetary incentives
- Be aware that QOF performance data is readily available to the public
- Have an understanding of the basis of exception reporting
- Be aware that QOF performance figures are generated annually and these are subject to an external review by Primary Care organisations

The Quality and Outcomes Framework (QOF) is a voluntary programme for Primary Care and is based around target driven pay. Targets are set and practices score points if they achieve them. Its basic aim is to "reward good practice" and was first introduced in 2004. It is under continual review and updates including new targets are introduced at regular intervals.

The QOF contains five main domains and each domain consists of a set of indicators, against which practices score points depending on their level of achievement. The total number of available points is 1000

- **Clinical care** This domain consists of indicators across clinical domains. It involves achieving preset standards in the management of: smoking, CHD, heart failure, atrial fibrillation, stroke and TIA, hypertension, hypothyroidism, diabetes, chronic kidney disease, dementia, learning difficulties, depression, mental health, COPD, asthma, epilepsy, cancer, obesity, palliative care.
- **Organisational** This domain consists of five organisational areas – records and information; information for patients; education and training; practice management and medicines management.
- **Patient experience** This domain relates to length of consultations and to patient satisfaction surveys
- **Additional services** This domain consists of four service areas which include cervical screening, child health surveillance, maternity services and contraceptive services
- **Holistic care –** This domain reflects the range of achievement across clinical indicators – calculated by ranking clinical indicators in terms of proportion of points gained (1-10). The proportion of the points gained by the third lowest indicator (i.e. indicator ranked 7) is the proportion of the holistic care points obtained.

Scoring

The QOF system is then used to give a practice a performance score based on the indicators defined in each domain. The higher the score, the higher the financial reward for the surgery. The exact monetary value of each point depends on practice characteristics and weighting for all factors that increase workload through the Carr-Hill allocation formula. The Carr Hill allocation formula takes into account age-sex adjustments (older people and children <5 years old require the most GP care), nursing and residential homes, list turnover, additional needs (such as long standing illness and mortality ratios), staff market forces factor (takes into account geographical variation and staff costs) and rurality. *The mean value of one point in 2007-2008 was £124.60.*

Availability to the public

The NHS Information Centre for health and social care (The NHS IC) has an online database to allow the public access to this data and see how well their surgery is scoring.

Exception reporting

Of note, there is exception reporting where patients can be excluded from QOF so that the practice is not penalised for failing to meet targets because of factors beyond their control. For example, if the patient does not attend for review, where medication cannot be prescribed due to a side effect, terminal illness, newly diagnosed to recently registered patients, patients on maximal tolerated therapy, informed dissent where a patient does not agree to a treatment or where investigations or secondary care is unavailable.

Annual reports and reviews

Each year, every practice must complete a standard report recording their level of achievement in the last year and the appropriate evidence. Most computerised practices use the Quality and Outcomes Framework Management and Analysis System (QMAS) to do this. There is also an annual quality review visit by the primary care organisation (PCO) where the information provided is reviewed and further evidence may be sought.

Please note: *QOF targets are sometimes slightly different to targets recommended by NICE guidelines*.

What effect do you think the QOF has on individual consultations?

Ask your GP teacher how they manage QOF in their own consultations and for their practice overall

References

Oxford Handbook of General Practice, Second Edition. Simon, Everitt and Kendrick.
www.nice.org.uk
http://www.hscic.gov.uk/qof accessed 27.8.13

Consultation Skills

Consolidating and extending consultation skills in Year 3

You had your first taste of talking with patients in Year 1 when you visited patients in their own homes as part of your GP sessions. In Year 2 you were introduced to the Cambridge-Calgary consultation skills guide (CCG) and practiced with actors. The Year 3 GP sessions are an excellent opportunity to further develop your consultation skills and should be seen as part of an ongoing process to become an 'effective consulter'.

Please get out your communication skills handbook from last year and revisit the CCG. It is a helpful framework for analysing and practicing the micro skills that are needed for a good consultation. Take the opportunity to reflect on your skills, 'What am I doing well?' 'What needs more practice?' and ask your GP teachers and peers to comment on your performance.

