MB ChB Programme

From http://outofourheads.net/oooh/

GP Attachments for 3rd Year Medical Students

Student Guidebook
2018-19

Placement Lead: Dr Barbara Laue
Phone: 0117 4282841
barbara.laue@bristol.ac.uk
Canynge Hall, Whatley Rd, Clifton, BS8 2PS

Placement Secretary: Kirsten Gill
Primary Health Care Teaching Office
Bristol Medical School
University of Bristol
1st Floor, 5Tyndall Ave,
Bristol
BS8 1UD
Phone: 0117 4282841
phc-teaching@bristol.ac.uk
http://www.bristol.ac.uk/primaryhealthcare/

@capcteaching
What 3rd Year students said about their GP teaching last year

Patients were very interesting and had good signs. Very friendly atmosphere. I didn’t feel ashamed to get things wrong. Dr T really helped me with things I needed to work on.

Our GP gave us lots of useful tips for history and examination. We were able to choose what we wanted to focus on. The patients chosen to come in were great. We saw a wide range of things. He was very encouraging, and I wasn’t afraid to get something wrong and he believed in us!

There was a great mix between seeing patients and having teaching - I loved that we went through different clinical skills and drug charts!! Dr R was also very lovely and approachable, and the sessions were always very fun.

Allowed me to practice things I didn’t feel confident in/hadn’t gotten much teaching on in the hospital e.g. differences in percussion note in a resp. exam.

Really great teacher, lot of interesting cases and patients, good discussion of practical issues.

Structured teaching relevant to the curriculum and very welcoming, felt like I had a good insight into primary care.
Welcome from the GP Lead for Year 3

Welcome to your 3rd year GP placements 22.8.18

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.

Benefits of the GP placements 24 hours of directly observed clinical learning
The focus for learning in the GP placements are the general skills and knowledge all doctors need. 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 your requests to see patients with specific conditions or to practice particular skills, for example using an ophthalmoscope.

You will have 8 sessions, 4 in each academy. Each session is about 3 hours long. This represents 8x3=24 hours of directly observed clinical learning. Please check out this guide and make good use of this learning experience.

The guidebook for Year 3 GP attachments
This guidebook has all the learning objectives for your Year 3 GP placements. It also has a list of contacts, information how to organise your sessions and who to contact if you have problems. You need to read it in conjunction with the Year 3 Handbook, Unit handbooks, Blackboard and Hippocrates learning resources and the Rules, Policies and Procedures handbook.

Being a self-directed learner
Please have a look through this guidebook. It has the learning objectives for the GP attachments including 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 guidebook and carry out your own learning needs analysis. The learning checklist in this guidebook will help you with that.

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 guidebook 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 record learning events and to reflect how their learning is improving their clinical practice.

Reflection is not a ‘tick-box’ exercise. In learning psychology terms, it is an invaluable process that protects you against forgetting what you have learned. It is an act of elaboration and retrieval which will lay down new connections in your brain which will make learned material more resistant to forgetting.
Developing skills in giving and receiving feedback
You will be attending your GP placements in small groups of 4 or occasionally 5 students. This provides an opportunity for you to receive feedback from the other students as well as your GP teacher. You will also be expected to give feedback to your peers.

This guidebook has a short section summarising recent thinking about the feedback process and 'rules' for giving feedback effectively. Don’t forget to read it.

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.

References to the GMC’s ‘Outcomes for Graduates’ (OFG)
The Bristol medical curriculum is based on the ‘framework’ set by the GMC for all medical schools. This ‘framework’ is described in ‘Outcomes for Graduates’ which was revised in 2018. You can access it at [https://www.gmc-uk.org/-/media/documents/dc11326-outcomes-for-graduates-2018_pdf-75040796.pdf](https://www.gmc-uk.org/-/media/documents/dc11326-outcomes-for-graduates-2018_pdf-75040796.pdf) accessed 13.8.18

It is organised into three ‘Outcomes’ – 1 Professional values and behaviours, 2 Professional skills and 3 Professional knowledge. I have referenced most of the learning objectives to relevant statements in OFG. 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.

Assessment
Primary Care contributes ‘Best of Five’ questions and one Primary Care OSCE station. They are based on the learning outcomes in this guidebook.

Consultation skills
Making sense of what patients tell us is a challenging task. To become good at it we need lots of practice and feedback. You will have two consultation skills sessions with actors in Year 3, one at the University and one in your academy during JMS. In addition, there are learning resources for consultation skills in Blackboard and Hippocrates.

Hippocrates and Blackboard
Year 3 GP placements MEDI_YR3_GP: Year 3 Primary Care

- ‘Putting it all together’ e-tutorials for anal fissure and heartburn under learning resources. These are set up like OSCEs. You can use them for OSCE practice or work through them in a stepwise fashion to learn more about consultation skills.
- Communication e-tutorial under consultation skills
- Primary Care - Essential Clinical Communication - key tasks of the consultation

Clerking portfolio
You will need to complete a clerking portfolio during the Junior Medicine and Surgery Unit. You can use this clinic proforma for patients you see in your GP attachment. You will usually see 2 patients per GP session.
This means that you will be seeing about 16 patients in total in your GP placement. Each patient should only be written up by one student.

Pathology
You will have two GP sessions during the Pathology Unit. Apart from Haematology your GP sessions will be the only opportunity to see patients in this Unit.

Psychiatry
Psychiatry is taught in Year 4. Given how inextricably linked physical and mental states are we feel that it is essential for you to gain some understanding of mental health assessments and conditions before your core psychiatry teaching in Year 4. In JMS you will have one day of liaison psychiatry, in MDEMO you will hear about mood disorders and in your GP placements you will learn how to screen for depression.

ENT
Being able to use an otoscope and recognise common ear conditions are essential skills for any clinician. You could ask your GP and patients for a bit of Otoscope practice in the Junior Medicine and Surgery Unit. There are some concise ENT learning resources in this guide to help you consolidate what you are learning in the ENT week.

Prescribing
Prescribing is an important and frequent task for most doctors. It is essential 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 compulsory for fifth year students since 2013-14.

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 for 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 range 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.

Any problems?
If you encounter problems with the GP placements, please tell us straight away. For example, if no patients have been invited for the session, you are not getting any feedback, you are not being observed etc. See page 9 for more info.

Wishing you an enjoyable time in your GP placements

[Signature]

Barbara Laue (GP Lead for Year 3)
Table of contents

Welcome from the GP Lead for Year 3 .................................................................3
Table of contents ........................................................................................................6
Contact Details ...........................................................................................................7
Teaching information .................................................................................................8
GP teaching sessions .................................................................................................8
Topics to cover in the GP placements .......................................................................11
Assessment ..................................................................................................................12
Attendance requirements for the GP sessions ..........................................................13
Professional behaviour ............................................................................................13
Boundaries ..................................................................................................................14
Confidentiality and Consent ......................................................................................14
Learning in Primary Care .........................................................................................15
Things you need to know about learning ..................................................................17
Clinical reasoning – an intro ....................................................................................18
Feedback ....................................................................................................................20
Prescribing ..................................................................................................................24
10 Stages of Prescribing ...........................................................................................26
JMS Learning objectives .........................................................................................27
Hypertension .............................................................................................................27
Cerebrovascular disease - Stroke and Transient Ischaemic Attack (TIA) ..................33
Atrial fibrillation and risk assessment ....................................................................37
Ischaemic heart disease and heart failure ..............................................................39
Type 2 diabetes .........................................................................................................44
Cardiovascular risk assessment .............................................................................49
COPD .........................................................................................................................50
Asthma (Adults) .........................................................................................................53
ENT examination .......................................................................................................57
MDEMO learning objectives ..................................................................................58
Pathology learning objectives ..................................................................................59
Mental Health/Psychiatry learning in Year 3 ............................................................63
Clinical Reasoning ....................................................................................................74
Books and References .............................................................................................78
Form 1 My Learning Checklist ................................................................................80
Form 2 - How am I doing? My reflection on learning in Unit 1&2 .........................81
Form 2 - How am I doing? My reflection on learning in Unit 3&4 .........................82
Form 3 Reflective diary of patients seen in my GP attachments 2018-19983
Student evaluation of the Year 3 GP attachments in 2018-19 ................................88
**Contact Details**

Within the University of Bristol, the overall administrator for Year 3 Primary Care student placements is Kirsten Gill [phc-teaching@bristol.ac.uk](mailto:phc-teaching@bristol.ac.uk) Tel: 0117 4282841

The GP lead for Year 3 is Dr Barbara Laue [barbara.laue@bristol.ac.uk](mailto:barbara.laue@bristol.ac.uk)

For support outside the Units you can contact

- The Faculty Student Advisor at [https://www.bris.ac.uk/medical-school/staffstudents/support/](https://www.bris.ac.uk/medical-school/staffstudents/support/)
- Your academic mentor
- Student Health [http://www.bristol.ac.uk/students-health/contact/](http://www.bristol.ac.uk/students-health/contact/)

<table>
<thead>
<tr>
<th>GP ACADEMY LEADS</th>
<th>ACADEMY ADMINISTRATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bath</strong></td>
<td></td>
</tr>
<tr>
<td>Academy Dean: Alastair Kerr <a href="mailto:a.kerr1@nhs.net">a.kerr1@nhs.net</a></td>
<td></td>
</tr>
<tr>
<td>Ciaran Conway</td>
<td></td>
</tr>
<tr>
<td>Tel: 07821 415143</td>
<td>Maureen Jacobs/Cath Foster Tel: 01225 825479</td>
</tr>
<tr>
<td><a href="mailto:Ciaran.conway@bristol.ac.uk">Ciaran.conway@bristol.ac.uk</a></td>
<td><a href="mailto:ruh-tr.bath-academy@nhs.net">ruh-tr.bath-academy@nhs.net</a></td>
</tr>
<tr>
<td><strong>North Bristol</strong></td>
<td></td>
</tr>
<tr>
<td>Academy Dean: Justin Morgan <a href="mailto:Justin.Morgan@nbt.nhs.uk">Justin.Morgan@nbt.nhs.uk</a></td>
<td></td>
</tr>
<tr>
<td>Nita Maha Tel: 01275 832285</td>
<td>Suzan Fowweather Tel: 0117 414 8085</td>
</tr>
<tr>
<td>nитамаха@outlook.com</td>
<td><a href="mailto:Suzan.fowweather@nbt.nhs.uk">Suzan.fowweather@nbt.nhs.uk</a></td>
</tr>
<tr>
<td><strong>South Bristol</strong></td>
<td></td>
</tr>
<tr>
<td>Academy Deans: Julie Dovey and Jonathan Rees <a href="mailto:Julie.dovey@uhbristol.nhs.uk">Julie.dovey@uhbristol.nhs.uk</a> <a href="mailto:jonathan.rees@uhbristol.nhs.uk">jonathan.rees@uhbristol.nhs.uk</a></td>
<td></td>
</tr>
<tr>
<td>Claire Pugh (Telephone via administrators) <a href="mailto:Claire.pugh@uhbristol.nhs.uk">Claire.pugh@uhbristol.nhs.uk</a></td>
<td>James Murray Tel: 0117 342 2256 <a href="mailto:southbristolacademy@UHBristol.nhs.uk">southbristolacademy@UHBristol.nhs.uk</a></td>
</tr>
<tr>
<td><strong>Gloucester &amp; Cheltenham</strong></td>
<td></td>
</tr>
<tr>
<td>Academy Dean: Philip Davies <a href="mailto:Philip.Davies7@nhs.net">Philip.Davies7@nhs.net</a></td>
<td></td>
</tr>
<tr>
<td>Michael Kilshaw 01242 602307</td>
<td>Angie Coulson Tel: 0300 422 6233 <a href="mailto:Angie.coulson@nhs.net">Angie.coulson@nhs.net</a> Zaneta Jones Helen Bowen <a href="mailto:ghn-tr.admin-glosacademy@nhs.net">ghn-tr.admin-glosacademy@nhs.net</a></td>
</tr>
<tr>
<td><a href="mailto:michaelkilshaw@gmail.com">michaelkilshaw@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td><strong>North Somerset/Weston</strong></td>
<td></td>
</tr>
<tr>
<td>Academy Dean: Bee Martin <a href="mailto:Beemartin@nhs.net">Beemartin@nhs.net</a></td>
<td></td>
</tr>
<tr>
<td>TBC</td>
<td>Lissette Lock Tel: 01934 881319 <a href="mailto:Lissettelock@nhs.net">Lissettelock@nhs.net</a></td>
</tr>
<tr>
<td><strong>Somerset</strong></td>
<td></td>
</tr>
<tr>
<td>Academy Dean: Simon Cooper <a href="mailto:simon.cooper@tst.nhs.uk">simon.cooper@tst.nhs.uk</a></td>
<td></td>
</tr>
<tr>
<td><strong>Taunton</strong></td>
<td></td>
</tr>
<tr>
<td>Laurence Huntley Tel: 07733 327511</td>
<td>Doreen Jordan Tel: 01823 344731 <a href="mailto:doreen.jordan@tst.nhs.uk">doreen.jordan@tst.nhs.uk</a></td>
</tr>
<tr>
<td><a href="mailto:laurencehuntley@hotmail.com">laurencehuntley@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td><strong>Yeovil</strong></td>
<td></td>
</tr>
<tr>
<td>Laurence Huntley Tel: 07733 327511</td>
<td>Caroline Bayliss Tel: 01935 384585 <a href="mailto:Caroline.bayliss@ydh.nhs.uk">Caroline.bayliss@ydh.nhs.uk</a></td>
</tr>
<tr>
<td><a href="mailto:laurencehuntley@hotmail.com">laurencehuntley@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td><strong>Swindon</strong></td>
<td></td>
</tr>
<tr>
<td>Academy Dean: Kevin Jones <a href="mailto:Kevin.Jones@gwh.nhs.net">Kevin.Jones@gwh.nhs.net</a></td>
<td></td>
</tr>
<tr>
<td>Hannah Graystone Tel: 01793 605913</td>
<td>Roshan Printer Tel: 01793 605913 <a href="mailto:r.printer@nhs.net">r.printer@nhs.net</a> Jenny Fotheringham Tel: 01793 605350 <a href="mailto:j.fotheringham@nhs.net">j.fotheringham@nhs.net</a></td>
</tr>
<tr>
<td><a href="mailto:hannahgraystone@nhs.net">hannahgraystone@nhs.net</a></td>
<td></td>
</tr>
</tbody>
</table>
Teaching information

GP teaching sessions

- 8 half-day GP sessions over the academic year
- 2 half-day sessions in MDEMO and in Pathology & Ethics, 4 half day sessions in Junior Medicine and Surgery (JMS)
- 2 different GPs, one in each Academy (4 sessions with each GP)
- Groups of 4, rarely 5 students
- Session length 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](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 your group and your GP teacher.

