University of BRISTOL

COMMUNITY ORIENTATED MEDICAL PRACTICE 2

PRIMARY HEALTH CARE

2013-2014

Block Four

LECTURE NOTES AND STUDY GUIDE
FOR
PRIMARY HEALTH CARE

Contents

1. Aims and Objectives for this Course

By the end of the unit you should be able to:

- Describe the role of the GP, other members of the primary health care team and the other systems that provide open access health care in the UK

- Conduct a complete consultation on any of the 16 core clinical problems listed (page 4). Including:
    - Consulting effectively with a patient with a disability
    - Identifying patients at risk of intimate partner violence and having strategies to help them
    - Understanding how the delivery of bad news impacts on patients and carers

- Describe the risks and benefits of commonly prescribed medication used in the treatment of these 16 core problems and understand the rationale behind making treatment decisions.

- Help patient reduce their risk of developing chronic disease and use data interpretation e.g. blood pressure measurement and cardiovascular risk to inform management.

- Understand the impact of multi-morbidity on the individual and health care services

- Describe methods by which the impact of disability on patients can be minimised

Core Problems in Primary Care

Problem	Presentation	Learning objectives
Asthma, angina	**My chest feels tight**	Describe how to diagnose asthma & angina, when to refer & how to manage these conditions including commonly used medications.
Chronic obstructive pulmonary disease (COPD), anaemia, heart failure & smoking	**I get out of breath easily**	Describe how to diagnose & manage COPD and heart failure including the main treatment options. Describe how to investigate anaemia. Demonstrate ability to help someone stop smoking and have an understanding of the main medications used including nicotine replacement.
Common cancers: lung, bowel, prostate & breast	**I'm losing weight; I'm still coughing; I have to go to the toilet all the time; I've found a lump in my breast**	Describe how these 4 common cancers might present and know how to reach a definite diagnosis. Describe how to manage a patient who is terminally ill as the result of any of these cancers.
Contraception	**I'd like to go on the pill**	Be familiar with at least one combined oral contraceptive pill. Demonstrate how to assess a patient before starting her on the pill and how to follow her up. Discuss methods of post-coital contraception. Discuss contraception options.
Depression	**I feel useless**	Be alert to possibility of depression and use skilful questioning to confirm diagnosis. Be familiar with at least one antidepressant drug.
Diabetes, anaemia, hypothyroidism, insomnia, depression, early pregnancy, chronic fatigue syndrome	**I feel tired all the time**	List differential diagnosis of tiredness. Describe presentation, investigation & management of each of these conditions.
Domestic violence	**I have tummy ache** **I can't sleep**	Identify patients who may be at risk of intimate partner violence and have strategies to help them
Gastroenteritis	**I've got diarrhoea**	Describe management of diarrhoea in adults
Gastro-oesophageal reflux	**I've got heartburn**	Describe investigation & management of heartburn understand the role of medication in the aetiology of heartburn, and in managing heartburn.
Hypertension and cardiovascular risk	**The nurse said my blood pressure was high**	Demonstrate how to diagnose and manage hypertension including choosing treatment options. Demonstrate how to estimate the risk of someone developing cardiovascular disease over the next 10 years. Be familiar with the indications for prescribing statins including the risks, benefits and monitoring required. Describe the role of a GP in managing patients following a myocardial infarction. Discuss the use of sildenafil in a patient presenting with erectile dysfunction.
Migraine & tension headache	**I've had a headache for the last 2 days**	Demonstrate how to assess a patient with a headache. Discuss treatment & prophylaxis for migraine.
Non specific low back pain	**My back hurts**	Demonstrate management of back pain & discuss when investigation is warranted.
Otitis media & externa	**My ear hurts**	List differential diagnosis of earache & management options for otitis media & externa including medications used.
Substance misuse	**My wife says I am drinking too much alcohol.** **Can you prescribe me some methadone?**	Make an initial assessment of someone with an alcohol or drug problem. Demonstrate ability to recognize alcohol dependence & offer help with stopping drinking. Be aware of the associated medical and social problems. Gain understanding of services for addicts within primary care.
Urinary tract infection, chlamydia & common STDs	**It stings when I go to the toilet**	Demonstrate how to manage simple UTIs including commonly prescribed antibiotics. Be alert to possibility of prostatic hypertrophy/ cancer in men. Be alert to possibility of STDs causing dysuria. Feel confident in taking a sexual history.
Viral sore throat, glandular fever, tonsillitis, upper respiratory tract infection and influenza	**I've got a sore throat**	Discuss management options for each of these conditions including commonly prescribed antibiotics. Communicate the potential benefits & disadvantages of antibiotics to the patient. Be able to counsel a patient on the use of simple over the counter analgesics e.g. paracetamol and non steroid anti inflammatories. Understand the flu vaccination and when it should be issued.

Learning Resources

In addition to reading this study guide you should use the following resources

Blackboard

The University is developing a suite of on-line tutorials in Primary Care on Blackboard. At present there are tutorials some of the 16 core problems e.g. “common cancers” and tutorials on sore throat, drug and alcohol misuse. There is also a podcast on asthma, written by a former student. To access these tutorials go to www.ole.bris.ac.uk. Once there you should find that you have been registered as a student for COMP2. Click on COMP2 (13-14) and follow these directions: Click on Learning Resources on the left hand menu.

Click on Primary Care
Click on Interactive tutorials for core topics in primary care

If you have not been registered as a student for COMP2 please contact Sharon Byrne (sharon.byrne@bristol.ac.uk). If you have any comments about the Primary Care tutorials please contact Dr Jessica Buchan (jessica.buchan@bristol.ac.uk).

If you are interested in developing an e-learning package for your peers as an external SSC please contact Dr Jessica Buchan at jessica.buchan@bristol.ac.uk

Websites

The tutorials on Blackboard have hyperlinks to other useful websites.

The NHS Library has an excellent collection of up-to-date detailed notes on the management of common problems in Primary Care. These are referred to as Clinical Knowledge Summaries and can be accessed free at www.cks.library.nhs.uk . They used to be known as Prodigy and are designed primarily for GPs to use during their consultations. However they are an excellent resource for medical students too and tell you what and how to prescribe, something which textbooks often avoid.

The NHS Direct website www.nhsdirect.nhs.uk is a comprehensive website for patients and is also kept up to date. It is worthwhile looking at some of the patient information leaflets that it contains. These leaflets are also referred to in the Clinical Knowledge Summaries.

Prescribing specific: The National Prescribing Centre also has an excellent website http://www.npci.org.uk with many useful tutorials, all of which are free. Click on the “lift” button to enter the virtual world of the National Prescribing Centre. www.prescribe.ac.uk links to the prescribing skills assessment and has an e learning platform.

http://www.drugs.smd.qmul.ac.uk/ is a website from Barts and the London medical school with free interactive clinical pharmacology learning modules you can access.

Through the University Library portal you should have access to all the major journals including the BMJ. If you are a member of the BMA you should register with BMJ Learning www.bmjlearning.com. This is an outstanding on-line learning resource aimed at all doctors. Many of the modules for GP and foundation doctors are of particular relevance to COMP2. Some modules can be accessed even if you are not a member of the BMA.

For learning about common problems in general practice previous students have recommended www.gpnotebook.com. Many GPs refer to this website regularly in the course of their normal surgeries.

Recommended books

Edited by Stephenson, A. **A Textbook Of General Practice, 3rd Ed**. London: Arnold; 2011
Simon, C, Everitt, H, Kendrick, T. **Oxford Handbook of General Practice. 3rd Ed.** Oxford: Oxford University Press; 2009.
Hopcroft, K and Forte, V. **Symptom Sorter. 4th Ed** (revised**).** Oxford: Radcliffe; 2010.
Storr, E, Nicholls, G, Leigh, M & McMain S. **General Practice: Clinical Cases Uncovered**. Blackwell 2008.

If you want to explore a topic in greater detail have a look at:

Khot, A and Polmear. Practical General Practice: Guidelines for Effective Clinical Management, 6th Ed (revised). Churchill Livingstone; 2010.