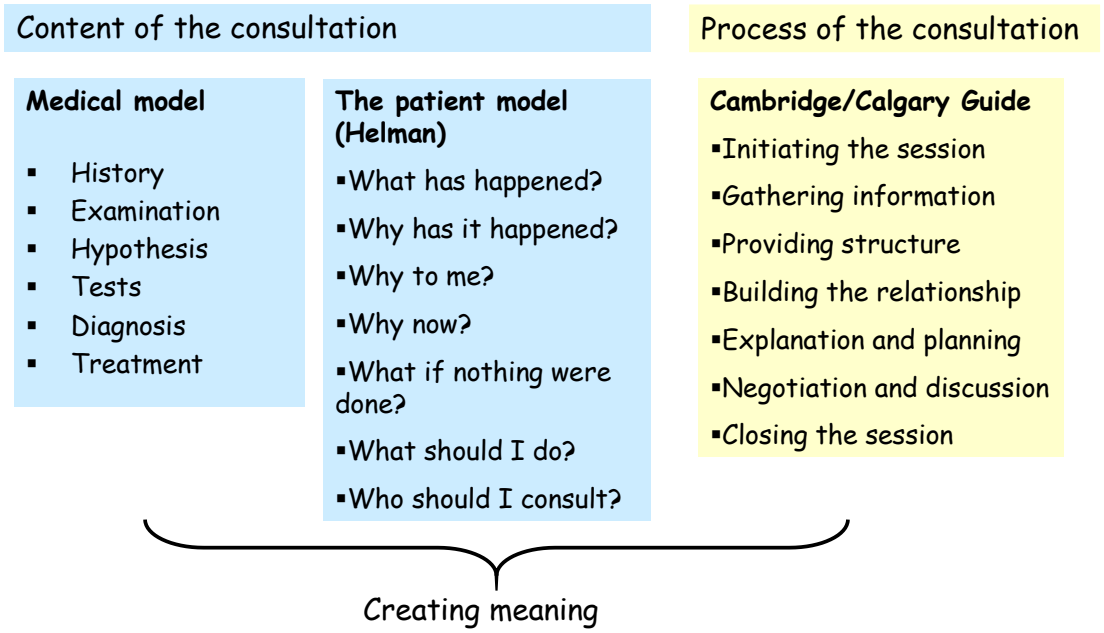
Please also be prepared to give specific and constructive feedback to the other students. GPs in training also use the CCG and your GP teacher has a copy in their teacher handbook.

Medical history taking and consultation skills

Students often feel confused by the apparently conflicting models of biomedical medical history taking (Presenting complaint, PMH etc) and the Cambridge-Calgary consultation skills guide. In a nutshell: The medical history template relates to the ***content*** you are trying to unearth. The CCG is a model of the ***process*** of gathering this information effectively.

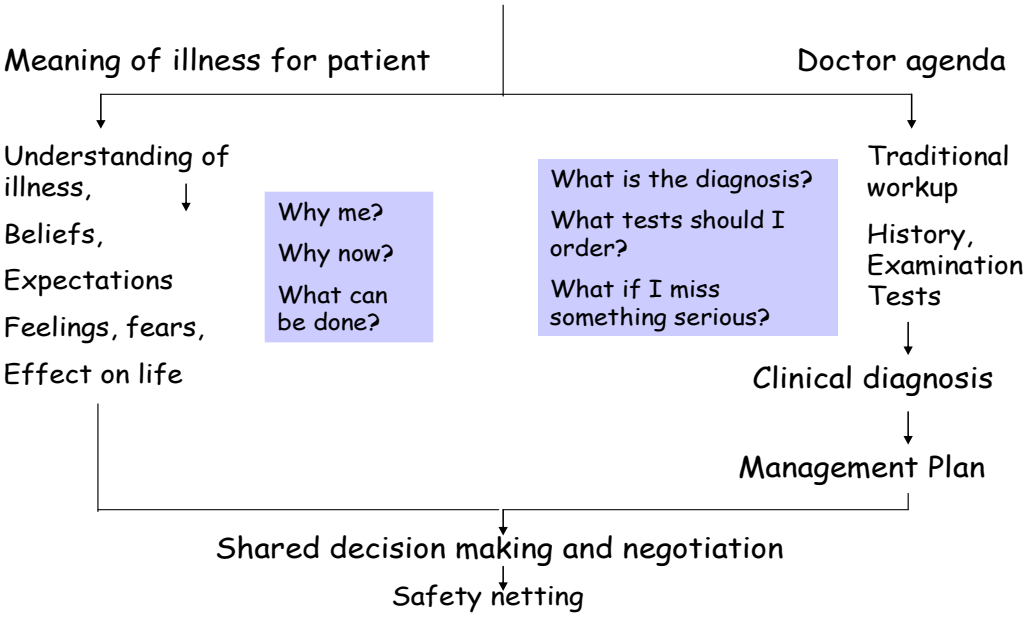
Here are some diagrams to highlight the relationships between ***content*** and ***process*** of consultations and patient and doctor agendas.