<table>
<thead>
<tr>
<th>1st Academy</th>
<th>2nd Academy</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDEMO 3.9.18-2.11.18</td>
<td>Pathology &amp; Ethics 5.11.18-18.1.19</td>
</tr>
<tr>
<td>Pathology &amp; Ethics 3.9.18-2.11.18</td>
<td>MDEMO 5.11.18-18.1.19</td>
</tr>
<tr>
<td>Junior Medicine &amp; Surgery 3.9.18-18.1.19</td>
<td>MDEMO 21.1.19-22.3.19</td>
</tr>
</tbody>
</table>

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 have sent 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
Dos (all students)
- When starting a new unit, check your timetable for clashes straight away
- Give lots of notice for booking and cancelling sessions
- Avoid timetabled hospital sessions when booking your GP
- GP sessions have priority over hospital sessions if the hospital session is booked after you have agreed a session with your GP
- Allow plenty of time to get to the practice, which may be some distance away.

Don’ts (all students)
- Don’t cancel a GP session at short notice
  - If you cancel at short notice or don’t turn up you are letting down the patients and your GP Teacher.
- Don’t book your GP sessions close to exam dates (because you are likely to cancel them at short notice when ‘exam nerves’ hit)
- Please do not agree to a ward round at lunchtime if you have an afternoon GP session as you would not have enough time to get to your GP.
- 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.

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 at the end of 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
- To give constructive feedback to your peers and your teacher
- To actively manage your learning (reflect, identify more learning objectives, plan how to achieve them)

If you have problems organising your GP sessions
Speak to your Academy Administrator and GP academy lead in the first instance.

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. 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 several 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 straight away, contact your GP academy lead or Barbara.laue@bristol.ac.uk

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.

Please read your emails regularly and communicate promptly
Medical indemnity and learning with patients
Throughout your five-year course you will have contact with patients, starting in year 1 during your GP placement. You will have vicarious indemnity through the hospital and the GP teachers but you should also join a medical protection company for free legal advice/support. As a student, you can be a member of one of the medical defense organisations like the MDU or MPS for free. You are expected to register with one of the medical insurers. Please visit their websites for more information

Learning outcomes
Learning in the GP placements supports the Aims for Year 3

- History taking
- Examination skills
- Clinical skills
- Begin to understand the disease processes
- Begin to understand appropriate investigations
- Develop clinical reasoning skills
- Develop a professional manner
- Take responsibility for your own learning and progression

Learning outcomes for your GP placements

| OFG Outcomes 1 | 2, a, d, e, f, g, h, l, j, n, 5, a, d, 6, a |
| OFG Outcomes 2 | 10, a, 11, a, b, c, d, 12, a, b, 14, a-h, j |
| OFG Outcomes 3 | 20, a, 22, a-e, 23, d, 24, a, b, d, e, 25, a |

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
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
### Topics to cover in the GP placements

GP Teachers have been asked to find patients with problems or diseases relevant to the Unit you are studying. 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 topics for General Practice based learning. Topics in red will be covered by all GP teachers.

**If there is an area you would especially like to cover, discuss this with your GP and your group.** This list is not exhaustive.

<table>
<thead>
<tr>
<th>Complaint</th>
<th>Condition</th>
<th>Relevant Clinical Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Junior Medicine and Surgery</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chest pain</td>
<td><strong>Hypertension</strong></td>
<td>Cardiovascular examination</td>
</tr>
<tr>
<td>Ankle swelling</td>
<td><strong>Angina/MI</strong></td>
<td>Respiratory examination</td>
</tr>
<tr>
<td>Leg pains on walking</td>
<td><strong>Cardiac Failure</strong></td>
<td>Taking a pulse and BP</td>
</tr>
<tr>
<td>Shortness of breath</td>
<td><strong>Peripheral Vascular Disease</strong></td>
<td>Measuring ABPI</td>
</tr>
<tr>
<td>Ear discharge</td>
<td><strong>CCF</strong></td>
<td>Demonstrating MDI/spacer</td>
</tr>
<tr>
<td>Blocked nose</td>
<td><strong>Chronic Otitis Media</strong></td>
<td>Using a thermometer</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td><strong>Irritable Bowel Syndrome</strong></td>
<td>Abdominal examination</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td><strong>Inflammatory Bowel Disease</strong></td>
<td></td>
</tr>
<tr>
<td>Heartburn</td>
<td><strong>Diverticular disease</strong></td>
<td></td>
</tr>
<tr>
<td>Tiredness</td>
<td><strong>Hypothyroidism</strong></td>
<td>Screening questions for depression</td>
</tr>
<tr>
<td>Thirst, high sugars</td>
<td><strong>Diabetes</strong></td>
<td>Blood glucose testing</td>
</tr>
<tr>
<td>Tremor</td>
<td><strong>Parkinson’s Disease</strong></td>
<td></td>
</tr>
<tr>
<td>Tingling legs</td>
<td><strong>Multiple Sclerosis</strong></td>
<td>Neurological examination</td>
</tr>
<tr>
<td>Facial or limb weakness</td>
<td><strong>TIA, Stroke</strong></td>
<td></td>
</tr>
<tr>
<td>Vertigo</td>
<td><strong>Menière’s Disease</strong></td>
<td>Using an otoscope</td>
</tr>
<tr>
<td>Dizziness</td>
<td><strong>BPPV</strong></td>
<td>Measuring BP</td>
</tr>
<tr>
<td>Nausea</td>
<td><strong>Chronic Renal Failure</strong></td>
<td>Dipsit urinealysis</td>
</tr>
<tr>
<td><strong>MDEMO</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joint pain</td>
<td><strong>Osteoarthritis</strong></td>
<td>Hip examination</td>
</tr>
<tr>
<td>Stiff shoulders</td>
<td><strong>Rheumatoid Arthritis</strong></td>
<td>Knee examination</td>
</tr>
<tr>
<td>Back pain</td>
<td><strong>Polymyalgia Rheumatica</strong></td>
<td>Ankle examination</td>
</tr>
<tr>
<td>Spinal deformity</td>
<td><strong>Mechanical Back Pain</strong></td>
<td>Shoulder examination</td>
</tr>
<tr>
<td>Poor vision</td>
<td><strong>Osteoporosis</strong></td>
<td>Spine examination</td>
</tr>
<tr>
<td></td>
<td><strong>Macular Degeneration</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Cataracts</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Pathology/Ethics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four principles ethics</td>
<td></td>
<td>Confidentiality re test results</td>
</tr>
<tr>
<td>The role, timing and interpretation of tests in the diagnostic process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tiredness</td>
<td><strong>Chronic kidney disease</strong></td>
<td>U+E, eGFR</td>
</tr>
<tr>
<td></td>
<td><strong>Alcohol abuse</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Statin monitoring</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Fatty liver</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Hepatitis</strong></td>
<td></td>
</tr>
<tr>
<td>Tiredness</td>
<td><strong>Anaemias</strong></td>
<td>FBC, Folate, B12, Ferritin</td>
</tr>
<tr>
<td>Tiredness</td>
<td><strong>Hypothyroidism</strong></td>
<td>TFT</td>
</tr>
<tr>
<td>Tiredness</td>
<td><strong>TFT</strong></td>
<td></td>
</tr>
</tbody>
</table>
Common chronic diseases and their management

Chronic diseases affect many 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

Junior Medicine and Surgery GP placement
- Hypertension
- Cerebrovascular disease (stroke, TIA)
- Ischaemic heart disease (Angina, MI, heart failure)
- Diabetes
- COPD/Asthma

MDEMO
- Osteoarthritis

Pathology
- Hypothyroidism
- Abnormal renal and liver function

There is scope for your GP Teacher to invite patients with other conditions. Please tell your GP Teacher what you want to learn about and he or she will try and find patients with those conditions.

Learning objectives
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 and management 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 discuss with your GP Teacher which patients it would be most useful for you to see in Primary Care.

‘Putting it all together’ e-tutorials in Blackboard – Year 3 GP placements
These were designed to help third year students with their end of year OSCE exams. These e-tutorial are excellent preparation for that.

You can also work through them in a step wise fashion for an in-depth analysis of the two consultations which will help you to deepen your skills and understanding of consultation skills – a ‘micro’ look at the Cambridge Calgary consultation skills guide.

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.

Primary Care contributes questions to the written JMS exam. This is a summative assessment. For more information about assessment please see medical school information in Blackboard.
Attendance requirements for the GP sessions

The GP sessions are compulsory and GPs keep an attendance register, which is returned to the Primary Care Teaching Office. From our database, we can track individual student attendance at GP sessions from year 1 to year 5.

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 absence concern form (SACF). GPs will complete a SACF if students miss more than 20% of their GP sessions (i.e. 2 sessions).

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

Professional behaviour

You need to 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](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 drug problem (may be referred to the Disability & Health Panel)

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.
Boundaries

Patients sometimes ask more of you than you can comfortably 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.
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 enthusiastic and 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

OFG Outcomes 1  2a,d-g,l,j,n  5a,d

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.

Form 1  Student learning check-list

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 learning check list

- When planning the sessions with your GP teacher
- When receiving feedback from your GP teacher
- To plan and focus your learning
- When preparing for long cases
Form 2  Student reflection on learning form
Try to reflect on your strengths and learning needs at the end of each Unit. Please 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.

Form 3  Reflective log of patients seen in your GP attachments
This is a log 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 should demonstrate in their yearly appraisals how they identify learning needs and what they have done about them.

Clerking portfolio in JMS
You can use patients seen in your GP placement as ‘clinic clerking’. Please use the JMS clinic clerking proforma for this. Each patient can only be used by one student.

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 into 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.emtrain.eu/learning-styles/](http://www.emtrain.eu/learning-styles/) accessed 22.8.18. You can also read tips for each learning 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.
Things you need to know about learning

What doesn’t work very well

▪ Re-reading without asking oneself ‘testing’ questions along the way
  o It may create the illusion of knowing through increasing familiarity. That can make it feel easy and more comfortable, but learning doesn’t last
▪ ‘Cramming’ – trying to memorise a lot in a short space of time without reflection or asking oneself questions about the material.
  o May get you trough an exam but the learning won’t be there when you need it in August 1921 when you see your first patient as a Foundation doctor.
  o This relies mainly on memory which is finite, and learning is therefore more prone to decay
▪ Repetition of the same thing – gains from massed practice are often transitory and easily forgotten

What helps to make it stick

▪ Elaboration – asking yourself questions ‘What does this mean?’ ‘If I had to summarise this, what would I say?’ ‘How would I explain this to another student/a patient?’
▪ Concrete, active learning experience Clerking a patient who has had an MI and then reading up about signs and symptoms, investigations and management of Mis
▪ Retrieval practice
  ▪ Practicing retrieval of the material you have learned will create more connections and will help to make it stick
    o Continual self-quizzing
    o Creating flash cards
    o Being a member of a learning group, asking each other questions, challenging each other to explain something
      o Effortful retrieval makes for stronger connections
▪ Spacing
  o If we revisit material immediately after learning, retrieval work is relatively easy and therefore fewer new connections are being made
  o If the interval is very short it may just act as mindless repetition
  o There are optimum intervals for revisiting material. Initially this should be short, for example one day, and then progressively longer
  o A longer interval makes retrieval more effortful, but if the interval is too long, material will have been lost
  o Repeated retrieval works makes memory more durable
▪ Interleaving
  ▪ Switch topic before you have completed your full revision
  ▪ Switching between topics, or between different aspects of physical practice, i.e. forehand and serve in tennis, will strengthen connections being made and make memory stronger and more flexibly accessible
▪ Generation
  o Trying to find answers and explanations prior to learning a topic or skill
  o Prepares a framework for hanging learning on
▪ Reflection – a type of retrieval and elaboration practice
▪ Sleep helps to consolidate memory
  o Don’t miss out on sleep, you need at least 8 hours every night

Best learning habits

<table>
<thead>
<tr>
<th>Elaboration</th>
<th>Spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrieval</td>
<td>Interleaving</td>
</tr>
<tr>
<td>Active learning</td>
<td>Generation</td>
</tr>
<tr>
<td>Reflection</td>
<td>Sleep</td>
</tr>
</tbody>
</table>
Clinical reasoning – an intro

Clinical reasoning is an important part of any consultation. It is the process that leads us to a diagnosis and helps us make decisions about investigations and management. This process is often implicit and not easily visible to observers.

You need to get a good understanding of clinical reasoning at this stage as a foundation to interpreting signs and symptoms when body systems go wrong. This ‘thinking about thinking’ is called ‘metacognition’ and is an important activity for doctors.

The diagnostic process often starts with the ‘presenting complaint’. You will very quickly become aware that symptoms are not very specific. For example, shortness of breath has many causes including a long list of cardiac and respiratory problems, anaemia, anxiety, acidosis, physical exertion and more. So, how can symptoms lead us to a diagnosis?