There should be copies of the Primary Care books in the **Medical Sciences Library.**

Summary of Learning Resources

The table below maps the core syllabus to the various learning resources that the university offers for this unit:

Presentation	**Learning Resources**		
	Lecture/Workshop	**On-line tutorial (Blackboard)**	**Notes in study guide**
My chest feels tight		Recorded lecture on Blackboard	Risk of Cardiovascular Disease
I get out of breath easily		eTutorial Podcasts on asthma	Breathlessness
I'm losing weight; I'm still coughing; I have to go to the toilet all the time; I've found a lump in my breast	Effective consultation skills workshop	eTutorial	Presentation of Common Cancers
I'd like to go on the pill	Effective consultation skills workshop	eTutorial	Emergency contraception
I feel useless		Recorded lecture on depression on Blackboard	Depression
I feel tired all the time		eTutorial	
My boyfriend hit me	Intimate Partner Violence lecture Effective consultation skills workshop		Intimate partner violence
I've got diarrhoea	Minor Illness lecture	eTutorial	Diarrhoea in adults
I've got heartburn	OSCE revision		Heartburn
The nurse said my blood pressure was high	The risk of CVS lecture	eTutorial	Measurement of blood pressure & pulse
I've had a headache for the last 2 days	Effective consultation skills workshop	eTutorial	Migraine
My back hurts	OSCE revision	eTutorial	Non specific low back pain
My ear hurts	Minor Illness lecture		Earache
I am drinking too much alcohol. Can you help me to stop using heroin?		eTutorial	Substance misuse
It stings when I go to the toilet	Effective consultation skills workshop		Dysuria in women
I've got a sore throat	Minor Illness lecture	eTutorial	Upper respiratory tract infection

2. Your GP Attachments

Your GP attachments give you a unique opportunity for learning. You will be taught on a one-to-one basis and will gain experience in conducting consultations by yourself. You may be taught by many different doctors within a single practice but one doctor will be identified as your key teacher.

You may either have one 4-week GP placement or two 2-week placements. During the four weeks you will have 30 sessions (half days) of teaching. This leaves 10 sessions which may be timetabled for dermatology teaching or other study time e.g. using the e learning tutorials on blackboard. Some of the attachments (mainly those in rural areas, some distance from the academy base) will require you to live with the GP. Residential placements will usually only be for 2 weeks. These attachments have proved very popular with students in the past and if you have specifically requested one, every effort will have been made by the Primary Care teaching administrator, to meet your request.

Hopefully those of you attached to the Bath, Gloucestershire, Somerset and Swindon academies will have all of your GP attachment(s) in the vicinity of a single academy. If your GP does not provide accommodation then you will be given accommodation by the academy.

Those of you attached to a Bristol academy may have a residential GP attachment in Devon, Somerset or South Gloucestershire but will be in Bristol for the rest of the time.

As soon as you know which practices you have been allocated please contact your GP teachers by phone or e-mail to confirm that you will be attending. Your GP teachers will have to prepare a timetable for you in advance of you arriving and this will involve them re-arranging their surgeries to free up time for teaching.

First 2 weeks of GP attachment

At the start of your GP attachment you should talk to your GP teacher about what you would like to get out of the attachment. Think about what your strengths and weaknesses are and what you need to concentrate on to maximise your learning. Use the 16 ‘core problems’ to identify areas of weakness.

During the first week of your first GP attachment you will sit in on surgeries with your GP teacher. Your GP teacher will invite you to comment on the consultations that you witness and over the course of the week will encourage you to start participating in some of the consultations. You should reflect on what you see and hear and can use the reflective table at the back of this guide to keep a record of your learning. Try and record both your tutors comments and your own reflection.

During the second week of your first GP attachment you will start to do some consultations by yourself, with your GP teacher watching you. You may want to ask your GP to sign off some of the consultations that they observe you doing in you CAPS logbook. Please record your teacher’s comments and your own thoughts on these consultations; then try to establish what you have learned from them.

As well as sitting in with your key GP teacher you will probably spend time with other GPs in the practice too. GPs have different consultation styles and sometimes attract different patient profiles so spending time with different GPs may broaden your experience. You may also have the opportunity to spend time with other members of the Primary Health Care team such as the treatment room nurses and district nurses.

Throughout the fortnight you should have lots of opportunities to be observed consulting with and examining patients. The most important exam for COMP2 is an objective structured clinical

examination in which you will have to conduct consultations with patients. So, during your GP attachments you need to ensure that you master the basic steps in conducting a consultation within general practice and that you are proficient in examining patients.

During the attachment your teacher will offer you at least one tutorial. It is up to you and your teacher what you concentrate on during these tutorials. You may want to explore issues arising out of a consultation that you have observed or participated in. Alternatively, you may want to focus on one of the clinical problems that constitute the core syllabus for primary care.

If you are moving to a different practice for your second 2 weeks, at the end of your first attachment you should spend some time completing the handover form in the back of this study guide. This form should summarise your achievements during the attachment and identify your goals for the next attachment.

Second 2 weeks of GP attachment

If you are in a new practice for your second 2 weeks you should show the handover form to your new GP teacher on your first day. Your new teacher will invite you to sit in on consultations but will probably encourage you to start doing your own consultations early on in the fortnight.

Some teachers may set up special surgeries for you to run (under their supervision) during your second 2 weeks. How much you do will depend upon your ability, your confidence, logistics (such as the availability of spare room) and the slot in which you are studying COMP2. If you are studying COMP2 at the start of year 4 you will not have learned about obstetrics, gynaecology or paediatrics yet. However if you are studying it at the end of year 4 then you should know about these topics already and you should find general practice easier. In the second 2 weeks of the GP attachment you should be observed doing a minimum of 5 consultations, if you are not entering these in your CAPS logbook you should record your reflections on these consultations in the reflective table at the end of this workbook.

During your second 2 weeks attachment you also have a further tutorial.

Out-of-Hours Commitments

During each GP attachment your GP teacher is likely to be the “duty doctor” for the practice at least once. On these days your GP is likely to see more urgent problems and will probably admit at least one patient to hospital. Ask your GP if you can accompany them for some of the time on one of these days and offer to stay until the end of evening surgery. Your GP may be very busy of these days and may not have as much time for teaching but you will see another side to general practice and will learn a lot.

Not all GPs work at nights or on weekends now but at most teaching practices there are GPs who do out-of hours work. The nature and pace of work out-of-hours can be very different. Ask your GP teacher if it’s possible for you to accompany them or someone else on an out-of-hours shift. About half of the GP teachers say that they can offer this and a quarter of students get some exposure of out-of-hours work during their GP attachments. The majority of those students who experience out-of-hours work in general practice find it a useful experience. It isn’t compulsory though.

3. Introduction to Primary Care

"In general practice patients stay and diseases come and go. In hospitals diseases stay and patients come and go"
Iona Heath 2005, President of the Royal College of General Practitioners

Primary Care provides first contact, continuous, comprehensive and co-ordinated care to populations undifferentiated by gender, disease or organ system.

In the UK the majority of patient care takes place in Primary Care

Every day in the NHS

836,000 people consult their GP or practice nurse

389,000 people receive care in the community

124,000 people attend out-patient appointments

50,000 people visit A&E

114,000 people are admitted to hospital as an emergency

44,000 people are admitted to hospital for planned treatment

Source: Department of Health, Dec 2005

The importance of Primary Care in creating a successful and efficient health care system was recognised by the World Health Organisation in its Alma Ata Declaration, made in 1978.

The Alma-Ata Declaration
Practical, scientifically sound and socially acceptable health care
Provides universal access to adequately trained professionals
Is affordable even for the poorest
Provides continuity of care
Is easily available to individuals and families in local communities
Provides reactive care (when individuals are unwell) as well as proactive care (actively promoting health and preventing disease)
Is backed by sufficient local resources and technology
Is supported by adequate and appropriate secondary care

To what extent does Primary Care in the UK live up to these aspirations?

Is Primary Care scientifically sound?

The first chair of Primary Health Care in the UK was established at the University of Edinburgh in the 1963. Now every Medical School in the UK has at least one professor of Primary Care. University Departments of Primary Health Care produce a large volume of research, published in high impact journals, eg. BMJ, Lancet & British Journal of General Practice (BJGP). Evidence-based guidelines for GPs are disseminated via The National Institute for Clinical Excellence (NICE).

Rational prescribing is encouraged by the Prescription & Pricing Authority which produces individual and detailed reports for GPs on their prescribing habits and compares them to the national averages.

GPs compliance with guidelines is encouraged via performance related pay (referred to as the Quality and Outcome Framework – QOF).

Does it provide universal access? Is it easily available to individuals and families in local communities?

The UK has a national network of GP surgeries, pharmacies and health centres. There are about 11,000 GP surgeries now but the number is falling. Between 1994 and 2004 about 1,000 single handed practice disappeared whilst other practices grew. Despite this reduction patients living in urban areas do have a genuine choice of practices, close to their home, with which they can register. All UK citizens are entitled to register with a GP and about 98% of the population is registered with a GP. All GP surgeries are expected to provide same day appointments or home visits for those who need urgent care. In addition GP surgeries have to provide a facility for booking appointments in advance. Every week day about 1.3% of the population goes to a GP surgery. The mean number of visits to a GP surgery made by each person in the UK is 5 a year. About a third of these visits are to see the practice nurse rather than the GP.