Content and process of the consultation



Ref.: Kurtz, S, Silverman, J and Benson, J (2003) Marrying content and process in clinical method teaching: enhancing the Calgary-Cambridge Guides, *Academic Medicine,* Vol. 78, No. 8

Bringing together the patient and doctor agenda



Year 2 students are taught how to take a systematic and comprehensive history and carry out an equally systematic and comprehensive examination. This familiarises students with all aspects of history and examination and will hopefully be "burned into their hard disc" for future reference.

The disadvantage of a 'template' approach is that it does not encourage students to think about the meaning and relevance of what patients responses. This can sometimes lead to inappropriate questions. Here is an example:

Student: "Are there any diseases running in the family, for example heart attacks?"
Patient: "My mother has had a problem with her memory for some time and last week we were told that she definitely has Alzheimer's".
Student: "Do you smoke?"

The student was following a list rather than responding to the information or "cue" from the patient. A diagnosis of Alzheimer's disease has many implications and it would have been more helpful to the patient if the student had expressed empathy:

Student: "That must have been a shock for you."

It is easy to see how asking one medical question after another, without taking account of the patient's responses, can hinder our interaction with patients.

From “check listing” to “problem solving” and whole person care (WPC)

From Elwyn Davies, GP, Cheddar Medical Centre)

When you have run through your checklist of relevant symptoms and are wondering what to do with the information ask yourself some simple questions

- Can you summarise what you have been told so far?
- Does it tell a story from beginning to end?
- Is the story unique to the individual and their situation?
- Can you tell what the probable diagnosis is (main problem)?
- And what it isn’t (differential diagnosis)?
- What is the worst thing it could be (What you must not miss)?
- Do you know what the patient thinks is wrong and worries about?
  - **the key to a happy consultation (ICE=ideas, concerns and expectations)**

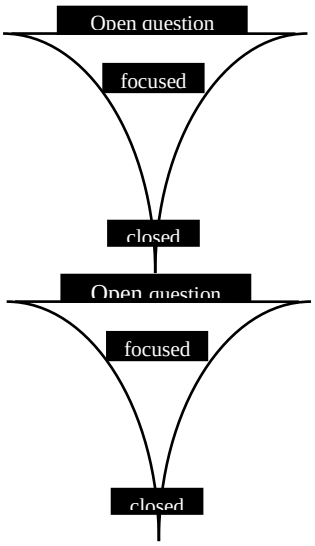
Specific consultation skills you may like to practice
Attentive listening, checking understanding, picking up cues, empathy, open and closed questions, appropriate language, clarification, time framing, summarising

Clinical Reasoning

The hypothetico-deductive model
Experienced doctors are able to diagnose quickly through pattern recognition (‘illness scripts’ see below) and/or using a hypothetico-deductive approach to diagnosis. This means that they generate ideas about possible diagnoses within the first minute or two of the consultation. Symptoms are put into “ballparks”, i.e. whether SOB is more likely to be a chest or heart problem. They then concentrate their questioning on attempts to confirm or refute the diagnosis. This focuses more on what the patient says and how they say it than following a list of questions.

The experienced doctor starts with open questions, then narrows down to more detailed and specific ones. He or she may then open up a further area of questioning with another open question; again narrowing down to afterwards. This process of ‘funnelling’ may happen several times in one consultation

Funnelling in clinical problem-solving



“Illness scripts”
Through clinical practice we also acquire our personal “illness scripts” which we draw on for making diagnoses. These are composite pictures of all patients we have seen with a particular problem. For example, we may better be able to pick up signs of motor neurone disease if we have encountered it before in different guises. These “illness scripts” provide shortcuts, which can be enormously helpful in 10-minute consultations but can also leave us stranded when they don’t fit the patient in front of us. It is then that we need to be able to use a more systematic approach.