Experienced doctors look for patterns or combinations of symptoms. If shortness of breath (SOB) was associated with left sided chest pain radiating into the left arm and had started acutely, acute cardiac ischaemia would top the list of differential diagnoses. As you progress through your studies you will clerk many patients and come to recognise typical combinations of symptoms. We call this ‘pattern recognition’. These typical patterns have also been called ‘illness scripts’. They work like reverse coding. When you come across a familiar pattern, the code or ‘illness script’ is triggered and the knowledge and diagnosis related to that script is activated. This process has also been described as ‘fast thinking’ or ‘intuitive.

Quite often the presenting patterns are not so typical, and we fall back on slower analytical processes or ‘slow thinking’. Commonly employed thinking processes are ‘inductive’ and ‘probabilistic’ reasoning.

In ‘inductive reasoning’ we draw conclusions from specific observations. Mr. Bird has been admitted with SOB. We already know that SOB on its own has a poor predictive value and we therefore look for other clues. We find that he has a tachycardia of 100 beats per minute and has recently been on a flight for 10 hours. He has no chest pain, no other signs and no other history. The diagnostic math now looks like this: SOB + tachycardia + risk factor for deep vein thrombosis with no other history would make it important to exclude a pulmonary embolus (PE). We can’t be 100% sure that Mr. Bird definitely has a PE but it makes that diagnosis possible and as this is a very serious condition we need to properly confirm or exclude it through some tests.

‘Probabilistic reasoning’ is another analytical process we draw on, often subconsciously. Experienced doctors have a ‘feel’ for the patient groups they care for and draw on their knowledge of age, gender, ethnicity and the prevalence of conditions in that group. For example, if a GP working in an inner-city practice in Bristol with high deprivation and a high percentage of refugees saw a patient with a cough she would place Tuberculosis higher on the list of differential diagnoses than a GP seeing a patient in affluent Stoke Bishop with its different patient mix with the same symptom.

‘Illness scripts’ as organising principle for your clinical learning

We learn about signs, symptoms and conditions and store them in our memory. As you can imagine, there is a lot of information to take in. If we learn this as simple lists, it is likely to be stored in our short-term memory which has limited capacity. It may also take longer to retrieve the information because we are searching through lots of lists. So, what can we do to improve retrieval of what we have learned? To overcome the problem of memory capacity and retrieval clinicians ‘chunk’ information into larger meaningful units or ‘illness scripts’. We have already learned that ‘illness scripts’ facilitate ‘fast thinking’. Using precise medical language in our clinical reasoning, presentations and writing helps us to identify and develop meaningful ‘illness scripts’.

Consider these two verbal presentations (away from the bedside):

1. ‘Patient presents with fever, cough, and chest pain. On examination, there is a purulent sputum and abnormal findings on chest X-ray. The patient has a history of diabetes and smoking.’

2. ‘A patient presents with a sudden onset of shortness of breath and chest pain. On examination, there is hypotension and tachycardia. The patient was recently on a flight and has no chest pain, no other signs and no other history.’
A I saw a 58-year-old woman who recently retired from working in a bank. She woke up with pain in her right side which came and went and she couldn’t lie still. She vomited. She had eaten a large portion of fish and chips late that evening. She passed urine normally but it was much darker in colour than normal. She had no diarrhoea. She has not had this before but says that her mother had the same problem when she was her age. She has not had a period for 8 years. She would like to lose some weight. She lives with her husband, the children have left home.

B A 58-year-old retired overweight woman presented with a first episode of acute onset right sided colicky abdominal pain and dark urine after a fatty meal (=biliary colic = illness script)

Precise medical language uses ‘semantic qualifiers’. In presentation B the descriptive language from presentation A ‘pain in her right side which came and went, and she couldn’t lie still’ has been translated into ‘colicky pain’. ‘Colicky’ is the ‘semantic qualifier’ which adds precision to the account. ‘Colicky’ belongs to a set of diagnoses and problems that can now be more easily and quickly accessed in the long-term memory including for example biliary and renal colic.

Accessing illness scripts during our history taking means it can inform our reasoning and further questioning. For example, biliary colic is commonly caused by a stone blocking the outlet of the cystic duct. This can cause bilirubin to rise in the blood with increased excretion via the kidneys making the urine look dark. If the patient hadn’t volunteered that information we could have asked about the urine specifically to help us differentiate between the causes of right sided colicky abdominal pain.

Medically meaningful ‘chunks of information’ or ‘illness scripts’ are thought to be stored in long term working memory which has better capacity than our short-term memory which tends to be activated for ‘cramming facts’ but is less efficient at retaining information.

Cognitive errors and how to avoid them

Clinicians aren’t usually fully aware of the thinking processes they use, much of it happens subconsciously. ‘Fast’ or ‘intuitive’ thinking is more automatic and effortless and helps us deal with high numbers of patients. But it is also more prone to cognitive biases and errors. Sound clinical reasoning is directly linked to patient safety and quality of care. It is therefore a good idea to have some understanding of the different types of cognitive errors and how to avoid them.

**Anchoring**

A patient presenting with ‘chest pain’ may make us leap to an early assumption that this is a heart problem and seek confirmation of this through further questions including ‘closed questions’. Without considering other diagnoses at this stage we could misdiagnose chest pain as a heart problem when in fact the symptoms are caused by, for example, a pulmonary embolus.

**Availability bias**

If a condition or conditions are in the forefront of our mind, for example if we have just been on a study day about epilepsy, we may be more likely to attribute a ‘black out’ to epilepsy.

**Premature closure**

Tendency to prematurely close the diagnostic process before other possibilities have been fully explored.

There are many other types of cognitive error, read more in this BMJ booklet.

Reference:

4Cooper, N and Frain, J (Eds.). ABC of clinical reasoning. BMJ Books; Wiley Blackwell, 2017
Feedback

Feedback is very important for both, students and teachers. It will help you to make sense of what you have learned and to plan more learning. It helps us to continue to improve your learning experience in ICS. We take your comments seriously and act on negative feedback about GP placements.

You will have feedback from hospital doctors, nurses, GPs and admin staff. If you feel you have not had sufficient feedback on your learning, ask for more and discuss this with your hospital teachers and/or GP teacher.

GP placements

During the course you will be asked to complete an evaluation form at the end of each GP attachment. We will send you a link to the online form nearer the time. Your feedback is vital as it enables us to give feedback to teachers and improve the course.

The ‘Feedback Gap’

We all instinctively know that feedback is important, and students are keen to receive it. But have you ever stopped to think what ‘feedback’ actually is?

The original concept of feedback came from engineering which saw ‘feedback’ as the control of any mechanical system through monitoring its output and feeding that information back into the system. In education, it became synonymous with ‘telling’, the one-way transmission from teacher to student. The student was a passive recipient but expected to act on the feedback.

Feedback is the aspect of the course that consistently gets the worst review by students despite considerable effort to provide timely feedback for students and training teachers to give feedback effectively. That seems a bit paradoxical and has been termed ‘the feedback gap’. So, what might be the reason for that?

Feedback – current understanding

Adult learners

There are several theories that are helping to illuminate the ‘feedback gap’. Adult learning theory tells us that adults have their own ideas about their learning needs. Treating students as passive recipients of feedback ignores their adult learning needs and capabilities. Students have their own ideas about what went well and what needs improving. It is important to include this ‘self-evaluation’ in the feedback process.

Feedback components - Appreciation, Evaluation, Coaching

It is also helpful to unpack the ‘black box’ of feedback and consider what elements make up ‘feedback’. There are three key elements in feedback; Appreciation gives us a pat on the back ‘well done…’. Evaluation tells us where we stand ‘When you percussed this patient’s chest you did not go side to side, you went down one side then the other…’ and Coaching tells us how to do better ‘When you percuss the chest it is best to go from side to side to compare the sound…’ Feedback sits at that intersection of wanting appreciation and wanting to hear how we can do better. That can be an uncomfortable place; we want to hear how to improve but we also want appreciation for our efforts.

‘Growth’ or ‘fixed’ mindset

The ‘mindset’ literature has shed some light on why we may feel ambivalent about the process. Psychological research has found that people seem to have one of two different perspectives or ‘mindsets’ that guide how they view their innate ability, intelligence and personal characteristics. Those with a ‘growth’ mindset believe that ability can be cultivated and enhanced through application and learning which in turn improves motivation. In contrast, those with a ‘fixed’ mindset believe that they have a certain amount of intelligence and talent
that cannot be significantly developed through effort. They are also motivated to learn but less resilient and less likely to continue.

These implicit beliefs about ourselves influence how we receive feedback. People with a ‘fixed’ mindset can experience constructive feedback as a threat to their identity and become defensive. Defence mechanisms may include dismissing the feedback as irrelevant and avoiding learning experiences. Those with a ‘growth’ mindset are better able to respond to the challenge of constructive feedback as it is not experienced as an identity threat.

To find out more about the ‘mindset’ concept and to gain more insight into your own personal beliefs and behaviours you may like to read Carol Dweck.

**Learning relationships**

Education research has shown that the learning relationships students have with their tutors are important. It takes time for relationships and trust to develop. Relatively short rotations in the clinical years which are typical for UK medical schools including MB16 at Bristol make it more difficult for students to have meaningful learning relationships with their tutors.

Studies have shown that students ‘smile and file’ if feedback is positive and ‘grin and bin’ if it is negative. Students are also less satisfied when the feedback is ‘constructive’ and they need to make changes even though they are keen to improve. If the learning relationships are poorly developed it is easier for the students to dismiss the feedback ‘as the tutor didn’t know them very well. This means that feedback has relatively little effect on changing students’ behaviour.

Short clinical rotations mean that students are transient to clinical teams and not well embedded. This often means that clinical assessments focus on ‘assessments of learning or performance’, looking whether the student has reached a set goal rather than ‘assessment for learning’ highlighting how the student could improve. This can result in students feeling more pressure and becoming more defensive. As a result, learning can be impaired and less fun. In contrast, environments where students are more embedded in the clinical team and have a well-established relationship with their teacher the same assessment activity is more likely to be experienced as ‘assessment for learning’.

**Feedback – learning from it and making it work for you**

Here are practical tips to make feedback work for you

1. **Self-evaluation – Making feedback more effective**

   This is often a ‘global’ judgement ‘I think this consultation was ok’. To make it more useful as a stepping stone for improvement, try breaking it down into smaller steps and think about the different tasks you were trying to accomplish in that consultation. For example, you could focus on how comprehensive your history was; did you forget anything? Or whether you picked up all the signs on examination etc.

   • What am I good at? Why do I think that? What is the evidence?
   • What do I find challenging? What don’t I understand?
   • Who could I ask for feedback?
   • What do my peers think about my skills?
   • What feedback have I had and from whom?
   • How does the feedback I have received compare with what I think about myself? How reliable is my self-evaluation?

2. **Being open to external feedback**

   Although self-evaluation is an important step in our development, we all have blind spots and it is good to hear from others what they observe, good or bad, and be receptive to their ideas.
Receiving feedback effectively

- Listen carefully
- Thank the person giving you feedback
- Ask for clarification if needed
- If the feedback is too general, probe for specifics ‘I am not quite sure what you mean by saying that my ‘history taking is good’. What is good and how could I do even better?
- Ask the person for suggestions how to improve. What do I need to do to get to expert level?
- Reflect on the feedback and keep notes so you can revisit this and see how you are progressing
- Make it a dialogue, ask questions, rather than being a passive recipient. You may disagree with the feedback giver. You can challenge their perception and ask for further clarifications and examples. What did they notice to reach that conclusion?

3. Ask for feedback – take the initiative

Feedback can be implicit in some teaching sessions. It is also a good idea to ask for it where this is not the case. You could for example team up with another student and take turns to observe or to clerk and give each other feedback.

4. Feed forward – reflect on the feedback and make a learning plan

Often, we receive feedback and move on without stopping to think about it. Feedback will work better for you if you take a moment to reflect on it. You may also find it helpful to write down the feedback, your reflections on it and any tips. Form2 can help with that. Here are some sentences that might help you to start your reflection about the feedback that you have received.

- Does it make sense? The part of the feedback that puzzles me the most...
- The comment that rang the truest for me was...
- What surprised me...
- I don’t get what you mean when you say...
- I would welcome some advice on...
- How could I act on those suggestions?

Good rules for giving feedback

You will be asked to provide feedback for other students and need to know how to do this. Giving feedback is a professional skill that all health professionals need to develop. Most of us tend to find it easier to give positive feedback than to criticise somebody. That is probably because it feels uncomfortable to hear something negative and we don’t want to hurt somebody else’s feelings. It is therefore important to give feedback in such a way that the receiver doesn’t become defensive and can ‘hear’ what we are saying. This is sometimes referred to as ‘constructive’ feedback. A lot of research has been done and there are some evidence based ‘ground rules’ for feedback giving.

Try and stick with these rules in your small groups. When you are observing, please write down your observations as you go along. It can be very difficult to be specific without making notes. It is nice for a person to hear ‘That was a great consultation’ but if you can’t specifically tell them what you observed that was ‘great’ they are less likely to learn from the feedback.
Giving feedback
  ▪ Observe directly
  ▪ Time the feedback appropriately
  ▪ Be descriptive, specific and non-judgemental
  ▪ Offer suggestions rather than directive advice
  ▪ Focus on changeable behaviour
  ▪ “Sandwich” negative feedback (pos./neg./pos.)
  ▪ 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…’

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…’

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 suggestions, 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 use Form 2 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.