All patients in the UK also have access to district nurses who visit patients in their own homes. Many other health professional also offer care to patients in their own homes or in local clinics. These professionals who form part of the "Primary Care Team" include

- Health Visitors (for children & the elderly)
- Community Matrons
- Physiotherapists
- Midwives

Are Primary Care professionals adequately trained?

In order to become a GP a doctor must complete 3 years of training after leaving the foundation programme. 18 months of this training programme is spent in general practice. Towards the end of the training programme the doctor must sit the membership examination of The Royal College of General Practitioners (MRCGP). Doctors cannot practice as independent GPs until they pass MRCGP. Many GPs have "portfolio" careers mixing time in practice with other related jobs such as medical education, appraisal, business management and political work.

The Royal College of General Practitioners is one of the newest Royal Colleges for doctors. It was founded in 1952. If you are interested in the history of General Practice in the UK, go to the RCGP website:

http://www.rcgp.org.uk/about-us/history-heritage-and-archive.aspx

In order to reflect the increasing complexity of general practice the RCGP would like to increase the length of time it takes to train as a GP from 3 to 5 years. However this would require extra funding from the Department of Health so the current comprise is to increase the length of training to 4 years.

District nurses and practice nurses have bespoke training too and there are courses leading to approved qualifications for practice managers.

F1 4 months + 4 months + 4 months

F2 4 months + 4 months + 4 months
(one of these blocks may be in general practice)

Entry Exam

Specialist Training 18 months
(Hospital)

Specialist Training 18 months
(GP)

Exit Exam (nMRCGP)

Locum Salaried GP Partner

Is Primary Care affordable even to the poorest?

In the UK all consultations are free. All investigations and referrals are free too.
Sick notes (after 7 days) are free. 89% of all prescriptions dispensed in England are free. Although the standard charge for one item on a prescription is £7.85 most people who receive prescription are exempt from charges. The people who are exempt from prescription charges include:

- All those over 60 years
- Children
- Women who are pregnant or who have given birth in the last year
- People with certain diseases; eg. diabetes, epilepsy, hypothyroidism
- People receiving treatment for cancer
- People on renal dialysis

Patients who do not fall into one of these exemption categories can still buy a prepayment certificate. For £104 this enables them to obtain all the prescriptions they need for the year. So if they need 15 or more prescriptions a year this works out cheaper than paying for individual prescriptions.

For more information on Prescription Charges go to
http://www.nhs.uk/NHSEngland/Healthcosts/Pages/Prescriptioncosts.aspx (accessed 14/3/14)
A few specific drugs and treatments are not available for free on the NHS

Primary Care provides continuity of care

Primary care has changed enormously over the last 50 years from many small (often singlehanded) practices providing care to a “personal list” of patients for 24 hours to much larger practices with at least a quarter of GPs working less than full time with patients “belonging” to the practice rather than individual GP. Today continuity of care increasingly exists by virtue of the medical record held at the GP surgery. Continuity of care has been eroded further by out of hours being provided by other organisations, and patients being access primary care through walk in centres or NHS direct (see below) However GPs still offer a personal, local service and deal with unsorted problems of almost

every kind. They remain the guardian of their patients' life-long medical records. The workload of Primary Care in the UK continues to increase mainly because as the population ages there are more people with multiple, complex, chronic medical problems. Patients tend to stay registered at the same GP surgery for 12 years. Although patients are mobile then they used to be it is still common for GPs to care for several generations of the same family.

Primary Care is easily available to individuals and families in local communities, and provides reactive care

GP surgeries provide care Monday to Friday 8am to 6.30pm and offer a mix of routine (pre-bookable) appointments and same day or day before slots. Many GP consultations are "unscheduled care" e.g. the patient has not arranged the appointment more than a day in advance. Out of hours GPs commission organisations to provide care for their patients either giving phone advice, seeing the patient in a designated surgery or visiting the patient at home. The out of hours organisation has its own notes system and fax the patients GP a report of contact with an individual patient. Many GPs in England work for these organisations as well as their own surgery. There is a large demand for GP care out-of-hours. Professor Salisbury (BMJ, 2000) looked at the data from out-of-hours organisations providing care to 1 million patients and found that 1 in 6 patients per year contacted GP out of hours. Amongst the under 5's the rate is 4 times higher than this (700 per 1,000 patients per year) and amongst those living in "deprived" postcodes the rate is twice as high.

As well as from GPs, patients may also seek advice from family and friends, their local pharmacy, A&E, and in 1999 two new gateways to the NHS were created:

- Walk-in centres
- NHS direct

Walk in centres are nurse led and use computer algorithms to manage patients. They treat minor illnesses and injuries, give health advice and do dressings and phlebotomy. They often prescribe for minor illness such as antibiotics for infections or emergency contraception. They also may deal with unplanned emergencies such as chest pain, so they are trained to provide care until the patient can be transferred e.g. to A&E. Walk in centres do not have national coverage and are not open 24 hours a day. To find their nearest walk in centre patients can access the NHS information site **NHS choices: www.nhs.uk**

NHS direct was established to "provide easier and faster information for people about health, illness and the NHS so that they are better able to care for themselves and their families (Dept. Health 1997). An observational study in the early days of NHS direct found little evidence that it reduced demand, it seemed to be an additional out of hours provision.

Patients can now access medical advice including how to get medical treatment quickly by dialling 111. When a patient needs medical advice or attention that is not an emergency but cannot wait for an appointment with their doctor, do not know where to seek help from, or are thinking of accessing urgent care e.g. A&E they should ring 111. They are put through to a trained adviser or nurse to give them medical advice or arrange for appropriate care this includes access to emergency dentists and late opening pharmacies. NHS direct website: www.nhsdirect.nhs.uk

Primary Care provides proactive as well reactive care

As well as dealing with the symptoms brought to them by patients, GPs have a large role in preventing disease and managing chronic disease. Here are some examples

Reactive	Proactive
Acute infections	Management of cardiovascular disease, diabetes, asthma & COPD
Musculoskeletal injury	Cervical screening
Depression	Immunisation
	Smoking cessation programmes
	Contraceptive advice
	Obstetric care
	Palliative care
	Management of drug and alcohol misuse

Primary care is backed by sufficient local resources and technology

Whether they are partnerships or part of national healthcare companies, GP practices are contracted to provide first contact care for their patients in return for a fixed fee per patient. They can increase their income by attaining certain targets for the management of specific medical conditions, eg. the management of hypertension and diabetes. They can also bid to provide certain add-on services (so called enhanced services) such as monitoring patients on disease modifying drugs or warfarin. Out of their income practices have to employ their staff and maintain and equip their premises.

GPs led the way in the use of computer records. Initially the impetus to use computers came from the huge workload of issuing repeat prescriptions to patients on long-term medication. On the back of this prescribing, GP surgeries developed computerised disease registers. Now most practices are paperless or paper-light; GPs hold all patients' records, including letters, results and medical notes on computer systems. These records enable GPs to conduct audits and monitor their performance at a detailed level. For instance, at almost the flick of a switch, GPs can establish how many of their patients with asthma have had their smoking status and inhaler technique checked in the last year. These computer systems can be interrogated nationally to establish the prevalence of many diseases. This information is used to reward GPs financially.

Supported by adequate and appropriate secondary care

GPs are given a lot of freedom to prescribe and have the power to refer to almost any hospital or clinic in the UK using the national electronic booking system, called Choose and Book. GPs have free access to most laboratory investigations; they also have the ability to request a wide variety of more costly investigations such as CT scans, echocardiograms and endoscopies, that years ago would only have been available to consultants. This means GPs have the ability to establish or exclude important diagnoses and take on the role of general physicians. All GPs also have the right to admit any of their patients to their local district hospital as an emergency.

So, in the UK, Primary Care is a highly developed specialty. Finland, Denmark and the Netherlands also have a highly developed system of Primary Care and this makes their healthcare systems cost-effective. In a seminal paper published in the Lancet in 1994 Professor Barbara Starfield produced powerful evidence demonstrating that countries which place a strong emphasis on Primary Care achieve better health outcomes than countries which put less emphasis on Primary Care. She showed that the same countries which have highly developed systems of Primary Care also spend the least per capita on health care.