In the course of your training and throughout your medical career you will develop your own toolbox of processes, phrases and illness scripts that you can draw on to help your patients.

Mnemonic for eliciting key features of presenting complaint

S	**Symptom**	Characteristics/associated symptoms
S	**Severity**	Subjective/objective scales
S	**Situational**	Aggravating/relieving factors
T	**Time course**	Previous occurrence/duration/constant or intermittent
O	**Onset**	Sudden or gradual
P	**Patient**	Age/race/gender/risk factors

Turning a Symptom into a Diagnosis

- Consider all possible diagnoses (Diagram 1)
- Narrow it down to a likely "ballpark" (Diagram 2)
- Then, using all available information, reduce your differential diagnosis down to the one(s) that best fit your patient (Diagram 3)

Example: Shortness of breath

Diagram 1

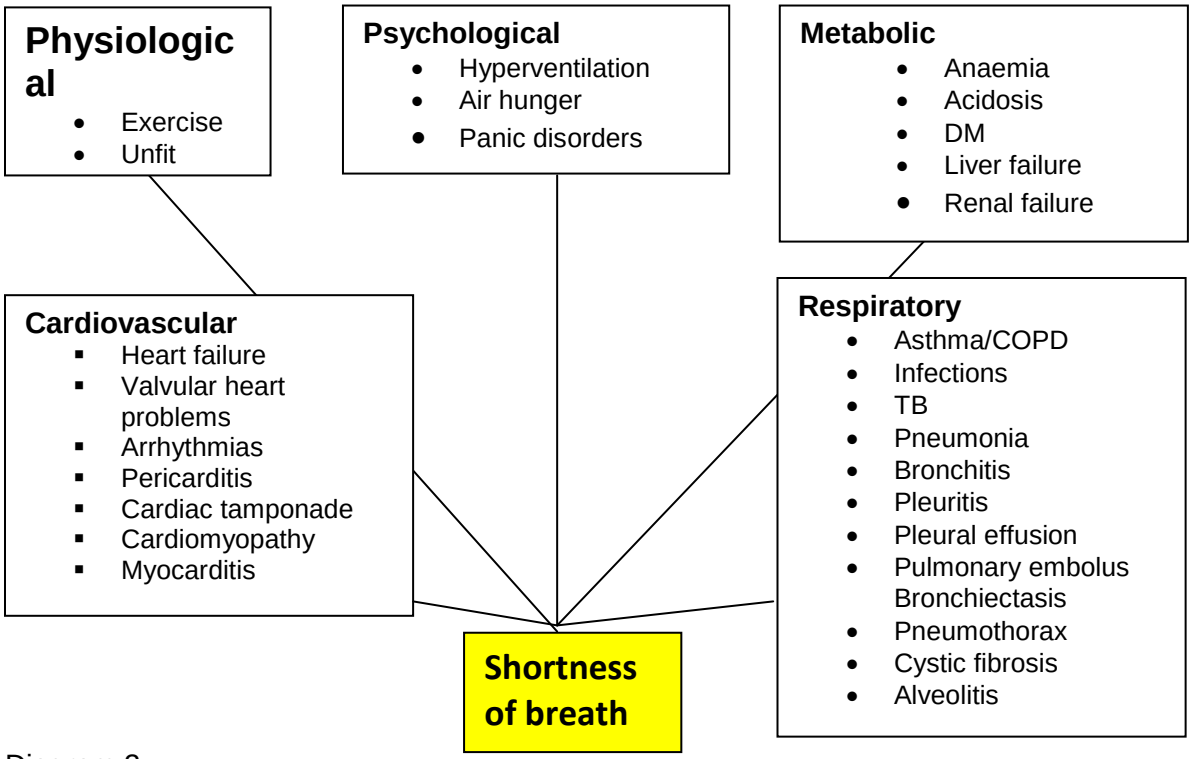


Diagram 2

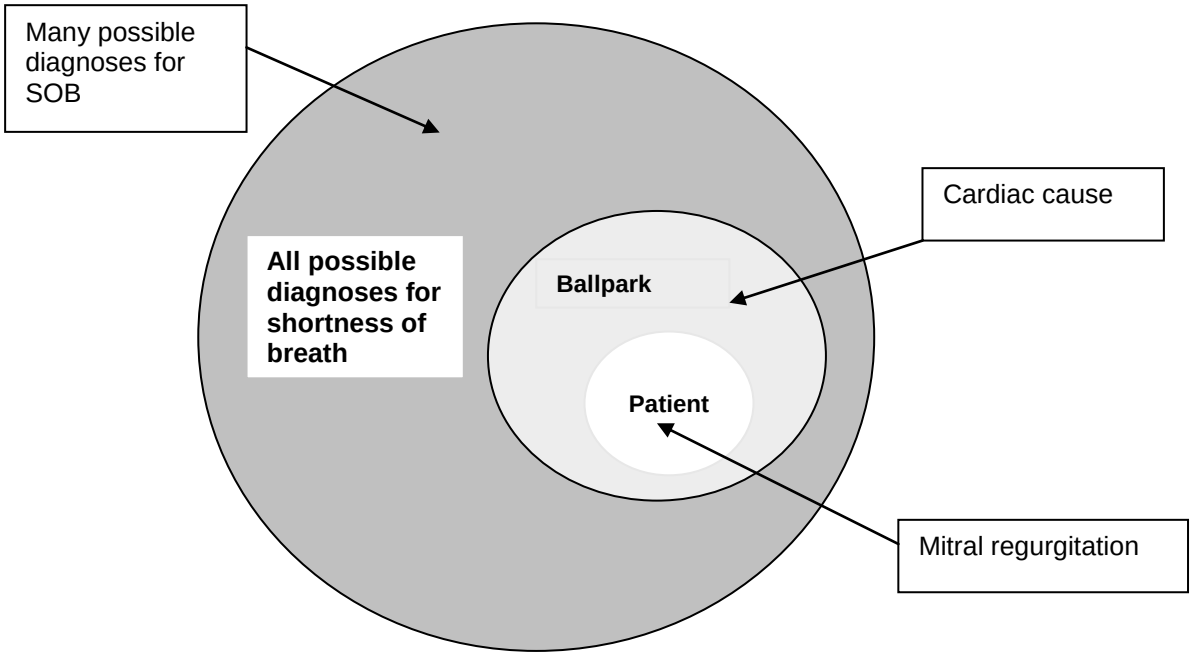


Diagram 3

The Clinical Process	Example	Findings
		46 M
1st level questions – "ballpark" (e.g. SSSTOP)	Tell me more about your breathlessness. Have you been coughing or wheezing? Have you had any chest pain? How does your breathing restrict you? Does anything make things worse? How long have you had this for? Any other medical problems?	Puffed easily these days No 'Niggles' Can't play tennis now No A year or so Not really