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

References:
1 Dweck, Carole S., Mindset-changing the way you think to fulfil your potential
3 Ende, J, Feedback in clinical medical education, JAMA 1983; 250:777-781)
Prescribing

In 2013-14 the prescribing skills assessment became mandatory in year 5. 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 here 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.prepareforthespa.com  accessed 22.8.18

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

<table>
<thead>
<tr>
<th>Stage</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Make a diagnosis</td>
</tr>
<tr>
<td>2</td>
<td>Establish therapeutic goal</td>
</tr>
<tr>
<td>3</td>
<td>Choose therapeutic approach</td>
</tr>
<tr>
<td>4</td>
<td>Choose the drug</td>
</tr>
<tr>
<td>5</td>
<td>Choose dose, route &amp; frequency</td>
</tr>
<tr>
<td>6</td>
<td>Choose duration of therapy</td>
</tr>
<tr>
<td>7</td>
<td>Write prescription</td>
</tr>
<tr>
<td>8</td>
<td>Inform the patient</td>
</tr>
<tr>
<td>9</td>
<td>Monitor drug effects</td>
</tr>
<tr>
<td>10</td>
<td>Review/alter prescription</td>
</tr>
</tbody>
</table>

From British Pharmacological Society 2012
JMS Learning objectives

Hypertension

Learning objectives

Skills - You should be able to
▪ take a comprehensive cardiovascular history
▪ perform a competent cardiovascular examination
▪ assess cardiovascular risk
▪ competently assess a pulse and take a blood pressure reading
▪ 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 causes of hypertension
▪ Be able to diagnose Hypertension on the basis of BP readings
▪ Be able to investigate a patient with raised BP appropriately
▪ 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

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 an approved device (manual or electronic)
▪ Use a manual device if the patient is in AF

For more information on validated BP measuring devices, how to take BP, the right cuff sizes and home monitoring go to an online tutorial at https://bihsoc.org/resources/bp-measurement/ accessed 14.8.18
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 inter-arm 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. If the interarm difference is greater than 20mmHg (Hypertension in adults: diagnosis and management (2011 updated 2016) NICE guideline CG127

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, guidelines for making a diagnosis of HT have been developed.
You can read the guidelines at https://www.nice.org.uk/guidance/cg127/chapter/1-Guidance accessed 14.8.18

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 known cause, least amenable to treatment
- Endocrine diseases (Primary Hyperaldosteronism (low K⁺, high Na), Acromegaly, Cushing’s, Phaeochromocytoma etc.)
- Pregnancy
- Coarctation of the aorta
- Connective tissue disorders (scleroderma, vasculitis)
History, Examination and Investigations

To look for causes of HT and to identify end organ damage

Some features in the history to consider:
Are they symptomatic – especially if the blood pressure is very high? Could this be accelerated hypertension? Any postural symptoms? Any symptoms of labile BP? Any palpitations or sweating?
Take a lifestyle history – smoking, exercise, alcohol, diet

Examination:
Pulse – regular or irregular? Use a manual cuff for diagnosis if the pulse is irregular and request an ECG if this is a new finding.
heart sounds, look for any evidence of heart failure, check peripheral circulation, examine fundi
Bloods: FBC, U&E, glucose, cholesterol and HDL:total cholesterol,
Urine: urine dip for blood, albumin:creatinine ratio to detect microalbuminuria ,
ECG 12 lead ECG, look for left ventricular hypertrophy

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 management, reducing alcohol, salt and caffeine intake, increasing fresh fruit and vegetables, trying relaxation and stress management
▪ 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 – 11.4mmHg systolic and 5.5mmHg diastolic (NEJM2010:362;2102). In comparison, drug therapy with amlodipine may typically reduce systolic BP by 17.5mmHg (Clin. Therapeutics 2003:25;1;35-57) but with potential side effects.

In this study the aim was to keep Sodium <2.3g/day=5.8g of salt/day
The authors 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 (NICE CG127)
https://www.nice.org.uk/guidance/cg127/chapter/1-Guidance#lifestyle-interventions accessed 14.8.18

**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.

**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 and end organ damage, 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-like diuretics (Indapamide, Chlortalidone)
- Angiotensin Converting Enzymes (ACE) inhibitors (Ramipril, Lisinopril,…)
- Angiotensin II receptor blockers (A2RBs) (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?

Many patients require more than one drug to control their BP The following shows the currently advised algorhythm for choice of drugs.

Summary of antihypertensive treatment

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Age &lt;55</th>
<th>↓</th>
<th>Age &gt;55</th>
<th>Or black person of African or Caribbean descent of any age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>↓</td>
<td></td>
<td>↓</td>
<td>↓</td>
</tr>
<tr>
<td>A</td>
<td>↓</td>
<td></td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

Key
A – ACE inhibitor or angiotensin II receptor blocker (ARB)
C – Calcium-channel blocker (CCB)
D – Thiazide-like diuretic

Step 2
A+C

Step 3
A+C+D

Step 4
Resistant HT
A+C+D+ consider spironolactone if potassium is <4.5mmol. Consider higher dose thiazide-like diuretics if potassium is >4.5mmol. If these are not tolerated or ineffective, consider alpha blockers or beta blockers. If blood pressure is not controlled on four agents seek expert advice.

Don’t give ACE and ARB together
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 (LVF)
  - Brain – check history for TIA/Stroke, if positive carry out appropriate neurological examination
- Consider blood tests for other CVD risk factors including chronic kidney disease (U+E), dyslipidaemia (HDL:total cholesterol), and diabetes (HbA1c, fasting glucose).

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.

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
- www.nice.org.uk
  - NICE Reference guide to hypertension at
- British National Formulary
Cerebrovascular disease - Stroke and Transient Ischaemic Attack (TIA)

Learning objectives
Skills - Students should be able to
▪ Assess the possibility of a stroke using the FAST model
▪ Take a coherent history incl. assessing activities of daily living and psychosocial factors
▪ Assess cardiovascular risk factors
▪ Perform a complete neurological examination including cranial nerves
▪ Assess a possible TIA with the ABCD2 scoring system
▪ 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
A group of pathological conditions arising from a focal loss of cerebral function due to ischaemia or haemorrhage, lasting for more than 24 hours.

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 stroke
Hypertension, diabetes mellitus, AF, previous Stroke or TIA, previous MI, heart failure, artificial heart valves, hyperviscosity syndromes, smoking, alcohol, obesity, low physical activity. Anticoagulation and cerebral aneurisms or vascular malformations are examples of risks for haemorrhagic strokes.

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 stroke. High mortality (10-15% die prior to reaching hospital). 70% due to Berry aneurysm rupture.

Presentation
Sudden onset of central nervous system symptoms or stepwise progression of symptoms over a period of days. There will be neurological signs.
SAH Thunderclap headache, often occipital, with vomiting, possible loss of consciousness, sometimes seizures and possibly focal neurology
**Triage – FAST** quick check for diagnosing an anterior circulation stroke advertised to the public.

- **F** Facial weakness (can they smile, has mouth or eye dropped)
- **A** Arm weakness (can they raise both arms)
- **S** Speech (can the person speak clearly and understand what you say)
- **T** Time (get help fast, get the person to hospital fast for consideration of thrombolysis or intravascular clot retrieval)

**Key examination**

If acute, should be ABCDE, remembering capillary glucose

(Airway, breathing, circulation, disability, exposure)

**Differential diagnoses include**

Space occupying lesion, trauma, migraine, MS

**Acute management**

Admit to a hospital with a stoke unit as there is good evidence that stroke units improve functional outcomes. Speed is imperative, as imaging is urgently required to look for haemorrhage.

Best supportive care, antiplatelet, thrombolysis and mechanical intravascular clot retrieval are all acute treatment options. Thrombolysis within 4.5 hours of onset of symptoms is currently recommended by NICE. Clot retrieval is also recommended as an option. It is only currently conducted in some specialist centres.

**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.

**Aftercare needs to cover**

Secondary prevention, psychosocial issues, aids and appliances, benefits, specialist rehabilitation, depression screen

**Secondary prevention post ischaemic stroke**

**Antiplatelet therapy**

- Aspirin 300mg for 2 weeks
- If in AF, for anticoagulation
- Otherwise Clopidogrel 75mg long term first line
- Dipyridamole MR plus Aspirin if Clopidogrel contraindicated
- Dipyridamole MR alone if both Aspirin and Dipyridamole contraindicated

**Statins**

- Irrespective of cholesterol level, usually started 48hrs after an acute stroke

**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 stroke**

**Post haemorrhagic stroke**

- Antiplatelets and statins not routinely recommended
- BP lowering, but not acutely

**Carotid endarterectomy**

All patients without significant disability should have urgent (within a week) carotid imaging and offered surgery if stenosis of >70% (European Carotid Surgery Trial criteria)
TIA

**Definition** Focal disturbance of cerebral function lasting less than 24 hours
- TIA increases the risk of stroke, which can be assessed using the ABCD2 score
- Amaurosis fugax is a symptom of a TIA due to transient embolic occlusion of the retinal artery, a direct branch of the internal carotid artery. It leads to a brief loss of vision described by patients as a “curtain descending”. It is an important event as further carotid emboli may subsequently pass into the Circle of Willis and beyond, causing a cerebral infarction.

**In patients with ‘TIA’, if they have ongoing symptoms (>24 hours) however mild, treat as a stroke and admit.**

**Risk scoring system for TIAs – ABCD2 score**

- **A** Age 1 point if 60 years old or more
- **B** Blood pressure 1 point if systolic 140 or more or diastolic 90 or more
- **C** Clinical features 1 point for speech disturbance without weakness
  2 points for unilateral weakness
- **D** Duration 1 point if 10-59 minutes, 2 points if 60 or more minutes
- **D** Diabetes 1 point if diabetic

6 or more conveys an 8.1% chance of stroke in the next two days, 4-5 conveys 4.1% and 0-3 conveys 1%. Consider admission for scores above 3 or if more than one recent TIA or new AF is found ([Lancet, 369:283-292, 2007](https://www.elsevier.com/doi/10.1016/s0140-6736(07)60418-8)).

**How to manage patients with TIA**
TIA is a medical emergency — risk of recurrent stroke is up to 10% in the week following a transient ischaemic attack (TIA) or minor stroke. Immediate diagnosis, secondary preventative treatment and modification of risk factors (for example carotid stenosis) are essential.

**Investigations**
Will be arranged by the stroke/TIA clinic and may include
- Bloods - FBC, renal and liver function, lipid profile, Plasma viscosity, glucose/HbA1c, clotting screen
- ECG or loop recorder to look for AF
- ECHO if indicated for example by young age or cardiac murmur, to look for ASD or VSD
- Brain imaging
- Carotid dopplers
Primary and secondary prevention of stroke and TIA

**Primary prevention - definition**
This aims to prevent a condition or disease that has not yet manifested itself. It can consist of health promotion or specific interventions. **Health promotion** would tackle lifestyle choices to reduce risky behaviour, for example not smoking, not drinking excessively, taking regular exercise, eating a healthy diet. **Specific interventions** could be immunisations, for example flu jabs.

**Secondary prevention - definition**
This aims to prevent latent disease from becoming active and reducing risk from already existing problems. For example, gastric banding for very obese patients with impaired glucose tolerance leads to weight loss that can prevent the development or reverse existing **Diabetes mellitus**.

**Measures for the prevention of stroke and TIA**

- Lifestyle measures – smoking, diet and obesity, alcohol, exercise
- Antiplatelet drugs
- 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 AF if CHA2DS2VasC is greater than or equal to 1 if male or 2 if female, balanced against the risk of bleeding)
  - 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 – reduce by 40% if secondary prevention, treat in accordance with a validated measure of CVS disease such as QRISK if primary prevention or if dyslipidaemia exceeds specific thresholds, such as in familial hypercholesterolaemia
- 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 vaccination
Atrial fibrillation and risk assessment
https://cks.nice.org.uk/atrial-fibrillation#!scenarioclarification:1 accessed 14.4.18

- 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 roughly 5-fold risk of stroke, and one in five of all strokes is attributed to this arrhythmia
- CHA2DS2-VASc is the current tool for scoring and stratifying stroke risk in patients with AF

**Principles of treatment**
- Rhythm or rate control
- Prevention of thrombo-embolic complications

**Rhythm control**
- Direct current cardioversion

**Rate control**
- Medication (βblockers e.g. bisoprolol, Calcium channel blockers e.g. Diltiazem, digoxin, flecainide, amiodarone)

**Anticoagulation**
- DOACs – Direct oral anticoagulants. A systematic review and meta-analysis of RCTs (Lancet 2014;383:955) showed that DOACs have a favourable risk-benefit profile compared to warfarin with significant reductions in stroke, intracranial haemorrhage and mortality.
- Warfarin – being used less and less but many stable patients still on it and indicated for people requiring anticoagulation due to metallic heart valves

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 CHA2DS2-VASc criteria have been developed (a risk assessment tool)

**CHA2DS2-VASc score for stroke risk in atrial fibrillation**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congestive Heart Failure</td>
<td>1</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1</td>
</tr>
<tr>
<td>Age &gt;75 years</td>
<td>2</td>
</tr>
<tr>
<td>Age between 65 and 74 years</td>
<td>1</td>
</tr>
<tr>
<td>Stroke/TIA/TE</td>
<td>2</td>
</tr>
<tr>
<td>Vascular disease (previous MI, peripheral arterial disease or aortic plaque)</td>
<td>1</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
</tr>
</tbody>
</table>

- Consider anticoagulation for men with a CHA2DS2-VASc score of 1. Take the bleeding risk into account.
- Offer anticoagulation to people with a CHA2DS2-VASc score of 2 or above, taking bleeding risk into account.
- Discuss the options for anticoagulation with the person and base the choice on their clinical features and preferences.
HAS-BLED Risk calculator to assess risk of major bleed on anticoagulation

Score of 3 or more indicates increased one-year bleed risk on anticoagulation sufficient to justify caution or more regular review

Risk is for intracranial bleed, bleed requiring hospitalization or a haemoglobin drop > 2g/L or bleed which needs transfusion