Starfield B. Is primary care essential? Lancet 1994; 334: 1129-33

4. Consultation skills

The Complete Consultation

PLEASE BRING YOUR COPY OF THE BNF TO EFFECTIVE CONSULTATION SEMINARS

Background
As part of the CAPS (Consultation and Procedural Skills) vertical theme you have been developing your abilities to receive a clinical history including the elements of HPC, PMH, SH, FH etc. You have learned key questions needed for the full elicitation of the HPC in various presentations (for instance, asking about haemoptysis in a case of cough). These are aspects of the *content* of the medical history. You have also learned things about the *process* of consulting such as how to gain rapport, break bad news, and conduct a motivational interview.
In COMP2 we want to extend your skills to the conduct of *complete* consultations. In your COMP2 Primary Care OSCEs you will be asked to conduct complete consultations and we expect this opportunity will also arise when you are on your GP attachments. The conduct of a complete consultation involves a lot more than receiving the history and internally formulating a differential diagnosis for the presenting complaint. You need to forge a plan of management in tandem with the patient and perform a number of housekeeping tasks. And forging such a plan requires, usually, both biomedical and patient-centred understandings of the problem.
In this session we provided a practical framework for the conduct of the complete consultation with a focus both on both process and content. In doing so we will introduce you to some established consultational models - in particular the Calgary-Cambridge guide. No model is “true” but together they provide an extremely useful map of the consultation territory. Following the lecture session you will have a chance to apply these ideas in small groups with the help of a facilitator and a simulated patient.

Learning outcomes
1. Understanding the structure of the complete medical consultation
2. Distinguishing content and process in the complete consultation
3. Developing awareness of the Calgary Cambridge consultation model
4. Becoming aware of the wide range of management options open to the GP
5. Developing the ability to negotiate management plans in four distinct clinical scenarios
6. Learning how to learn from observing consultations in practice

The Complete Consultation

I. **Initiating the Session**

The session starts as the patient walks into your consulting room, right? No, wrong! Before you see the patient, be sure to look at their clinical record. For instance the patient may be returning for an important set of results and it won’t inspire confidence if you haven’t noticed. Recent clinic letters can be helpful as can a quick scan of current medication.
There is also the subtle matter of preparing yourself inwardly for the encounter. What states of mind might favour a good outcome ahead? Alertness, curiosity, focus, compassion are all useful to bring along. Doctors develop rituals to help them get into good frames of mind (or recover from bad ones) such as tidying their desk, having a drink of water, adjusting their posture or breathing deeply.
Research shows that we make up our minds about each other very quickly so first impressions count. Try go get the name right or ask “what do you like to be called?” if not sure. Introduce yourself. You are building a relationship throughout the consultation founded on this initial rapport. This includes looking the person in the eye, showing interest, probably (though not necessarily)

smiling and adopting an open body posture. Pay attention to chair position, lighting and room temperature.
Then comes the crucial task of establishing the primary reason for the consultation. Look out for what phrases your GP uses to open the batting. Some favourites include: “How are things?”, “How are you doing?”, “What’s the problem?” A friendly silence may be best of all – people usually jump in. Research shows that on average a family physician interrupts the patient’s initial statement after 17 seconds. Observe this time interval with your GP.
The primary reason may not initially be clear or there may be multiple problems. An agenda may need to be negotiated. Look out for how your GP manages the dreaded “list”. There may be issues that the GP wishes to bring to agenda that have not been brought by the patient including things to do with the management of chronic disease (e.g. blood pressure, medication review) or how the person is accessing the service. Note that serious issues may not be brought out at the start of the consultation – the so-called hidden agenda.

II. Gathering Information

The next phase is to explore the current problem(s). Here we face a significant challenge: to obtain the *both* the necessary biomedical diagnostic information *and* patient’s perspective on the problem. The best starting place is with *open* questions that help the patient to tell a story of the problem which will naturally tend to provide a chronological account. However closed, diagnostically related, questions will also need to come in. This should always include asking for “red flag” symptoms.

Examples of specific closed questions important for information gathering:

(a) When a woman requests emergency contraception:
- When did you have sex?
- When was the first day of your last period?
- Are your periods regular?
- How often do you have a period?
- How important is it to you that you do not get pregnant?

(b) When a woman presents with symptoms of a UTI:
- Do you have fever symptoms?
- Have you had any loin pain?
- Have you seen any blood in your urine?
- Do you have any vaginal discharge or itching?
- Have you had any new sexual partners in the past six months?
- When was your last period? Could you be pregnant?

What about the patient perspective? Much of this will unfold by giving the person space to talk. You will normally want to understand how the problem is impacting on the person’s intimate relationships, family life, schooling, work etc. At some point you may want to ask “how does it feel” or “how did you feel about that?” This may open up important areas (not limited to a diagnosis of depression). A consistently useful acronym in this domain is **ICE – ideas, concerns and expectations**. What does the patient think is going on (ideas)? What are their worries about what might happen (concerns)? What do they think the doctor is going to do to help (expectations)? This information will be essential when it comes to forging your management plan.
Depending on the context you may need to explore beyond the presenting complaint. There are the traditional history taking domains such as PMH, DH, FH, SH, ROS. In general practice, for obvious reasons, exploration in these areas has to be focused. Also much information is already lodged on the computer or in the memory of the GP. Even in 10 minutes it can be possible to find out a bit about the person – their work, their hobbies, their aspirations. This helps you understand the resources the person can draw on.

These notes have dealt so far mainly on content. But what is the *process* by which we obtain rich and focused information? These process skills are indistinguishable from general counselling skills and are very useful in practice even if doing them in a role-play situation seems artificial:

Counselling Skills

These skills all assist patients to feel listened to and therefore to share more useful information:

Helpful noises	Known in linguistics as "phatics" these are words that have no meaning other than to convey listening e.g. "uh-huh, em, yeah, right"
Open questions	"Tell me more", "What else about that?", "What was that like?". It is surprisingly difficult to avoid recourse to closed questioning – persist.
Repetition	Patient: "My head feels like it is going to explode." Doctor: "Going to explode."
Reflection	Patient: "I am going to bloody kill that guy when I get him" Doctor: "You are obviously feeling very angry about this situation"
Silence	People have different thresholds but if you can live with silences you will allow people to contact deeper feelings
Summarizing	This is good as it a) provides you with a chance to check out that you have understood the problem b) lets the patient see that you have been listening c) may give clarity to the patient
Noting cues	Rather than say outright what their problem is, the patient may consciously or subconsciously give you cues. Obvious cues should be pursued.

III. **Physical Examination**

In primary care examination is almost always system specific. Though there is a discrete time in the consultation for examination you are observing from the moment of first contact.

IV. **Considering the Options**

Once you receive most of the history you may have an idea of what is going on and what needs to happen next. This is a great moment to pause and have a think about the options – including in the OSCE setting. The options open to the GP are extensive. The value of a GP to a community lies in how well he or she is in touch with local services.

Options for the GP:

Listening	Not average listening but active listening.
Reassuring	This is often all is needed. Better with ICE.
Explaining	Actively talking through a diagnosis, test, treatment
Information giving	Verbally. Pre-printed. On-line and then printed.
Motivating	Helping someone to change their behaviour/lifestyle.

Investigating	Near patient testing, blood tests, x-rays, special tests
Prescribing	OTC, FP10, Private prescriptions
Doing a procedure	Injection, minor operation
Referring	Within PHCT: GP colleague; PN; DN; HV; counsellor Out of PHCT: specialists, PAMs, CAM, voluntary sector

V. **Explanation and Planning**

When begin to share your understanding of the problem and what might happen next there is an art in adapting your language to the educational background and ICE (see above) of the patient. It is also important to not to give too much information – particularly if the consultation has high emotional content people will not remember much. Here are tips for the art of explain and planning:

Checking	Check what the person knows already about the subject (they may know more than you). As you unfold your explanation, check their understanding. "Are you with me so far?" "So if you had to explain this to your husband/wife how would you describe what I've told you?"
Chunking	Say what you have to say in manageable chunks rather than all at once.
Clarifying	Use simple language. Avoid jargon. Use diagrams and visual aids. This can be helpful, for instance, when communicating risk.
Customising	Alter your approach depending on what you have already understood to be the patient's ideas, concerns and expectation. Draw on their metaphors.
Sharing	Depending on the context, present options to the patient and enlist their help in discerning what might be best for them (note some patients will not want this responsibility "it's up to you doctor").

VI. **Closing the Session and Housekeeping**

Hopefully you have now forged and agreed a plan for what will happen next. Before the consultation can be called complete there a number of important final stages.