↓		
2nd level questions – "detail"	Do you get palpitations? Have you had any heart problems before? Have you ever had rheumatic fever? Any heart problems in the family? Do you smoke?	Occasionally No No Father MI aged 60 No
↓		
Differential diagnosis	Heart Failure Valvular Heart Problem Arrhythmia Cardiomyopathy	
↓		
Examination	Cardiovascular Examination	P 90, BP 130/85 Pansystolic murmur
↓		
Review differential diagnosis	Valvular Heart Problem likely	
↓		
Investigations	ECG FBC/U&E/Lipids	Flat T-waves inferolaterally NAD
↓		
Review differential diagnosis (+/- further investigations)	Echocardiogram	Slightly enlarged L heart Mitral valve prolapse Mod. mitral regurgitation
↓		
Diagnosis or Acceptable Uncertainty	Mitral valve prolapse causing moderate mitral regurgitation	
↓		
Management plan	Watch and Wait Aspirin	
↓		
Follow up	GP + Cardiology reviews	

Books and References

Clinical Examination

Introduction to Clinical Examination, Munro and Ford (Churchill Livingstone, 2000)
Short succinct textbook, good for quick revision

Clinical skills, Oxford Core Texts, Cox and Roper (Eds.) (Oxford University Press, 2005)
This is a more recent book on clinical skills with detailed descriptions of examination techniques, almost 500 pages. It also rates the difficulty of an examination from 1-5, which can be helpful.