<table>
<thead>
<tr>
<th>Feature</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension (Systolic &gt;= 160mmHg)</td>
<td>1</td>
</tr>
<tr>
<td>Abnormal renal function</td>
<td>1</td>
</tr>
<tr>
<td>Abnormal liver function</td>
<td>1</td>
</tr>
<tr>
<td>Age &gt;= 65 years</td>
<td>1</td>
</tr>
<tr>
<td>Stroke in past</td>
<td>1</td>
</tr>
<tr>
<td>Bleeding</td>
<td>1</td>
</tr>
<tr>
<td>Labile INRs</td>
<td>1</td>
</tr>
<tr>
<td>Taking other drugs as well</td>
<td>1</td>
</tr>
<tr>
<td>Alcohol intake at same time</td>
<td>1</td>
</tr>
</tbody>
</table>

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 clinical knowledge summary for AF
https://cks.nice.org.uk/atrial-fibrillation#!scenarioclarification:1 accessed 14.4.18

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
- Perform a competent cardiovascular examination including assessment of JVP and measuring blood pressure
- Assess cardiovascular risk

Knowledge - Students should be able to
- Diagnose and differentiate between different causes of chest pain including MI, unstable angina, stable angina, oesophageal reflux, musculoskeletal chest pain
- Describe acute coronary syndrome and be able to outline a management plan
- List appropriate investigations for chest pain
- Identify common ECG abnormalities
- Outline management of an acute MI, stable angina and unstable angina
- Outline long term treatment post MI
- Understand the difference between primary and secondary prevention and list appropriate interventions
- Know when to suspect heart failure and list appropriate investigations
- Outline the management of heart failure.
- Name examples of drugs used to treat MI, Angina and heart failure incl. some common side effects, contraindications and appropriate blood monitoring
- 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, most likely, there are some cardiovascular risk factors

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, history of established CAD (e.g. previous MI, coronary revascularisation), and other cardiovascular disease
Features which make a diagnosis of stable angina less likely

▪ Chest pain is continuous or very prolonged
▪ Unrelated to activity
▪ Worse on inspiration
▪ Associated with other symptoms - dizziness, palpitations, tingling, 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 (e.g. anatomical testing for obstructive coronary artery disease (CAD) such as CT calcium scoring or angiography and/or functional testing for myocardial ischaemia such as exercise tolerance testing or stress echocardiography).
▪ 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. [https://www.nice.org.uk/Guidance/cg95](https://www.nice.org.uk/Guidance/cg95) accessed 14.8.18

(You are not expected to know the details of this guideline)

Treatments for angina

The management of angina includes specific treatment for angina and modification of cardiovascular risk factors. 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
  ○ Call 999 for an ambulance if the pain has not eased after another 5 minutes (i.e. 10 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 ACS 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.

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 may be normal, may be hypo- or hypertensive, may have signs of LVF

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, Pulmonary embolism (PE), pneumothorax, pleurisy, oesophageal spasm or oesophagitis, other intra-abdominal causes, musculoskeletal pain, shingles, Bornholm’s disease (Coxsackie virus infection), idiopathic chest pain

Acute treatment: MONA
M Morphine/pain relief – reduce sympathetic drive and myocardial oxygen demand; remember antiemetics
O Oxygen if hypoxic ( <94%); excess oxygen therapy can worsen ischaemia, possibly by causing vasoconstriction
N Nitrates (GTN spray)
A Aspirin 300mg orally stat unless contraindicated (if this is given in the community it must be documented so that hospital staff receiving the patient know what the patient has had)
  ▪ Admit to hospital via 999. In hospital, investigations include serial ECGs and cardiac enzymes.
  ▪ 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 Statin e.g. Atorvastatin
▪ A Antiplatelets – aspirin and another e.g. ticagrelor, clopidogrel
▪ A ACE inhibitor e.g. Ramipril
▪ B Beta blocker e.g. bisoprolol

Remember to tell the patient to inform the DVLA if they drive
**Left Ventricular Heart failure**

**Types** Preserved or reduced left ventricular ejection fraction. Preserved ejection fraction is also known less correctly as ‘diastolic failure’ or a failure to relax. Here, the left ventricle is able to pump out a normal proportion of blood it contains but is unable to accommodate a sufficient volume of blood in diastole to meet the body’s needs. This can be caused by cardiac hypertrophy or fibrosis, often due to HT. The rest of this section refers to reduced ejection fraction heart failure.

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

**Presentation**

**Symptoms** - lethargy and fatigue, breathlessness, reduced exercise tolerance, orthopnoea, paroxysmal nocturnal dyspnoea, ankle swelling

**Signs** – S3 gallop, laterally displaced apex beat, peripheral oedema, crepitations at lung bases, raised JVP, increased adrenergic activity (tachycardia, cold clammy peripheries), hepatomegaly, pleural effusion, ascites

**Diagnosis**
Mainly clinical. If previous MI, refer urgently for echo and specialist assessment as heart failure is likely. If no previous MI: see flow diagram below taken from the SIGN guidelines.

---

**Source:**
SIGN guideline 95: Management of chronic heart failure 2007
NICE 2010, CG108

---

**BNP** has a 91% sensitivity and 73% specificity for the diagnosis of heart failure. This means 91/100 people with heart failure will have a raised BNP and 19/100 people with heart failure will have a normal BNP. 27/100 people without heart failure will have a raised BNP and 73/100 people without heart failure will have a normal BNP. BNP, therefore, can be used as a ‘rule out’ test. An ECG has around an 81% sensitivity for heart failure but is poorly specific. If the BNP is normal and the ECG is normal, the patient is unlikely to have heart failure and should not be referred for an echo.
Classification
- Echocardiogram - Uses ejection fraction to grade severity
- NYHA – uses symptoms to grade severity (grade I to IV)

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

Management
- General advice, cardiac rehabilitation, low salt diet, advice to continue exercise, ask about depression and any concerns about sex, vaccination (influenza and pneumococcal), inform DVLA
- Non-drug measures – diet and weight, smoking, alcohol, exercise, reduce salt
- Drug treatment.
  - To relieve symptoms – loop diuretic (such as furosemide)
  - To reduce morbidity and mortality – start a beta blocker and an ACE inhibitor (e.g. Ramipril). Introduce one drug, then the other. Nitrates combined with hydralazine can be considered.
- If symptoms persist despite the above then refer. Other treatments that may be recommended include spironolactone/eplerenone and digoxin

QOF Points are available for appropriate treatment and vaccinations if necessary.

References

NB. You need to be aware of examples of frequently used drugs for common cardiac conditions, including common contraindications and side effects of these drugs. This information is not given here, please refer to the BNF
Type 2 diabetes

Learning Objectives

Knowledge - Students should be able to
▪ Describe the basic mechanism of the disease and list some secondary causes
▪ Diagnose type II diabetes on the basis of history and blood tests
▪ Describe tests including random and fasting glucose, HbA1c, glucose tolerance test
▪ Give relevant lifestyle advice
▪ List possible complications from diabetes and know how to check for them
▪ Understand the importance of controlling blood pressure and CV risk factors
▪ List medication used for Type2 DM, their common side effects and interactions
▪ 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
▪ Assess cardiovascular risk
▪ Use and interpret urine dipsticks
▪ Carry out a finger prick test for glucose and interpret the result

Presentation

Acute: Ketoacidosis (rare) or hyperosmolar Hyperglycaemic state
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/mol (6.5%) (most surgeries now use this)
▪ Random plasma glucose of ≥11.1mmol/l
▪ Fasting plasma glucose ≥ 7mmol/l
▪ Glucose tolerance test (GTT)
  o Glucose ≥ 11.1mmol/l 2 hours after 75g of glucose diagnoses diabetes
  o 7.8mmol/l to <11.1mmol/l patient has impaired glucose tolerance
  o < 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/mol 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 algorithm for the treatment of Type2DM which you can find here

There is stepwise progression to treatment
1. Attempt to control the blood sugar with diet and other lifestyle measures
   ↓
2. Add in Metformin
   ↓
   1. Add second drug (Sulphonylurea, DPP-4i, pioglitazone or SGLT-2)
   ↓
3. Add third drug
   ↓
5. Consider insulin

NB. You should be aware of mode of action and common side effects of drugs commonly used for Type 2 DM i.e. Biguanide (Metformin), Sulfonylurea (Gliclazide) and DPP4 inhibitors (Glptins – Sitagliptin), Pioglitazone and SGLT-2. 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 mmol is optimal if on drug therapy, 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
  o $<140/80$ if no complications
  o $<130/80$ if microalbuminuria, cerebral vascular disease or retinopathy present
- Treat blood pressure according to usual practice but include renin-angiotensin blockade (ACE or A2RB) if the albumin:creatinine ratio is 3mg/mmol or greater

Lipids

- Atorvastatin 20mg if $<84$yrs and 10-year CV risk estimated by QRISK2 $>10%$.
- Offer it to those $>85$ without doing a risk assessment.

Aspirin for cardiovascular disease prevention?

- Yes, if established cardiovascular disease (secondary prevention)

Assess cardiovascular risk factors and treat if indicated
Complications

- **Cardiovascular disease**
  Patients with Diabetes are at increased risk of MI, stroke and peripheral vascular disease. Consider 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. People with diabetes 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 micro albumin: 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, pruritus, 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 cheirothropy (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 <48 mmol/mol 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. Good blood pressure control is key, as is smoking cessation if required. Lifestyle modifications need to be advised at every review.

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 and urine tests** to be completed prior to the annual review
- U& E’s and eGFR (estimated glomerular filtration rate), LFTs, HbA1c, Lipid profile.
  Consider Vitamin B12 if taking metformin. Urine for albumin:creatinine ratio should be sent. Welcome – Rapport building, general questions/history,
- 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.
- Ask regarding smoking status and offer advice if smoking (cycle of change)
- Measure – blood pressure, body mass index. 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.
- Discuss glycaemic control, blood pressure control and lipid control results. Discuss any changes needed.
- Agree targets to achieve
- Educate – smoking, diet, exercise, DM control, medication etc, ensure they have been referred to a structured group education programme if needed
- Ensure appropriate follow up. If patients are well controlled follow up would be every 6-12 months, more frequently if control is poor or there are complications
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 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 ready made 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
Type 2 Diabetes NICE Guidelines at http://cks.nice.org.uk/diabetes-type-2#scenario
accessed 14.8.18
British National Formulary
Cardiovascular risk assessment

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 the currently recommended cardiovascular risk prediction tool is called QRISK2
▪ Understand how cardiovascular risk scores affect our clinical practice.

Skills - Students should
▪ Be able to use the online QRISK2 calculator at https://qrisk.org/2017/ accessed 14.4.18

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
Aims 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 ≥10%. 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

Discussion points
Consider how to gain informed consent for screening, especially for primary prevention
COPD


**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
- Demonstrate use of a peak flow meter and interpret results
- Interpret spirometry results
- Demonstrate how to use an MDI with and without spacer device
- Diagnose COPD
- Demonstrate use of a nebuliser

**Definition**

COPD is a heterogenous condition 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.

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic cough</td>
<td>Hyperinflated chest</td>
</tr>
<tr>
<td>Regular sputum production</td>
<td>Use of accessory muscles</td>
</tr>
<tr>
<td>Wheeze</td>
<td>Poor chest expansion</td>
</tr>
<tr>
<td>SOBOE</td>
<td>Reduced crico-sternal distance</td>
</tr>
<tr>
<td>Frequent ‘winter bronchitis’</td>
<td>Hyperresonant chest with reduced cardiac dullness</td>
</tr>
<tr>
<td></td>
<td>Pursing of lips on expiration</td>
</tr>
<tr>
<td></td>
<td>Cyanosis</td>
</tr>
<tr>
<td></td>
<td>Peripheral oedema</td>
</tr>
<tr>
<td></td>
<td>Raised JVP</td>
</tr>
<tr>
<td></td>
<td>Cachexia</td>
</tr>
</tbody>
</table>

**Diagnosing COPD**

- There is no single diagnostic test for COPD but the FEV1:FVC ratio must be <0.7. The diagnosis is made based on 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)

**FEV₁**  
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

**FEV₁/FVC**  
Ratio of FEV₁ to FVC expressed as percentage

Investigations

- **FEV₁/FVC** in COPD typically < 0.7 (70%)
- **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)**

<table>
<thead>
<tr>
<th>Severity</th>
<th>FEV₁/FVC</th>
<th>FEV₁</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>&lt;0.7</td>
<td>&gt;80%</td>
</tr>
<tr>
<td>Moderate</td>
<td>&lt;0.7</td>
<td>≥50-79%</td>
</tr>
<tr>
<td>Severe</td>
<td>&lt;0.7</td>
<td>≥30-49%</td>
</tr>
<tr>
<td>Very severe</td>
<td>&lt;0.7</td>
<td>&lt;30</td>
</tr>
</tbody>
</table>

**Management**

- **Non drug therapy**
  - Advise patient to stop smoking at every opportunity
  - Pulmonary rehab – to improve exercise capacity and reduce breathlessness
  - Influenza and pneumococcal immunisation

<table>
<thead>
<tr>
<th>Severity</th>
<th>Symptoms</th>
<th>FEV₁</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>Breathlessness and/or exercise limitations</td>
<td>SABA</td>
</tr>
<tr>
<td>Moderate</td>
<td>Exacerbations or persistent breathlessness</td>
<td>≥50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;50</td>
</tr>
<tr>
<td>Severe</td>
<td>Persistent exacerbations or breathlessness</td>
<td>&lt;30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medication</th>
</tr>
</thead>
<tbody>
<tr>
<td>SABA</td>
</tr>
<tr>
<td>SAMA</td>
</tr>
<tr>
<td>LABA</td>
</tr>
<tr>
<td>LAMA</td>
</tr>
<tr>
<td>ICS</td>
</tr>
<tr>
<td>Long acting beta agonist (Salbutamol)</td>
</tr>
<tr>
<td>Short acting muscarinic antagonist (Ipratropium)</td>
</tr>
<tr>
<td>Long acting beta agonist (Salmeterol)</td>
</tr>
<tr>
<td>Long acting muscarinic antagonist (Tiotropium)</td>
</tr>
<tr>
<td>Inhaled corticosteroid (Beclometasone)</td>
</tr>
</tbody>
</table>