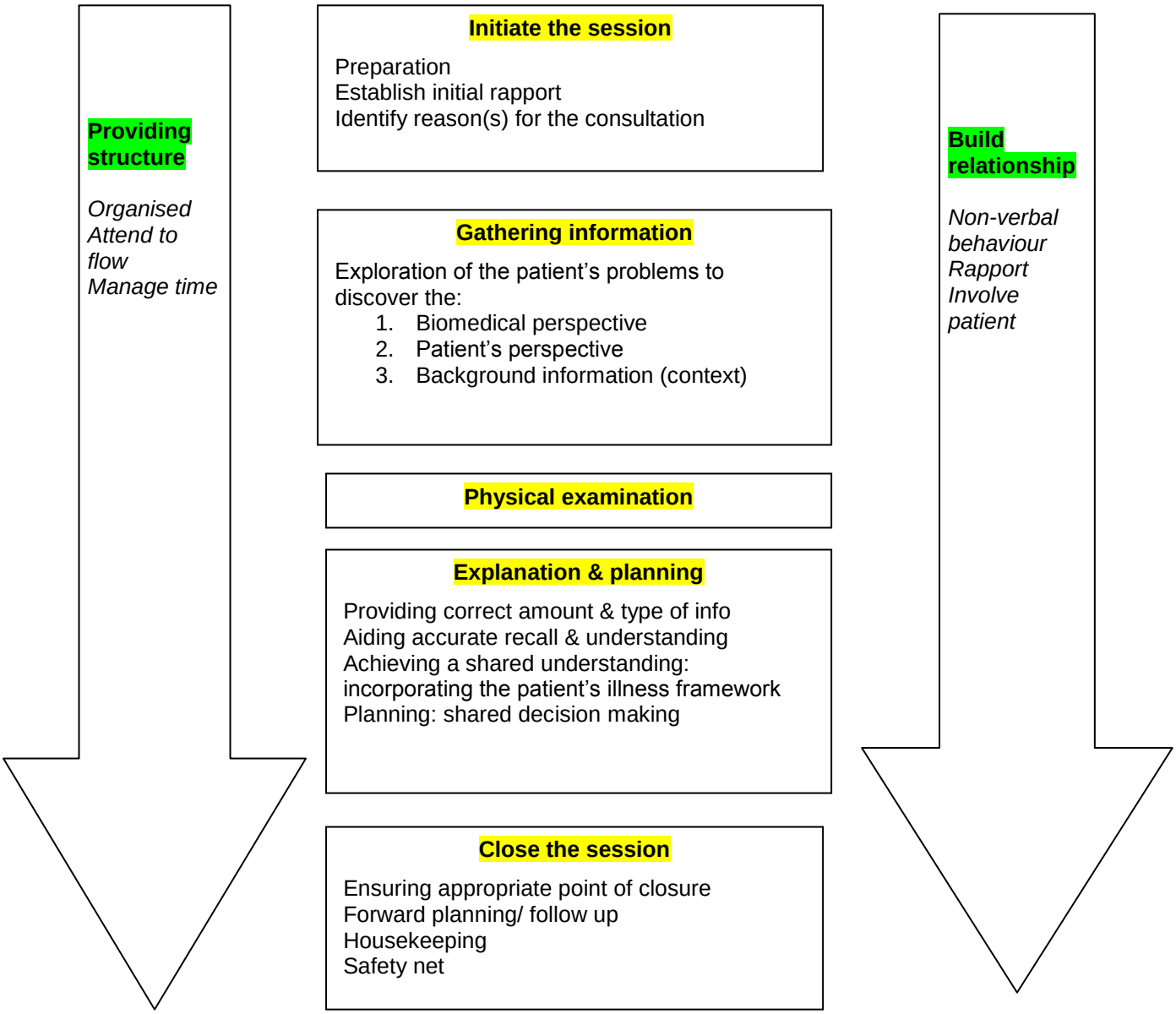
Summarising	Both the problem and the plan. See above for advantages of the summary. The summary is also a cue for bring the meeting to a close.
Question time	Explicitly ask if the person has any questions
Follow-up	Arrange (or consciously don't arrange) follow-up. If you are referring someone to another service try and give an indication of waiting times.
Safety-netting	People like to know what to do if things get worse/go wrong between now and the time of the next planned encounter, it is important to consider timescale when safety netting.
Note-making	Accurate paper/computer notes are essential to provide continuity of care and for medico-legal reasons. QoF data may need entering.

Learning points Consultations often throw-up tasks to be done and DENs (doctors' educational needs) to pursue. These should be logged.

Self care Have some water. Stretch. Breathe for a moment. Then call the next person.....

Calgary-Cambridge Guide

There are many models of the consultation. The Calgary-Cambridge Guide (CCG) is probably the most useful and is widely used. The one you can see below is slightly modified from the official CCG to include "Considering the Options" and "Housekeeping". Down each side of the CCG diagram are long arrows with the text "Providing Structure" and "Building the Relationship". In our assessment of student OSCE performance, students often come adrift by not through lack of knowledge but through lack of *structure*. They will for instance offer a treatment option *before* receiving a full history or conducting an examination. A logical (though not inflexible) structure helps you think and gives confidence to the patient. You are encouraged to make the organisation of the consultation process *overt* (e.g. by saying "I would like to examine you now. Afterwards, when you are getting dressed again I will write up a few notes and then let's talk about what might be going on"). Part of being structured is managing time – in particular not running out of time (OSCEs) or wildly over time (GP). Whilst we are gathering and planning we need to pay on-going attention to the therapeutic relationship. Rapport leads to trust and trust leads to the sharing of important concerns and the forging of a strong onward plan.



Though we have focused on the CCG there are other models that enrich our appreciation. Stott and Davis (1979) wrote a seminal paper entitled “The exceptional potential in each primary care consultation”. In it they suggest four areas for systematic exploration: a) management of the presenting problem (as above) b) modification of help-seeking behaviours (perhaps reflecting on whether an appointment was needed at all) c) management of continuing problems (sometimes delegated now to practice nurses) and d) opportunistic health promotion (often prompted by the QoF’s demands e.g. for data on smoking). This model veers away from the patient-centred, but reminds us that there are legitimate aspects of doctoring that are not responses to what the patient brings – health promotion being an obvious example.

Small Group Session—you are expected to bring your BNF and this study guide please
The four scenarios are all common primary care situations: a) Domestic violence b) Women’s Health c) Migraine and d) Prostate problems. We have asked you to read over the essential medical information in advance of this session. You have to conduct a complete consultation including the formulation a coherent management plan. This is the same task as you will be presented with in the COMP2 OSCE exam and also on your GP attachments.
To get the most from this session you may like to read over the notes on the presentations in the PHC Handbook. It can be helpful to agree some ground rules. Everyone can/must learn from each role-play – not just the one in which they are playing the doctor. A key to success is to keep actively engaged. The CCG can be very helpful in this respect. Because there is so much happening it is good to divide up the task of observation. One reasonably even division is into four groups to observe:

I. Initiating and Closing the Session
The greeting. Identifying the reasons for the consultation. Agenda setting. Time to first interrupt. Summarising. Questions. Follow-up. Safety-netting.

II. Gathering Information
Questions specific to the presentations. ICE. Wider context: PMH, DH, FH, ROS (focused) intimate partner, family, work, hobbies.

III. Explaining and Planning.
Management specific to the presentations. Checking, Chunking, Clarifying, Customising. Sharing

IV. Providing Structure and Building Relationship
Is the organisation overt? Time management. Phatics. Open questions. Repetition. Reflection. Silences. Summarising. Noting cues.
If one or two group members are allocated to each of these categories, at the end of the consultation, when you have heard from the actor and perhaps the student in the “hot seat” the “observation squad” can report back, or one or two observers can be allocated for each consultation. Observers must acknowledge what was desirably present and also question what else might have contributed to the consultation.
It isn’t easy to get it right. There are a lot of different components! On attachment you can use CCG to keep you alert as you sit in on consultations. Make notes in your log. Look for examples of good practice and if a consultation doesn’t go well try and figure out why.

Giving patients bad news in the GP consultation

Bad news is “any information which adversely and seriously affects an individual's view of his or her future” (*Buckman R. Breaking Bad News: A Guide for Health Care Professionals. Baltimore: Johns Hopkins University Press, 1992:15*) We tend to see “bad news” as a cancer or terminal diagnosis, however GP’s frequently have to give unfavourable news to their patients, and the meaning patients give the news depends on their experiences, understanding and perspective. Breaking bad news is a complex communication task; not only is it hard to tell patients things that you think they won’t want to hear but the GP also has to respond to patients' emotional reactions at the same time as involving the patient in decision-making, and manage patient expectations. They also have to find a balance between being honest and giving hope; especially when the situation is bleak.
Many models exist and have been described to assist this challenging task. The following is a précis of the principles from Silverman et al:

Preparation	Find a comfortable, familiar environment Invite a friend or relative if possible Allow enough time Be adequately prepared, know the facts and patient’s background
Getting started	Establish and summarise what the patient knows, and what has happened since last seen Try to assess how much the patient wants to know Try to gauge how the patient is feeling/what s/he is thinking
Sharing the information	Start slowly, give information in ‘small packages’ Give the patient plenty of time between ‘packages’ to understand what you are saying Give a warning. e.g. ‘Well, I have some bad news’ Reassess the patient’s understanding and feelings at each stage before progressing, allow the patient to ask questions Be prepared for a range of emotions e.g. denial, anger Respond to the patient’s feelings with empathy and concern Do not be afraid to show your own feelings
Planning and support	Identify the patient’s main concerns e.g. ‘How do I tell my family? Will I feel pain?’ Discuss potential solutions, emphasis positive areas to maintain realistic hope Ally yourself with the patient e.g. ‘We can work together on this’
Follow up and closing	Summarise and check the patient’s understanding Offer continuing support, arrange a specific time to meet again Do not rush the patient into treatment Identify other support systems e.g. District/McMillan nurses Offer to see/tell family/others Offer written information

Scenarios for Role Play (Effective Consultation Skills Workshop)

Scenario 1: Domestic Violence

You are on call and Maria White aged 34 has booked an urgent appointment. You note from her medical records that she joined your list 14 months previously and has one child now 9 months. She has not consulted since her last pill check three months ago.