An Introduction to the Musculoskeletal System – a handbook for medical students,
Professor Paul Dieppe (www.arc.org.uk)
This free handbook from the Arthritis Research Campaign covers the 5 minute GALS (gait, arms, legs, spine) examination.

Clinical medicine

Symptom Sorter. 3rd Ed.**,** Hopcroft, K and Forte, V. Oxford: Radcliffe; 2007.
The chapters in this book are organised by symptoms. The authors present a list of possible causes of each symptom in order of likelihood and list the red flags that must not be missed. This is a very useful book for all practicing doctors and clinical students.

General practice

A Textbook of General Practice, 3rd Ed., Stephenson, A. (Ed.) London: Arnold; 2011.
This book, edited by our current external examiner for Year 4, is good at explaining what general practice is all about. It discusses the organisation of general practice, prescribing, chronic disease and health promotion. It contains less information on the management of particular clinical problems.

Whole Person Medicine

Suburban Shaman – tales from medicine's front line, Helman, C (Hammersmith Press, 2006)
A succession of colourful stories emphasising a humanistic approach to medical practice from the author's experiences around the world. Good therapy for information overload.

Evidence Based Medicine

How to read a paper: the basics of evidence-based medicine, Greenhalgh, (BMJ Books, 2006). Very helpful when presenting papers or researching. I wish I had read it earlier!

Ethics

The duties of a doctor registered with the General Medical Council
http://www.gmc-uk.org/guidance/good_medical_practice/duties_of_a_doctor.asp

Medical Students: Professional Behaviour and Fitness to Practice
www.gmc-uk.org/education/undergraduate/undergraduate_policy/professional_behaviour.asp

Disability

The diving bell and the butterfly, Bauby (London: Fourth Estate, 1998)
Written by a patient with "Locked in syndrome" after a massive stroke. An amazing book.

Consultation and procedural skills

Communication skills that heal, BUB, B. (Oxford: Radcliffe Publishing 2006)
A different look at the consultation, pattern recognition of 'types of consultations', for example 'the lament'. You can read the 'Lament chapter' here http://bmj-mh.highwire.org/content/30/2/63.full accessed 29.8.13. Easy and enjoyable to read with hands on suggestions. Highly recommended

Wider Interest

Blood and Guts – A Short History of Medicine, Porter (Penguin, 2003)
Fascinating, well-illustrated account of medicine's development. Includes plague costumes, barber-surgeons and hydrotherapy! Puts today's medical practice into perspective.

Online Resources

http://cks.nice.org.uk/ accessed 29.8.13

NHS **C**linical **K**nowledge **S**ummaries **(**formerly PRDIGY)

This is a reliable source of evidence based information and practical 'know how' for common conditions managed in Primary Care

www.patient.co.uk accessed 29.8.13

This site has helpful leaflets on medical conditions and problems for patients. It can be useful to read these leaflets as a simple overview of a condition before you read more in depth material.

There is also a section titled 'Professional references' which is intended for doctors. Here you find the 'Patient Plus' and 'Other references'.
Patient Plus has expert level information on a huge range of conditions and 'Other References' has links to all the relevant guidelines and to excellent image libraries, including anatomy and dermatology.

http://www.gpnotebook.co.uk/homepage.cfm accessed 29.8.13

GPnotebook focuses on the information needs of General Practitioners and has concise summaries of conditions covering the entire field of clinical medicine. This site is used by many GPs to answer questions quickly during consultations.

Quick and user friendly.

www.learning.bmj.com
Register free for a selection of free online interactive learning modules. Paying subscribers receive more.

Year 3 Student Self Assessment Checklist

This checklist is based on the suggested teaching topics. It is designed to help tailor your learning to your needs. It can also help assess progress in acquiring skills and knowledge.
The checklist is **yours**. It does not form part of a formal assessment process. Be honest.
Try to complete it on 3 occasions

- Before GP session 1 (at the start of year 3)
- Before GP session 4 (end of 1st GP attachment)
- Before GP session 8 (end of 2nd GP attachment)