- Consider mucoytic 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 physician

Stopping smoking is the single most important intervention

51
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)

Review
- 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 follow up

Management of exacerbations
- Careful history and examination including oximetry
- 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

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


Reference

Asthma (Adults)

Learning objectives
Knowledge - Students should be able to
▪ Explain asthma in non-jargon language to a patient
▪ Understand how to diagnose asthma
▪ Describe how to manage asthma including drug therapies
Skills - Students should be able to
▪ Complete a competent history and examination of the respiratory system
▪ Demonstrate use of a peak flow meter and interpret results
▪ Demonstrate how to use an MDI with and without spacer device
▪ 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
▪ 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 – refer if this is suspected

Diagnosing Asthma
▪ There is no single diagnostic test for asthma
▪ If a high clinical probability of asthma (Fhx, personal Hx of atopy, recurrent Sx with intercurrent resolution, wheeze on examination when symptomatic, no other likely differentials) then a test of treatment is advised. 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
▪ PEFR <than a third of predicted or best
▪ Hypotension
▪ Bradycardia
▪ Exhaustion

Peak flow measurement
▪ Ask the patient to stand up, hold PEFR 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 PEFR meter.
▪ Read the PEFR off the meter. Record best attempt of three 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
PEFR diurnal variability of > 20% over three days in a week over several weeks suggests asthma, as does a 20% increase of average PEFR having commenced treatment.
Spirometry
Patients with asthma may have a reduced FEV₁/FVC ratio (an obstructive picture). This is expected to fluctuate as opposed to COPD where it tends to be fixed.
An increase in FEV₁ of 12% and 200mls post-bronchodilation is diagnostic but may not be achieved if the patient is asymptomatic at the time of testing.
A restrictive pattern on spirometry is not indicative of asthma and should raise the consideration of referral or re-evaluation of the patient.

Challenge Tests
Various challenge tests are available that cause bronchoconstriction in patients with asthma e.g. methacholine, histamine. These may be considered via referral if spirometry and PEFR testing are non-diagnostic but a suspicion of asthma remains.

Tests for Eosinophilic Inflammation and Atopy
Inhaled nitric oxide with or without sputum or blood eosinophilia can be used but are not widely available. Skin prick or serum allergen specific IgE testing can be considered in cases of suspected allergen-induced breathing symptoms.

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 (FEV₁ 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. An inhaled short acting bronchodilator as required (Salbutamol) is prescribed concurrently.

Regular preventer: Inhaled low dose inhaled corticosteroid (ICS), equivalent to 400mcg beclomethasone dipropionate per day

Initial add on therapy Add long acting beta2 agonist (LABA) e.g. salmeterol, formoterol, usually as a combination inhaler. Do not prescribe LABAs without ICS as this has been shown to increase mortality.

Additional add on therapies
Stop LABA if no benefit. If some benefit but still poor control consider: increase ICS to medium dose i.e. equivalent to 800mcg beclomethasone per day; or consider a trial of an oral leukotriene receptor agonist (LTRA e.g. Montelukast), inhaled long acting antimuscarinic (LAMA e.g. tiotropium) or sustained release theophylline.

High dose therapies refer to specialist services at this stage
High dose ICS (1600mcg beclomethasone/day) addition of fourth drug, may include oral beta-agonists
Continuous or frequent use of oral steroid tablets
Continuing high dose ICS and finding the lowest effective maintenance dose of oral steroids while managing steroid risk.
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’.
- 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 – PEFR
- Check inhaler/spacer technique
- Plan review and formulate written action plan what to do if asthma gets worse

Management of exacerbations
Assess using ABCDE and include oxygen saturations and PEFR if able to complete.

Management of acute severe asthma in adults in general practice

<table>
<thead>
<tr>
<th>Moderate asthma</th>
<th>Acute severe asthma</th>
<th>Life-threatening asthma</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEF &gt; 80% of best or predicted</td>
<td>PEF &lt; 50% of best or predicted</td>
<td>PEF &lt; 33% of best or predicted</td>
</tr>
</tbody>
</table>

**INITIAL ASSESSMENT**

- **SpO2 ≥ 92%**
- **Speech normal**
- **Respiration < 25 breaths/min**
- **Pulse < 110 beats/min**

**FURTHER ASSESSMENT**

- **SpO2 ≥ 92%**
- **Can’t complete sentences**
- **Respiration ≥ 25 breaths/min**
- **Pulse ≥ 110 beats/min**

- **SpO2 < 92%**
- **Silent chest, cyanosis or poor respiratory effort**
- **Amphotericin or hypotension**
- **Exhaustion, altered consciousness**

**MANAGEMENT**

- Treat at home or in surgery and assess response to treatment
- Consider admission
- Arrange immediate ADMISSION

**TREATMENT**

- **β2 bronchodilator:**
  - via spacer (give 4 puffs initially and give a further 2 puffs every 2 minutes according to response up to maximum of 10 puffs)
  - if PEF > 50–75% predicted/best:
    - Nebulise (preferably oxygen driven) (salbutamol 5 mg)
    - Give prednisolone 40–50 mg
    - Continue or increase usual treatment

- **Oxygen to maintain SpO2 94-100% if available**
- **β2 bronchodilator:**
  - Nebulise (preferably oxygen driven) (salbutamol 5 mg)
  - or via spacer (give 4 puffs initially and give a further 2 puffs every 2 minutes according to response up to maximum of 10 puffs)
  - Nebulise salbutamol 100 mg
  - Prednisolone 40–50 mg or IV hydrocortisone 100 mg
  - If no response in acute severe asthma: ADMIT

- **Oxygen to maintain SpO2 94–98%**
- **β2 bronchodilator and (intravenous):**
  - Nebulise (preferably oxygen driven) (salbutamol 5 mg and ipratropium 0.5 mg)
  - or via spacer (give 4 puffs initially and give a further 2 puffs every 2 minutes according to response up to maximum of 10 puffs)
  - Prednisolone 40–50 mg or IV hydrocortisone 100 mg immediately

This is an excellent resource for further reading
Quality and Outcomes Framework (QOF)

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

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
Organisational
Patient experience
Additional services
Holistic care

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 mean value of one point in England in 2013-14 was £156.92.

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.

Please note: QOF targets are sometimes different to NICE targets

You can look up QOF results for any practice in England
How about checking your practice’s results? You can find them here

References
www.nice.org.uk

Discussion points
- What effect do you think QOF has on individual consultations?
- How does QOF (payment by result) sit with informed choice and consent
- Ask your GP teacher how they manage QOF in their own consultations
ENT examination
by Mr. Angus Waddell Consultant ENT surgeon, Great Western Hospital, Swindon

Introduction
▪ Introduce yourself, wash hands, consent, ask patient which is the worst ear

Inspection
▪ From the front—look for asymmetry
▪ Inspect both ears individually—scars, deformity, erythema, pinna lesions

Otoscopy
▪ Examine better ear first
▪ Chose 4mm otoscope speculum. Hold the otoscope like a pen not a hammer
▪ Pull pinna gently up & backwards when placing speculum. Get up close to the otoscope
▪ Look at the external ear canal, the ear drum itself, and through the drum into the middle ear

Tuning fork tests (Where is the hearing problem?)
Use 512 or 256 Hz tuning fork

Weber  Weber localises towards conductive loss and away from a sensorineural hearing loss
▪ Tap the tuning fork on your own elbow or leg to vibrate
▪ Place it on the patient’s forehead, stabilising the head with your other hand
▪ Ask the patient which ear they hear it loudest in

Rinne  Rinne test is loudest in front of the ear
▪ Place the vibrating tuning fork alongside the ear canal
▪ Then place the base of the tuning fork on the mastoid tip, stabilising the head
▪ Ask the patient if it is loudest in front or behind

Positive  Loudest in front of the ear—normal hearing or sensorineural hearing loss.
Negative  Loudest behind the ear—conductive hearing loss

Whisper test
To test the left ear mask the right ear by pressing on the tragus
Whisper different 2 digit numbers into the unmasked ear (i.e. 63)
Whisper more and more quietly until the person can’t hear you
Repeat for the other ear
▪ Loud shout  110dB
▪ Speaking voice approx.  60dB
▪ Quietest whisper is approx.  25dB
MDEMO learning objectives

Knowledge
Be able to
▪ List and recognise symptoms of OA
▪ List and recognise signs of OA
▪ Carry out a holistic assessment of a patient with OA
▪ Describe features that distinguish between OA and RA
▪ Outline NICE guidelines for management of OA
▪ Describe the role of Paracetamol and NSAIDs in OA
▪ Understand the role of weight loss in knee OA
▪ Understand the role of physical activity and physiotherapy in the management of OA
▪ Know when to refer for assessment for surgery

Skills
▪ Practice using an ophthalmoscope
▪ Hip, knee and shoulder examination

Holistic assessment
▪ Social
▪ Occupational
▪ Health beliefs
▪ ICE – Ideas, concerns, expectations
▪ Mood
▪ Quality of sleep
▪ Support network
▪ Other musculoskeletal pain
▪ Comorbidities
▪ Attitudes to exercise
▪ Pain assessment

I would like you to relieve my pain by Kirsty Bromage
Read Kirsty’s reflections at http://www.outofourheads.net/oooh/handler.php?id=573 accessed 13.8.18

Resources

NICE guidelines - OA care and management in adults
http://www.nice.org.uk/guidance/cg177/chapter/1-recommendations accessed 14.8.18

Hip examination
https://www.youtube.com/watch?v=iTfDvFCPZ_w accessed 14.8.18

Knee examination
https://www.youtube.com/watch?v=wlLfNls75RY accessed 14.8.18

Shoulder examination
https://www.youtube.com/watch?v=q8xtOqZFTwo accessed 14.8.18
Pathology learning objectives

The Pathology Unit was new in Year 3 for 2014-15 and replaced the Psychiatry Unit which has moved into Year 4. Ethics is part of the Pathology Unit.

You will start this Unit with 3 weeks of lectures covering Haematology, Biochemistry, Microbiology and Histopathology. During your hospital-based teaching you will see patients only in haematology as the other Pathology departments (Biochemistry, Microbiology, Histopathology) do not have direct access to patients. This means that GP Teachers have an important role in teaching you about the role and use of pathology in clinical practice.

During this Unit you will have 2 sessions with your GP. This means you will see 4 patients overall, 2 per session.

We would like you to cover the following conditions/blood results
- Hypothyroidism (interpretation of TFTs and replacement therapy)
- Abnormal liver function (liver disease, alcohol, statins etc)
- Abnormal renal function (U&E, eGFR, Urine dip etc)

This will make it fairer to all students if we base exam questions on these conditions.

Knowledge
- Understand common abbreviations (FBC, LFT, U+E, eGFR, TFT, HbA1c, CRP, INR)
- The role of Pathology in the management of patients’ problems
  - Understand the role of testing in the diagnostic process
  - When to request tests
- Gain insight into the electronic pathology request system
- Understand importance of correct labelling and patient identifiers needed
- Gain experience in assessing and interpreting results
- Know which tests can be done in the surgery (bedside testing incl. d-Dimer)
- Understand ethical and professional principles around giving results out
- Understand responsibility for ensuring that patients get their results, especially if they are abnormal

Skills
- Complete a form (paper/electronic, haematology/biochemistry/microbiology etc)
- Take and test a urine sample
- Take a urine sample to send for MSU
- Take blood sample
- Disposal of sharps and samples

Key principles for the GP sessions in Pathology

The focus should be on hands on history taking and examination as in the other GP sessions. This means you should see two patients for each session. We do know from years of student feedback that being observed by a qualified doctor while taking a history and examining does not happen very often and is highly valued by students. We therefore need to make sure that we deliver this in the Pathology Unit as well.

Focus: History, examination, consultation skills and ‘investigating and test results’.

OFG Outcomes 2 14 a, b-h, j
Organisation of the GP sessions during the Pathology Unit
The organisation should follow the tried and tested pattern of sessions in the other units. You should see 2 patients per session during Pathology.

<table>
<thead>
<tr>
<th>Learning needs analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Establish what students already know, what they need to know and what they want to know</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Agree learning objectives for the session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient 1</td>
</tr>
<tr>
<td>- Hx, exam., discussion and exercises around pathology topics/tests relating to this patient</td>
</tr>
<tr>
<td>Break</td>
</tr>
<tr>
<td>Patient 2</td>
</tr>
<tr>
<td>- Hx, exam., discussion and exercises around pathology topics/tests relating to this patient</td>
</tr>
<tr>
<td>Revisiting of learning objectives, planning the next session, planning learning</td>
</tr>
</tbody>
</table>

How can Pathology be fitted into the teaching sessions?
You will be taught pathology at the university. Our role as GP teachers is to show how we use ‘pathology’ in our daily practice. Deciding on tests and managing results is a big and complex part of the work of a doctor

Sessions should be planned so that you have enough time to address pathology questions and topics. For example, you could just take the history with patient 1 and just examine with patient 2 depending on what history, signs and symptoms patients have.

The following section is intended as a resource for your teaching sessions.