The focus of your task in this station is to use the history to help forge a management plan in tandem with the patient.

Please conduct a full consultation with Mrs White.

References

http://www.womensaid.org.uk/ (accessed 29/7/13) National charity supporting a network of domestic and sexual abuse services and national helpline number. Provides information for patients.

Scenario 2: Women's health in primary care

Your next patient Fiona Taylor, age 44, has requested an urgent appointment. You also note from the records that her last smear was 5 years ago.

2nd Scenario.

Fiona Taylor books for a second consultation.

References

http://www.patient.co.uk/health/Cystitis-in-Women.htm (accessed 29/7/13) Excellent information leaflet for patients

http://www.cks.nhs.uk/urinary_tract_infection_lower_women (accessed 29/7/13) This offers up to date guidance on the management of urinary tract infections in women.

http://cks.nice.org.uk/chlamydia-uncomplicated-genital#-223712 (accessed 29/7/13). This offers up to date guidance on the management of uncomplicated chlamydial infection in women

http://www.cks.nhs.uk/contraception_emergency#-252286 (accessed 29/7/13) This offers doctors a clear protocol for dealing with requests for emergency contraception.

http://www.fpa.org.uk/helpandadvice/contraception/emergencycontraception (accessed 29/7/13) Excellent source for patients and gives good summaries for students to use.

Scenario 3: Headache

Your next patient is Mr/Ms Jo Galloway, age 48. He/she comes to consult you about his/her migraine. You know that he/she has 2 children. If this is Ms Galloway please assume that she is also on the mini pill (a progesterone-only contraceptive pill called Noriday).

References

http://www.patient.co.uk/showdoc/40000731 (accessed 29/7/13). This gives a good overview of migraine and has a link to management summaries.

Say, RE & Thomson, R. The importance of patient preferences in treatment decisions – challenges for doctors BMJ 2003; 327: 542-545.

Scenario 4: Prostate screening

Your next patient is Mr Michael Beech, age 59. He has a history of hypertension, which is controlled on Ramipril (an ace inhibitor). During his last nurse led review 2 weeks ago Mr Beech's blood pressure was 132/78 and he had some blood tests performed which show the following:
Urea and electrolytes, and calcium normal range, fasting glucose 4.8 mmol/L, fasting cholesterol 6.1 mmol/L and PSA 10.2 ng/mL (Age specific reference ranges 50-59 >=3.0ng/mL, 60-69>=4.0ng/mL)

References:

http://www.nice.org.uk/cg58 (accessed 29/7/13)

http://www.patient.co.uk/health/prostate-specific-antigen-psa-test (accessed 29/7/13)

http://www.healthtalkonline.org/Condition.aspx?Group=Cancer&Condition=Prostate_Cancer (accessed 29/7/13)

http://qrisk.org (accessed 29/7/13)

This session can raise difficult or unresolved issues for some students. While it might be appropriate to discuss this one-to-one with your tutor at the end of the session, it is important that students and tutors are aware of other sources of support. Details of University of Bristol support services can be found at:
http://www.bris.ac.uk/medical-school/staffstudents/support/

In addition, students can also self-refer to their GP or the following services:
1. Student Counselling Service: 3rd Floor, Hampton House, St Michael's Hill, Cotham, Bristol BS6 6AU, UK Telephone: (0117) 954 6655.
2. CRUSE (bereavement counselling service): 9a St James Barton Bristol BS1 3CT. Tel: 0117 926 4045.
3. OFF THE RECORD 2 Horfield Road, St Michael's Hill, Bristol, BS2 8EA. A free and confidential counselling, crisis support and advice and information service for young people aged 25 and under. Available Monday to Thursday. Call 0808 808 9120.

Promoting health-related behaviour change

Aim

How to help, not hinder, health-related behaviour change

Objectives

- Gain knowledge, improve skills and promote attitudes that help doctors have positive impact on health-related behaviour change

Background

"Health threatening behaviours are the commonest cause of premature illness and death in the developed world"
Rollnick et al[1], BMJ 2005;331;961-963

In addition to its central role in the prevention of cancer and cardiovascular disease, patient behaviour is also a key variable influencing the outcome of many medical conditions. Exercise and dietary change can lead to clinical improvement in patients with diabetes, depression and arthritis, while tackling smoking may be the single most important intervention in patients with respiratory conditions like chronic obstructive airways disease or asthma. Yet our health-promoting advice doesn't always fall on willing ears – and when it is resisted, consultations addressing health-related behaviour can be frustrating for both doctors and patients.
"It is not difficult to distinguish discussions that go well from those that go badly. When the discussion goes well, the patient is actively engaged in talking about the why and the how of change and seems to accept responsibility for change. When the discussion goes badly, the patient is passive, overtly resistant, or gives the impression of superficially agreeing with the practitioner."
Rollnick et al[1], BMJ 2005;331;961-963

Suggestions for successful behaviour change consultations

It used to be thought that motivation was something some patients had, others didn't and there wasn't much we could do to change this. However, research[2] suggests that motivation fluctuates: some types of conversation can draw it out, whilst other, more confrontational, exchanges can increase the expression of resistance. The approach of Motivational Interviewing develops this insight into a set of skills and strategies, and many of these are suitable for use in medical consultations. Drawing on Motivational Interviewing principles, here are seven suggestions for making behaviour change consultations more satisfying and effective. These are:

1) Recognise our ability to influence resistance
2) Aim for progress rather than perfection
3) View resistance as a signal
4) Use empathy as a tool
5) Support patients to make their own arguments for change
6) Use teachable moments
7) Explore a menu of options and ask them to choose

1) Recognise our ability to influence resistance
Can you remember times when someone pressured you to do something in a way that got your back up and made you more resistant? Avoiding things that can provoke resistance, like arguments, is a good starting point for conversations designed to draw out its opposites of enthusiasm and motivation.

2) Aim for progress rather than perfection

The 'stages of change' model[3] is helpful here. Rather than feeling we're failing if our patient isn't in the action stage of behaviour change, a *motivational nudge* that helps someone move in this direction is seen as a success. The diagram below presents the journey of moving through these stages as similar to passing through a revolving door. If someone isn't even thinking about change (the Pre-contemplation stage), then raising awareness in a way that starts them thinking is a positive step.

People can get stuck at any of these stages, or stuck in a loop of going round the door (see Fig.1 below). It helps to have an understanding of common blocks and also to have ways of helping people through these. Skilfulness in behaviour change consultations is based on being able to recognise where the patient is at, and aiming for a step of progress from that point.