Score	1	2	3	4	5	6	7	8	9
Confidence	Nil		Little		Moderate		Very		Total

Skill/Knowledge	**Start Year 3**	**Before GP session 4**	**Before GP session 8**
COMMUNICATION/ CONSULTATION			
Introductions	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Developing rapport	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Non-verbal communication	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Attentive listening	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Open/closed question use	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Clarifying	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Empathy	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Explaining clearly	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Summarising	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Sharing decisions	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Interview structuring	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Time management	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Average (1-9)			
CLINICAL KNOWLEDGE			
Overall	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Ophthalmology	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
ENT	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Psychiatry	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Musculoskeletal	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Average (1-9)	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
CLINICAL EXAMINATION			
Cardiovascular	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Respiratory	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Abdominal	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Neurological	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
ENT	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Mental State	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Knee	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Hip	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Back	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Shoulder	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Average (1-9)			
PRACTICAL SKILLS			
BP measurement	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Dipstick urinalysis	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Blood glucose testing	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Using an auriscope	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Using an ophthalmoscope	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Measuring ABPI	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Demonstrating inhalers	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Measuring PEFR	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Using a thermometer	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9	1..2..3..4..5..6..7..8..9
Average (1-9)			
Overall Average (1-9)			

Please write your reflections and comments on the back of this form

Year 3 - Student Self-Assessment Form

(Not to be returned to the teaching office)

Date **GP teacher/practice** (stamp)

Unit 1&2

Please take some time to reflect on your professional development. Areas for consideration: medical history taking, consultation skills, knowledge, "putting it all together" and others. You may also want to consider how you feel in different medical environments (hospital wards, General Practice) and how you are handling emotions – those of patients, people around you and your own.

	Own reflections	**Feedback from your GP teacher**
Strengths		
Areas in which I have improved		
Areas for development		

Year 3 - Student Self-Assessment Form

(Not to be returned to the teaching office)

Date **GP teacher/practice** (stamp)

Unit 3&4

Please take some time to reflect on your professional development. Areas for consideration: medical history taking, consultation skills, knowledge, "putting it all together" and others. You may also want to consider how you feel in different medical environments (hospital wards, General Practice) and how you are handling emotions – those of patients, people around you and your own.

	Own reflections	**Feedback from your GP teacher**
Strengths		
Areas in which I have improved		
Areas for development		

Reflective diary of patients seen in my GP attachments 2013-14

Please keep a list of the patients you have seen in General Practice and reflect on what you have learned from them. This should help you to plan your studies. You, the other students in your group and your GP teacher could also use this learning log for planning the next session.

Patient **(age, gender)**	**Diagnosis/Problem(s)**	**Learning points**	**Plan for further learning**
Example F, 65	Type 2 DM, depression, Obesity	▪ Learned how to stay focussed with a complex history ▪ 2 question screening tool for depression ▪ How to check for peripheral neuropathy	▪ When to start medication in Type 2 DM ▪ Guidelines for treatment in Type 2 DM ▪ Learn more about motivational interviewing
1			
2			
3			
4			
5			

Patient (age, gender)	**Diagnosis/Problems**	**Learning points**	**Plan for further learning**
6			
7			
8			
9			
10			
11			

Patient **(age, gender)**	**Diagnosis/Problems**	**Learning points**	**Plan for further learning**
12			
13			
14			
15			
16			
17			

My notes and reflections

University of BRISTOL

Student evaluation of the Year 3 GP attachments in 2013-14

Academy ……..

GP attachment (please tick) **1st GP practice** † **2nd GP practice** †

GP's name and practice (please print clearly or use stamp)

	Yes	No	Comment
Our GP teacher made us feel welcome			
Our GP was an enthusiastic teacher			
Our sessions were well organised (started on time, well planned, well structured)			
We saw 2 or more patients in each session			
The GP teacher observed me taking a history and examining a patient			
The GP teacher commented on our skills during the sessions			
The GP teacher gave me individual feedback at the end of the last session			
I found the feedback from my GP teacher helpful			

What was good about the sessions in this practice?

How could this GP Teacher improve the sessions?

How have these sessions improved your clinical skills?

Thank you for taking the time to complete this form

Please place your form and those from the other students in the envelope provided by your GP teacher and seal the envelope. Please ask your GP teacher to post to:

Primary Care Teaching Office, Room 101, Canynge Hall, 39 Whatley Rd, Clifton, Bristol BS8 2PS

PTO for further comments