What topics should I focus on?
Overview of commonly requested tests for patients, good for an overview [https://labtestsonline.org.uk/tests-index](https://labtestsonline.org.uk/tests-index) accessed 22.8.18

Liver function tests
Resources
Good overview of LFTs in [www.patient.co.uk](http://www.patient.co.uk) [http://www.patient.co.uk/doctor/abnormal-liver-function-tests](http://www.patient.co.uk/doctor/abnormal-liver-function-tests) accessed 22.8.18

Questions
- What information from the history would make you consider liver problems?
- What physical signs would you look for in a patient with suspected liver problems?
- Drug therapies requiring checking of LFTs (statins)
- Slightly abnormal LFTs, what do you do next?

Renal function tests
Resources
Overview of GFR and Urinalysis [http://www.patient.co.uk/doctor/Assessing-Renal-Function.htm](http://www.patient.co.uk/doctor/Assessing-Renal-Function.htm) accessed 22.8.18

Questions
- What information from the history would make you consider kidney problems?
- What physical signs would you look for in a patient with suspected kidney problems?
- What tests would you perform in a patient with suspected kidney problems?
- What history would make you want to test urine for blood and protein?
- How would you manage CKD? – Importance of BP control in CKD
FBC
- One of the most commonly requested tests

Questions
- When would you request it?
- What can it tell you?
  - Anaemia
  - Infection
  - Microcytosis
  - Macrocytosis
  - White cell count – high or low
  - Platelet count – high or low
  - Eosinophilia
  - Lymphocytosis
  - Abnormal cells
  - etc

TFT
When do we request TFTs? Diagnosis, monitoring, screening

Useful overview at http://patient.info/doctor/thyroid-function-tests-pro accessed 22.8.18

MSU
- Interpretation of MSU results
- Contamination

Resources
Cystitis

Questions
- How would you diagnose a UTI?
- What tests would you do in suspected UTI?
- How would you manage a suspected/confirmed UTI? (young female, young male, older woman, male with BPH, catheter etc)

Practical issues when testing
- To test or not to test?
- Gaining consent
- Communicating results of investigations- making sure the patient gets the result
- How results come back to the practice
- How results are being processed once they are back at the practice
- What happens to results when the requesting doctor is not available?
- Responsibility for acting on results
- Preparing patients for bad results
- How to handle unexpectedly bad results
- Testing as a patient and time management tool

Discuss the practice systems for managing testing and test results
- If a test or a referral is urgent, make sure the request is marked “urgent” and check that it has been actioned. Telephone the laboratory or department if necessary.
- Foolproof system for reviewing results of investigations?
- Processing speed - if a test result is abnormal, deal with it promptly and appropriately
Giving out results
Think about and discuss how patients get their results
- What systems and safeguards are in place. Pitfalls
- What do you/they think about patients having direct access to their own results electronically?
- Which results are ok over the phone, which would you give out in person?
How would you deal with the following unexpected results?
- CXR showing small opacity near hilum in 56 year old smoker who is well but has had a persistent cough for 7 weeks
- HIV test positive
- FBC showing microcytic anaemia
Role play exercise
- Student pretends to be on the phone to a patient who has a FBC showing microcytic anaemia. Needs to give the result and arrange more tests or
- Give results and start treatment – iron tablets
- Any other scenarios to role play?
Confidentiality issue -discuss the following scenarios
- Husband phones the surgery and asks the receptionist for the result of his wife’s blood tests. He says that she is very deaf and has asked him to get the results. The husband and wife are both known to the receptionist.
- Could role play this

More on the MPS website
http://www.medicalprotection.org/ireland/resources/factsheets/factsheets/roi-confidentiality-general-principles accessed 22.8.18

Discuss your practice’s systems for managing testing and test results
- If a test or a referral is urgent, make sure the request is marked “urgent” and check that it has been actioned. Telephone the laboratory or department if necessary.
- Foolproof system for reviewing results of investigations?
- Processing speed - if a test result is abnormal, deal with it promptly and appropriately
- Could normal results be filed by admin staff?

More topics for discussion
- Linking the session with histopathology, e.g. patients who have had cancer treatment (breast / GIT / other) or even minor surgery done in the surgery
- Look at blood results – anaemia, thyroid disease, abnormal LFTs
- Patients with non-specific symptoms like TATT or weight loss could be good. Thinking about all the tests you could do and possible diagnoses
- Diagnostic process – Differential diagnoses reached after history taking and examination – tests to confirm or exclude diagnoses
- Screening tests
  - FOBs through the post, mammograms or smears. Conditions that are picked up and the route from screening to diagnosis
  - Pros and cons of screening tests (could use PSA as an example)
  - Wilson and Junger screening criteria http://www.gptraining.net/training/tutorials/management/audit/screen.htm accessed 22.8.18
- Chronic disease monitoring e.g. DM, CKD, BP, DMARDs, antipsychotics
  - Process, organisation, burden for patient, practice set up, frequency etc
- Microbiology and the use of tests – UTIs, tissue fluids, joint fluids, throat swab etc
- Spectrum of problems for one system, for example lungs – Cancer, inflammation, infection, trauma-pneumothorax
- Look at path results and ‘construct’ patient history/problem from that
Mental Health/Psychiatry learning in Year 3

To fully appreciate patient histories and the burden of disease you need to develop some skills and knowledge in mental health prior to your core Psychiatry teaching in Year 4. The following gives you an overview where this is happening.

Core Psychiatry teaching will be in Year 4

<table>
<thead>
<tr>
<th>Year</th>
<th>Mental health/Psychiatry teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Linking with the Whole Person Care Vertical Theme as well as the Human Basis of Medicine Course</td>
</tr>
</tbody>
</table>
| 2    | Pilot in the South Bristol Academy - 3 sessions  
PITHE – Psychiatry in LITHE (Learning In The Hospital Environment)  
  ▪ Exploring how patients make us feel, value judgements we make and how to deal with them  
  ▪ Objective assessment - MSE  
  ▪ Exploring and practicing things that are difficult to talk about - sex, alcohol, drugs, death and suicide  
  ▪ Self-care – recognising when we are ill or have problems (alcohol etc)  
Primary Care as part of the ICS sessions (Introduction to clinical skills)  
  ▪ Teaching whole person care |
| 3    | JMS  
  ▪ Balint groups for students (voluntary)  
  ▪ 1 day of liaison Psychiatry for each student (apprenticeship style)  
Primary Care  
  ▪ Screening for depression  
  ▪ Recognising symptoms of depression  
  ▪ Know about the cycle of change  
  ▪ Know the principles of motivational interviewing  
Central study days  
  ▪ 3.5 hr central teaching session for all 250 students [involving 20+ tutors]. This will be based on a complex, evolving case including attachment issues, self-medication, iatrogenic harm, system issues and emphasising an integrative approach to optimise care |
| 4    | Psychiatry and Perioperative Care (PPC)  
  ▪ Linking with CAMHS and old age Medicine teaching  
Primary Care  
  ▪ Low mood  
  ▪ TATT |
| 5    | Primary Care  
  ▪ Medically unexplained symptoms  
  ▪ Somatoform disorders |

Learning task

Please read about the mental state examination so you become familiar with the domains that are covered by it.

In your GP attachment you should have a chance to assess patients for low mood by asking screening questions, see below.
Learning objectives

Knowledge – you should

▪ Be able to list symptoms of depression
▪ Know the Whooley* screening questions for depression
▪ Know how to assess the severity of depression
▪ Know how to assess suicide risk
▪ Understand that depression can be treated with medication or talking therapies
▪ Have basic knowledge of SSRIs and know that other medications are available
▪ Know the symptoms of Lithium toxicity
▪ Know the domains covered by the MSE
▪ Be able to describe the cycle of change
▪ Understand the principles of motivational interviewing

Skills – you should be able to

▪ Use a depression questionnaire, for example the PHQ9

Optional mental health topics to cover if relevant to the patients you are seeing

▪ GAD – Generalised anxiety disorder
▪ Alcohol dependence

This guidebook includes some teaching resources for these topics.

Mental state examination (MSE)

This is an important part of the clinical assessment in Psychiatry. It systematically assesses the patient’s current state of mind through exploring a number of domains including appearance, mood and others. Wikipedia gives a concise description of the full MSE and its domains. You can find it here http://en.wikipedia.org/wiki/Mental_status_examination#Mood_and_affect accessed 22.8.18

You will learn more about MSE and have a chance to practice the full MSE with patients in Psychiatry in Year 4.

We are forming impressions and make judgements as soon as we meet a patient. Some of this may happen on a subconscious level. For example a patient walking in, smiling, saying hello and making good eye contact would make us think that this person’s mood is likely to be normal. Compare this to a patient walking a bit more slowly, with no eye contact and no greeting. We would think that this person could be depressed and would try and explore this.

The patient’s mood and mental state can have a major effect on how they present their history and how they are coping with their condition or problems. It is therefore important to be able to assess our patient’s mental state.

Some degree of MSE is necessary in all our consultations, not just the ones where we suspect that the patient has a psychiatric condition. That is why we think that you should read about it and practice some aspects of it in your consultations and clerkings in Year 3.

Depression and anxiety are common conditions and the following provides you with some knowledge and skills to assess patients for them.
Low mood and depression

As we have a focus on chronic disease in the GP sessions in year 3 this is an ideal place to start learning about some aspects of mental state and mood assessment. Depression is common in patients with chronic disease

Try practising how to build assessment of mood into your consultation.

It is estimated that 2.3 million 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 the Whooley* screening questions

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.
- 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 assess the severity of depression. In General Practice the most commonly used questionnaire is the PHQ9. You can find it here http://www.integration.samhsa.gov/images/res/PHQ%20Questions.pdf accessed 22.8.18

Prescribing
Read the introduction to depression in your BNF, only a couple of pages. Take a quick look at the introductory page to tricyclic antidepressants and selective serotonin reuptake inhibitors (SSRI). SSRIs are the most widely prescribed antidepressants. Knowing their commonest side effects and effects in overdose will be relevant to patients you see in JMS. You are likely to see patients who have taken an overdose when you are with the on call team.

Discussion points for your GP sessions
- It is estimated that 30-50% of depression are not detected. What do you think may be the reasons for that?
- How would you assess suicide risk?
- 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
I decided to use a sculpture of a Peter’s head to emphasise in three dimensions the differences between Peter in his severely depressed state and his stable state. My piece tries to encapsulate the “normal enough” person that I met at the consultation on the left side of the face, and the person that I imagine him to be during his depressive phases on the right.

**Peter**  
*by Haydn Williams*


*You will learn more about depression and how to treat it in year 4.*

**Cycle of change** Prochaska and DiClemente

The following describes the stages a person may go through when they make a change to their behaviour. Not usually a clean circle.

Have you ever tried to change a habit or behaviour? For example, getting eight hours sleep, eating less chocolate, having a regular structure for revision work? How easy was that?

- Preparation
- Contemplation
- Pre-contemplation
- Action
- Maintenance
- Relapse

More a spiral than a circle

**Student task**
Find out where on the cycle of change your patient is. For example
- How do you feel about your smoking?
- What would you like to do about your smoking?

If the answer is ‘I enjoy it and don’t really want to stop now’ the patient is probably pre-contemplative.
If the answer is ‘I have thought about stopping, my family doesn’t like me smoking’ the patient is probably contemplative.

What would be a helpful response from you at the different stages of the cycle?
Motivational interviewing – FRAMES model

The following provides a brief summary

Motivational interviewing is an approach that employs empathic and respectful techniques and is non-confrontational. It is rooted in the Rogerian principles of accurate empathy, non-possessive warmth and genuineness and uses the following techniques to facilitate change.

**F Feedback**
This principle refers to informing the patient about the risks and consequences of the problematic behaviours. What's good and what's not so good about the target behaviour is discussed.

**R Responsibility**
The responsibility to change lies with the patient. The patient must make his/her own decisions along the path of change.

**A Advice**
It is perfectly acceptable to give a patient advice as long as the patient understands that it is his/her choice to follow it. Sometimes a patient may be unsure of something and appear to be floundering. It can be helpful to provide advice in those moments. On the other hand, if a patient is not receptive to receiving advice it is counterproductive to offer it.

**M Menu**
It is important for patients to have choice in the process of change. Present the patient with options from which they can choose what they feel is the best way to go in implementing their goals.

**E Empathy**
The counsellor must convey to the patient a true understanding of the patient's situation or dilemma and transmit acceptance of their feelings, values or goals without being judgmental.

**S Self efficacy**
Encouragement and optimism are key elements in assisting a patient in developing a sense of self efficacy. Each patient has had at least some moment in their life when they have been successful at something related to the target behaviour that needs to be changed. Discover that successful period and demonstrate to the patient a reason for optimism.

**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](http://www.outofourheads.net) accessed 25.8.17
Additional important principles

Avoid Labels
The use of a label is limiting and can be insulting to a patient. If a patient feels labelled this often results in damaging self-efficacy, limiting sense of choice and generating defensiveness or resistance. Focusing on the acceptance of a label or diagnosis is not constructive and in fact may actually bog down the therapeutic alliance. It is better to focus on the need for change than a particular label.

Avoid Arguments
It may sound obvious that arguing is not helpful, especially in a patient counsellor relationship but it sometimes occurs inadvertently. It must be remembered that any form of argumentation is likely to result in anger and other forms of resistance that ultimately interfere with initiation of movement toward change.

Roll with Resistance
It is natural for anyone faced with the need for a change to display some form of resistance. It is, in fact, normal to observe resistance in a patient who is in need of change. The natural tendency is to confront the resistance directly. This is only likely to raise the level of resistance. It is better to ask questions, give information and avoid declarations.

Decrease the Desirability of the Target Behaviour:
A behaviour that is in need of changing persists because there is some level of desirability to either continue to experience the behaviour or to avoid the work of changing the behaviour. The counsellor must, through open-ended questioning and providing cues for weighing the desirability of the target behaviour against the desirability of changing. By engaging the patient this way ultimately the counsellor hopes the patient can develop a plan to achieve the desirable aspects of the behaviour to be changed through a more reasonable and healthy process.