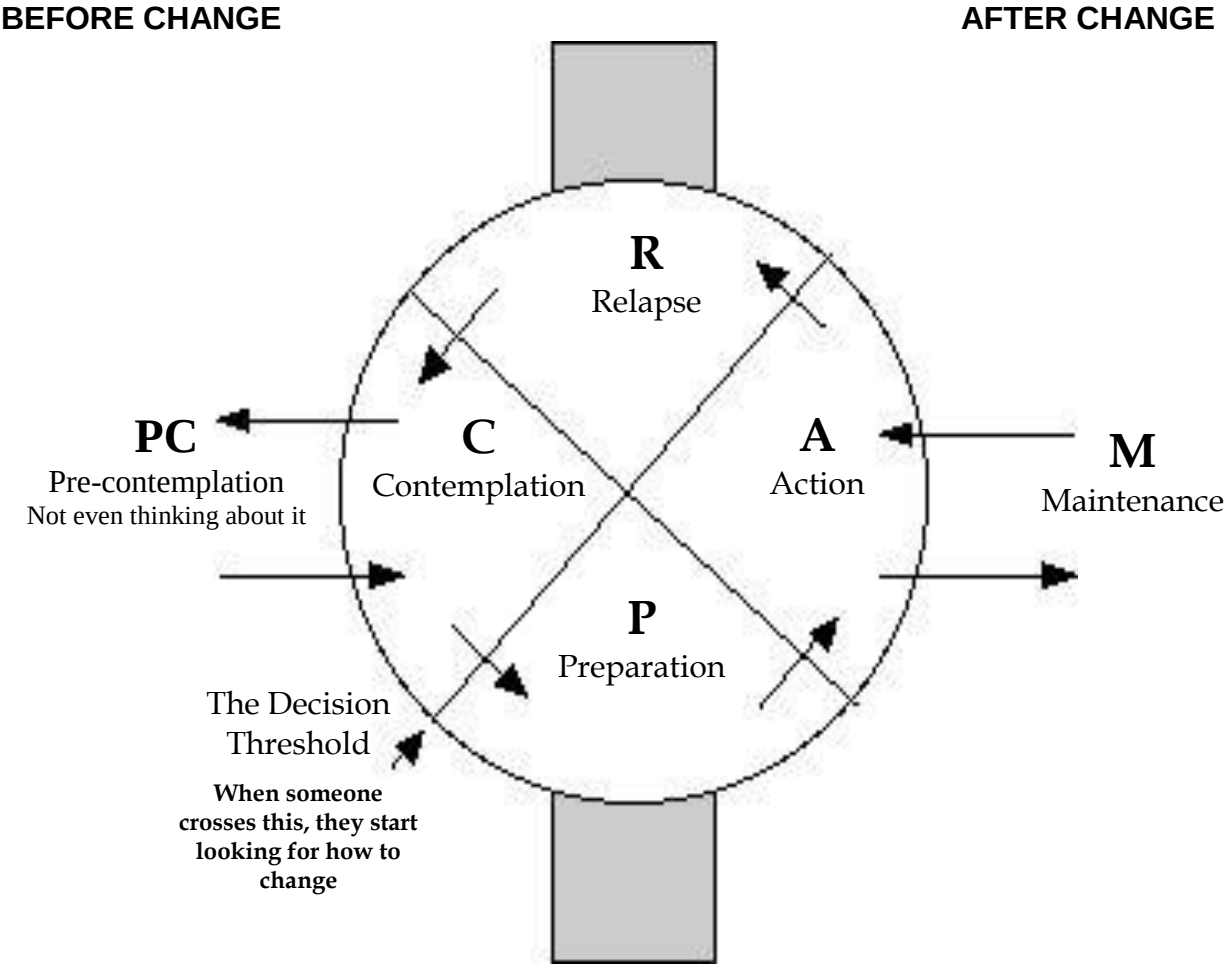


Fig 1: The stages of change model of Prochaska and Diclemente

3) View resistance as a signal

Patient resistance can be evidence that the Doctor has moved too far ahead of the patient in their change process. If a person is ambivalent about a particular change and still in the contemplation stage, for example, while the doctor has jumped ahead to talk about how the person can take action to accomplish that change, the doctor may find themselves in a "yes but" scenario. Here the doctor works hard at finding potential solutions and the patient responds with reasons why the solutions are unworkable for them. Using resistance as a signal can help you move back to where the patient is and work from there.

4) Use empathy as a tool
Research identifies empathy as a key ingredient in successful behaviour change consultations[2]. An empathic intervention is where the doctor aims to understand the patient by first giving them room to express their view, and then accurately reflecting back or summarising what they've heard. A useful prompt for this is *"Nudge, listen, summarise".* A good question can invite or nudge the patient into describing their view, making space through active listening can draw this out, and by summarising you show you've listened, can check you've understood the patient's view correctly, and also help the consultation move on.

Motivations are usually mixed and resistance can be thought of as *'counter-motivation'*, where the patient is motivated, but in the opposite direction. Making room for people to explore mixed feelings can help them become clearer about what they want. *Double-sided reflections* (reflecting back both the attractive and not so attractive aspects they've described of their behaviour) can help the patient work through ambivalence.

Useful questions to ask yourself to help you understand a patient's perspective are:

- *"What are they a customer for?"* (i.e. what's the change that's most important to them. This may not be the change you've identified as important).
- *"What's the want behind the should?"* To find their motivation, they need to associate the behaviour change with a gain that is attractive to them. What would this be?

5) Support patients to make their own arguments for change
Rather than persuading them, be interested and curious in why they might want to change. When we listen to patients describing their reasons like this, they may talk themselves into the change they want to make. Motivational Interviewing is an approach based on this, and one of its core interventions is to 'elicit self-motivating statements'.

When you hear a patient express interest (even slightly) in a change, you can use questions and reflective listening to draw this out more. Here's an example:

P: *"I'm not much good at sticking at diets, but I suppose I will have do something about my weight at some point"*
D*: "Aha, what makes you say that?"*
P*: "Well I can see it isn't going to do me any good"*
D*: "You have some concerns about what might happen if you didn't tackle this" (reflection, then silence and an interested look, which invites the patient to elaborate).*
P: *"That's right, I keep getting pain in my knees, and I know my weight doesn't help this."*

6) Use teachable moments
The more the patient links the behaviour in question with symptoms they're concerned about, the more they are likely to be motivated to change. You can ask the patient whether they see any link. The link can be strengthened at 'teachable moments', i.e. times when a patient is particularly open to considering change (e.g. they are feeling ill due to a particular behaviour or someone close is suffering due to their similar behaviours).

A useful question to draw out links to lifestyle is "Why do you think this (ie. current condition) is happening now?" If a patient doesn't seem aware of a link, a question that can open up a discussion about this is: "would you be interested in finding out more about what sort of things make a condition like this more likely to happen?"

7) Explore a menu of options and ask them to choose

It is their life and their choice; responsibility lies with the patient. But listing options can be a way of adding suggestions, and then leaving it to the patient to decide which of these to move forward with. For example, if a patient wants to stop smoking, a menu of options can be used to map out possible ways of moving ahead with this e.g. referral to a local stop smoking clinic, use of web-based support (www.gosmokefree.nhs.uk), the NHS quitline (0800 022 4 332), taking a patient information leaflet, drug treatment options like NRT or bupropion, setting a stop date and returning for a follow up appointment. They may wish to take up several of these options.

"It is useful to contrast at least two styles of consulting about behaviour change.
When practitioners use a directing style, most of the consultation is taken up
with informing patients about what the practitioner thinks they should do
and why they should do it. When practitioners use a guiding style, they step aside from persuasion
and instead encourage patients to explore their motivations and aspirations.
The guiding style is more suited to consultations about changing behaviour
because it harnesses the internal motivations of the patient.
This was the starting point of motivational interviewing
which can be viewed as a refined form of a guiding style."
Rollnick et al[1], BMJ 2005;331;961-963

References

1. Rollnick et al (2005)[1], Consultations about changing behaviour, *BMJ;331;961-963*

2. Miller WR, Benefield RG and Tonigan JS (1993). Enhancing motivation for change in problem drinking: A controlled comparison of two therapist styles. *Journal of Consulting and Clinical Psychology,* 61(3), 455-461.

3. Prochaska JO & DiClemente CC (1983). Stages and processes of self-change of smoking: toward an integrative model of change. *J Consult ClinPsychol*, 51:390–395.

5. Prescribing in Primary Care

Prescribing is a core skill practiced regularly that you will undertake from day one of your first foundation post. Medication can yield great benefits for patients but they are also associated with significant risks. To guide your learning process the Medical Schools Council Safe Prescribing Working Group has agreed a set of competencies that you are required to achieve at the beginning of your Foundation training (available to download from www.medschools.ac.uk) these include ability to establish and accurate drug history, plan appropriate therapy for common indications and provide patients with appropriate information about their medications.

You will be required to undertake a Prescribing Skills Assessment as a summative assessment of knowledge judgement and skills related to prescribing medicines based on the competencies identified in Tomorrow's Doctors 2009.
(http://www.gmc-uk.org/education/undergraduate/tomorrows_doctors_2009.asp)

During your time in primary care you will see lots of prescribing. You should take your BNF to the surgery and we would advise that when you observe consultations you use this to look up medications prescribed. Part of conducting consultations is that you learn how to manage the 16 core clinical problems including the medication commonly prescribed, and the risks (including adverse effects) and benefits of medication used and be able to advise patients on this. The table below shows the steps involved in prescribing that you can tailor to the relevant core clinical problems.