Develop Discrepancy: Motivation to change can be enhanced when a patient perceives a discrepancy between where they are and where they want to be. The counsellor seeks to increase a patient's attention on such discrepancies with regard to their alcohol related behaviours. To develop such discrepancies it may be necessary to raise a patient's awareness of their personal consequences of their alcohol use.
Generalised anxiety disorder (GAD) (optional)

Read more about it at [http://www.patient.co.uk/doctor/generalised-anxiety-disorder-pro](http://www.patient.co.uk/doctor/generalised-anxiety-disorder-pro)  accessed 14.8.18

Learning objectives

Knowledge

▪ Be aware of the diagnostic term and a simple definition
▪ Be aware of the stepwise approach to treatment

Skill

▪ Use the GAD-7 questionnaire
▪ Be able to assess mood

Diagnosis

▪ Common condition defined as chronic, excessive worry occurring more days than not for at least 6 months that causes distress or impairment
▪ At least 3 key symptoms out of the following 6 are required to make a diagnosis: restlessness or nervousness, easy fatigability, poor concentration, irritability, muscle tension, or sleep disturbance
▪ It is in part a diagnosis of exclusion: medical conditions, medications or substances, and other mental disorders should be ruled out as a primary cause
▪ Physical examination and laboratory studies are generally normal if no co-existing medical problems or substance abuse issues exist
▪ Treatment is with either pharmacotherapy, psychotherapy, or a combination

The stepped-care model NICE recommends the following approach

**Step 1:**
Identification, assessment, education, monitoring

**Step 2:**
Diagnosed GAD not improved after education and active monitoring in primary care
▪ Low-intensity psychological support, non-facilitated or guided self-help, psycho-educational groups

**Step 3:**
GAD with an inadequate response to step 2 interventions or marked functional impairment
▪ CBT/applied relaxation or drug treatment

**Step 4:**
Complex treatment-refractory GAD and very marked functional impairment, such as self-neglect or a high risk of self-harm
▪ Specialist drug and/or psychological treatment, multi-agency teams, crisis intervention, outpatient or inpatient care

This shows that medication is not the first step, use education, self help and monitoring first where appropriate

To help make the diagnosis you could use the **GAD-7 questionnaire**
Alcohol dependence (optional)

Learning objectives

Knowledge
▪ Understand the importance of assessing alcohol intake
▪ Understand the terms harmful and hazardous drinking
▪ Know recommended limits
▪ Know about the cycle of change
▪ Have a basic understanding of the principles of motivational interviewing.
▪ Know about simple intervention

Skills
▪ Be able to use the audit-C questionnaire in your consultations
▪ Calculate units of alcohol
▪ Assess at what stage the patient is in the cycle of change
▪ Apply the principles of motivational interviewing

Just like smoking we should always ask about alcohol intake in all settings. Be aware of subconscious prejudices; it may be easier to remember to ask about alcohol if our patient is a dishevelled looking man as supposed to a well-dressed older woman.

Calculating units of alcohol
The number of UK units of alcohol in a drink can be determined by multiplying the volume of the drink (in milliliters) by its percentage ABV (alcohol by volume), and dividing by 1000.

Examples
▪ One pint (568 ml) of beer at 4% ABV contains: 568mlx4/1000=2.3 units
▪ One bottle of wine (750ml) at 12% ABV contains: 750x12/1000=9 units

Questionnaires for assessing alcohol use
AUDIT - Alcohol Use Disorders Identification Test
At http://www.patient.co.uk/doctor/alcohol-use-disorders-identification-test-audit accessed 14.8.18

AUDIT-C (shortened form) useful quick screening test in any consultations
First 3 questions from the AUDIT questionnaire
1. How often do you have a drink containing alcohol?
2. How many units of alcohol do you drink on a typical day when you are drinking?
3. How often have you had 6 or more units if female? or 8 or more if male, on a single occasion in the last year?

Using a cutoff of ≥3, AUDIT-C identifies 90% of patients with active alcohol abuse or dependence and 98% of patients with heavy drinking, (specificity was only 60%, false-positive rate 40%). [3]
Using a cutoff ≥4 the Audit-C has a sensitivity of 86% of patients with heavy drinking and/or active alcohol abuse or dependence with a specificity of 72%.

If the score is ≥3 or more points on the AUDIT-C, or a report of drinking 6 (women) or 8 (men) or more drinks on one occasion ever in the last year complete the full questionnaire

Assessing risk from drinking

<table>
<thead>
<tr>
<th>WHO terms</th>
<th>DH Terms</th>
<th>Units of alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>women</td>
</tr>
<tr>
<td>Harmful</td>
<td>Higher Risk</td>
<td>6</td>
</tr>
<tr>
<td>Hazardous</td>
<td>Increasing Risk</td>
<td>&gt;2-3</td>
</tr>
<tr>
<td>Safe or Sensible</td>
<td>Lower risk</td>
<td>≤ 2-3</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Medical model</th>
<th>The patient model (Helman)</th>
<th>Cambridge/Calgary Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>What has happened?</td>
<td>Initiating the session</td>
</tr>
<tr>
<td>Examination</td>
<td>Why has it happened?</td>
<td>Gathering information</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>Why to me?</td>
<td>Providing structure</td>
</tr>
<tr>
<td>Tests</td>
<td>Why now?</td>
<td>Building the relationship</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>What if nothing were done?</td>
<td>Explanation and planning</td>
</tr>
<tr>
<td>Treatment</td>
<td>What should I do?</td>
<td>Negotiation and discussion</td>
</tr>
<tr>
<td></td>
<td>Who should I consult?</td>
<td>Closing the session</td>
</tr>
</tbody>
</table>

Creating meaning

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.

E-learning resources for consultation skills

Making sense of what patients tell us is a challenging task. To become good at it we need lots of practice and feedback. You will have two consultation skills sessions with actors in Year 3, one at the University and one in your academy during JMS. In addition there are learning resources in Blackboard and Hippocrates.

**Blackboard – Year 3 GP placements**
- ‘Putting it all together’ e-tutorials for anal fissure and heartburn under learning resources. This takes a ‘micro’ look at the CCG (Cambridge-Calgary consultation skills guide)
- Communication e-tutorial under consultation skills

**Hippocrates**
Primary Care - Essential Clinical Communication - key tasks of the consultation
From “check listing” to “problem solving” and whole person care

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, non-jargon language, clarification, summarising, safety netting

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

“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.

During 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

<table>
<thead>
<tr>
<th></th>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td><strong>Symptom</strong></td>
<td>Characteristics/associated symptoms</td>
</tr>
<tr>
<td>S</td>
<td><strong>Severity</strong></td>
<td>Subjective/objective scales</td>
</tr>
<tr>
<td>S</td>
<td><strong>Situational</strong></td>
<td>Aggravating/relieving factors</td>
</tr>
<tr>
<td>T</td>
<td><strong>Time course</strong></td>
<td>Previous occurrence/duration/constant or intermittent</td>
</tr>
<tr>
<td>O</td>
<td><strong>Onset</strong></td>
<td>Sudden or gradual</td>
</tr>
<tr>
<td>P</td>
<td><strong>Patient</strong></td>
<td>Age/race/gender/risk factors</td>
</tr>
</tbody>
</table>
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 lists of possible differential diagnoses for SOB

- **Physiological**
  - Exercise
  - Unfit
  - Altitude

- **Psychological**
  - Hyperventilation
  - Air hunger
  - Panic disorders

- **Metabolic**
  - Anaemia
  - Acidosis
  - DM
  - Liver failure
  - Renal failure

- **Cardiovascular**
  - Heart failure
  - Valvular heart problems
  - Arrhythmias
  - Pericarditis
  - Cardiac tamponade
  - Cardiomyopathy
  - Myocarditis

- **Respiratory**
  - Asthma/COPD
  - Infections
  - TB
  - Pneumonia
  - Bronchitis
  - Pleuritis
  - Pleural effusion
  - Pulmonary embolus
  - Bronchiectasis
  - Pneumothorax
  - Cystic fibrosis
  - Alveolitis

Diagram 2 narrowing the diagnosis through history and examination

- Many possible diagnoses for SOB

- **Cardiac cause**
  - Mitral regurgitation

All possible diagnoses for shortness of breath

Ballpark

Patient
Diagram 3  The diagnostic process

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

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

McLeod’s Clinical Examination (Douglas, Nicol and Robertson, Elsevier).
McLeod’s Clinical Diagnosis

An Introduction to the GALS screen
accessed 14.8.18

Clinical medicine
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.

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
accessed 14.8.18

Medical Students: Professional Behaviour and Fitness to Practice
http://www.gmcuk.org/Medical_students___professional_values_and_fitness_to_practice_1114.pdf_48905163.pdf accessed 14.8.18

Disability
The diving bell and the butterfly, Bauby (London: Fourth Estate, 1998)

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’. Easy and enjoyable to read with hands on suggestions

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.

For further textbooks, please see the Primary Care website
http://www.bristol.ac.uk/primaryhealthcare/
Online Resources

http://cks.nice.org.uk/ accessed 22.8.18

NHS Clinical Knowledge Summaries (formerly PRODIGY)

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

https://patient.info/health accessed 22.8.18

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 22.8.18

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.
Form 1  My Learning 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)

<table>
<thead>
<tr>
<th>Score</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td>Nil</td>
<td>Little</td>
<td>Moderate</td>
<td>Very</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Skill/Knowledge</th>
<th>Start Year 3</th>
<th>Before GP session 4</th>
<th>Before GP session 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMUNICATION/CONSULTATION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introductions</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
</tr>
<tr>
<td>Developing rapport</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
</tr>
<tr>
<td>Non-verbal communication</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
</tr>
<tr>
<td>Attentive listening</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
</tr>
<tr>
<td>Open/closed question use</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
</tr>
<tr>
<td>Clarifying</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
</tr>
<tr>
<td>Empathy</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
</tr>
<tr>
<td>Explaining clearly</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
</tr>
<tr>
<td>Summarising</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
</tr>
<tr>
<td>Sharing decisions</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
</tr>
<tr>
<td>Interview structuring</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
</tr>
<tr>
<td>Time management</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
<td>1..2..3..4..5..6..7..8..9</td>
</tr>
<tr>
<td>Average (1-9)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CLINICAL KNOWLEDGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
</tr>
<tr>
<td>Ophthalmology</td>
</tr>
<tr>
<td>ENT</td>
</tr>
<tr>
<td>Psychiatry</td>
</tr>
<tr>
<td>Musculoskeletal</td>
</tr>
<tr>
<td>Average (1-9)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CLINICAL EXAMINATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
</tr>
<tr>
<td>Respiratory</td>
</tr>
<tr>
<td>Abdominal</td>
</tr>
<tr>
<td>Neurological</td>
</tr>
<tr>
<td>ENT</td>
</tr>
<tr>
<td>Mental State</td>
</tr>
<tr>
<td>Knee</td>
</tr>
<tr>
<td>Hip</td>
</tr>
<tr>
<td>Back</td>
</tr>
<tr>
<td>Shoulder</td>
</tr>
<tr>
<td>Average (1-9)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRACTICAL SKILLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP measurement</td>
</tr>
<tr>
<td>Dipstick urinanalysis</td>
</tr>
<tr>
<td>Blood glucose testing</td>
</tr>
<tr>
<td>Using an auriscope</td>
</tr>
<tr>
<td>Using an ophthalmoscope</td>
</tr>
<tr>
<td>Measuring ABPI</td>
</tr>
<tr>
<td>Demonstrating inhalers</td>
</tr>
<tr>
<td>Measuring PEFR</td>
</tr>
<tr>
<td>Using a thermometer</td>
</tr>
<tr>
<td>Average (1-9)</td>
</tr>
<tr>
<td>Overall Average (1-9)</td>
</tr>
</tbody>
</table>

Please write your reflections and comments on the back of this form
Form 2 - How am I doing? My reflection on learning in Unit 1&2

Please take a moment to reflect on your learning. Areas for consideration: medical history taking, consultation skills, knowledge, “putting it all together”, making a diagnosis 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.

<table>
<thead>
<tr>
<th>Own reflections</th>
<th>Feedback from your GP teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Areas in which I have improved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Areas for development</strong></td>
<td></td>
</tr>
</tbody>
</table>
Form 2 - How am I doing? My reflection on learning in Unit 3&4

Please take a moment to reflect on your learning. 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.

<table>
<thead>
<tr>
<th>Own reflections</th>
<th>Feedback from your GP teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Areas in which I have improved</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Areas for development</strong></td>
<td></td>
</tr>
</tbody>
</table>
Form 3  Reflective diary of patients seen in my GP attachments 2018-19

Please keep a log 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.

<table>
<thead>
<tr>
<th>Patient (age, gender)</th>
<th>Diagnosis/Problem(s)</th>
<th>Learning points</th>
<th>Plan for further learning</th>
</tr>
</thead>
</table>
| 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 |

<table>
<thead>
<tr>
<th>1</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient (age, gender)</td>
<td>Diagnosis/Problems</td>
<td>Learning points</td>
<td>Plan for further learning</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------</td>
<td>----------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient (age, gender)</td>
<td>Diagnosis/Problems</td>
<td>Learning points</td>
<td>Plan for further learning</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Structured Clinic clerking

Before Clinic:
- Read up about common potential conditions you will see
- Take Oxford handbook
- Take BNF (or use in clinic rooms)

Clinic: ..............................................................

Case number:
Patient age:
Patient gender:

What was the presenting complaint?

What were the key finds on history?

What were the key findings on examination or Investigations?
Any relevant information in PMH / DH / FH / SH?

What are the key learning points from this case?
Student evaluation of the Year 3 GP attachments in 2018-19

Academy ............................................

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

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

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

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 Team, Faculty of Health Sciences, 1st Floor, South Wing, Senate House, Tyndall Avenue, Bristol BS8 1TH.