Stages to prescribing

1	**Make a diagnosis**	Core problem: depression. *" I feel useless*."
2	**Establish therapeutic goal**	Aim to return to work. See objective benefit in treatment e.g. improved PHQ9 score.
3	**Choose therapeutic approach**	Moderate depression. Shared decision making with patient to try antidepressant. Check interactions and contraindications.
4	**Choose the drug**	Citalopram.
5	**Choose dose, route & frequency**	10mg, oral, OD.
6	**Choose duration of therapy**	6 months after recovery
7	**Write prescription**	FP10. Understand who benefits from free prescriptions. Decide to put on current or repeat medication with review. In this case likely to put on current medication initially.
8	**Inform the patient**	Likely side effects, reasons to stop/seek advice. When to follow up and how to review. Give written information e.g. www.patient.co.uk
9	**Monitor drug effects**	Repeat PHQ9
10	**Review/alter prescription**	Increase dose to 20mg

6. Multimorbidity

Aims of lecture

- To increase awareness of the prevalence of multimorbidity
- To consider
  - how multimorbidity affects patients
  - how this changes how we think about medicine
  - implications for how we provide care

Background

Multimorbidity is described as the co-existence of two or more unrelated long-term conditions in one person. It is not a medical diagnosis with well-defined criteria but it represents a major challenge for patients and clinicians and is an emerging priority for healthcare systems. Over the last few decades advances in medicine and public health have led to improved outcomes of previously fatal diseases and increased life expectancy. More and more people are now living with multiple long term conditions. A recent study showed that 72% of GP consultations involved problems in multiple disease areas (*Salisbury et al, 2013*). Multimorbidity is now the norm rather than the exception.

Epidemiology

Using the 17 major chronic conditions identified by the Quality and Outcomes Framework (QOF), research based on 182 general practices in England, indicates that 16% of the whole adult population have multimorbidity. Using the wider list of Adjusted Clinical Groups (ACG) conditions, comprising 115 long-term conditions, suggests a higher prevalence of 57% (*Salisbury et al, 2011*). Multimorbidity increases with age. By 75 years of age, almost half of the population have multiple chronic conditions. However, it is not just a problem of old age. Due to the current population demographics, more people below the age of 65 years have multimorbidity than those aged over 65 years (see Figure 1).

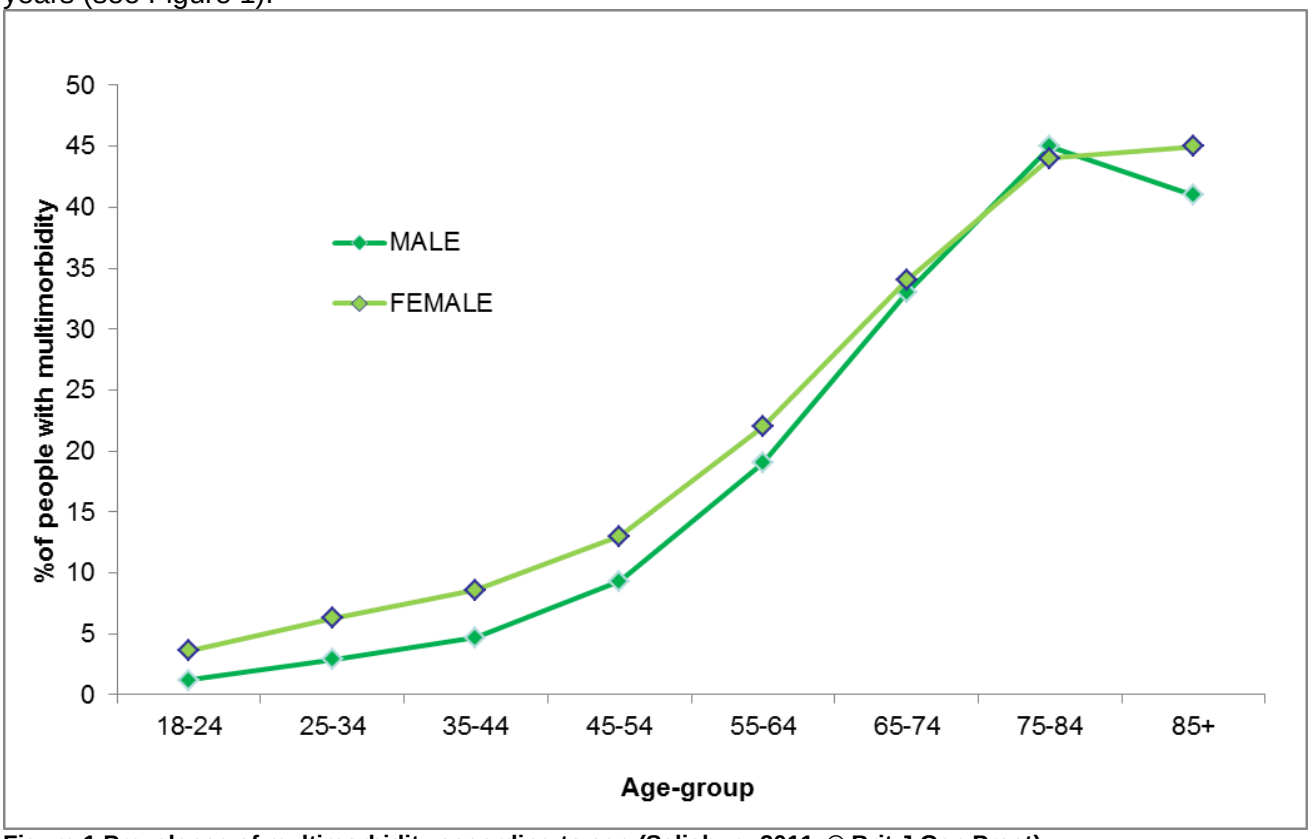


Figure 1 Prevalence of multimorbidity according to age (Salisbury 2011. © Brit J Gen Pract)

Prevalence also increases with deprivation. People in the poorest social class have a 60% higher prevalence than those in the richest social class and the same prevalence of multimorbidity occurs 10-15 years earlier in the poorest communities compared with the most affluent in society (*Barnett et al, 2012*).

Impact of multimorbidity

People with multimorbidity have complex health needs. Having multiple conditions increases patients' risk of disability, causes more physical limitations and affects individuals' ability to care for themselves. Patient-reported barriers to self-management include financial constraints, having symptoms and treatments that interfere with each other, physical limitations and 'hassles' interacting with the health care system (*Bayliss et al, 2007*). Research has shown that people with multimorbidity have a worse life expectancy, poorer quality of life, more frequent and longer hospital stays and higher rates of mental health problems such as depression (*Barnett et al, 2012*).

People with multimorbidity also have a higher consultation rate in both primary and secondary care. (*Salisbury et al 2011)* demonstrated that the 16% of the population with multimorbidity accounted for 33% of all primary care consultations.

Dealing with patients with multimorbidity frequently results in the prescription of multiple medications. Polypharmacy brings additional risks to patients with multimorbidity. Firstly there is a higher chance of adverse drug reactions. Secondly, increasing the therapeutic burden commonly leads to reduced adherence to therapies. Non-adherence is associated with negative outcomes such as increased morbidity and mortality, difficulties in professional-patient relationships and wasted expenditure by health services.

For these reasons, multimorbidity is associated with huge healthcare costs in both primary and secondary care. Expenditure on health care has been shown to rise exponentially with the number of chronic disorders an individual has.

Current health care provision

Health services have increasingly moved away from the provision of generalist care to a more specialty based service, increasing the number of healthcare professionals involved with each patient and resulting in a more disease-centred approach. This trend has occurred in order to improve the quality and consistency of care for each disease. But this fragmented and poorly co-ordinated approach does not meet the complex needs of multimorbid patients. It is inefficient and time-consuming for both patients and health professionals and results in multiple appointments, duplication of tests and conflicting information for the patient. In addition, clinical evidence and guidelines are largely created for individual diseases, and these are based on trials that mostly exclude people with multimorbidities. This makes it difficult to determine the relevance of the evidence for each individual patient and understand how to prioritise recommendations from several guidelines. Some medical interventions might be less effective in patients with multimorbidity and even if treatments are effective these patients may have less to gain because of their reduced life expentency.

Implications for practice

Multimorbidity challenges every aspect of medicine and we need to think about redesigning our health care system to cope with these demands. This will include changes in policies, guidelines, research and how medicine is taught.

There is an urgent need to move from a disease-centred to a holistic patient-centred approach. Co-ordination and continuity of care can be improved by ensuring that each patient with multimorbidity has a clearly designated usual doctor and nurse. Continuity of care has been shown to lead to better patient satisfaction, increased adherance to medication and fewer hospital admissions. Primary care is well placed to deliver this and promotion of generalism and recognition of the complexities of the role of general practitioner should be reflected by enhanced postgraduate training and improved undergraduate education.
In addition, patients with multimorbidity should be offered longer consultations so that multiple problems can be addressed. Self-management support needs to be enhanced both within consultations and by better links with community resources.

Reasearch trials need to have wide inclusion criteria with sub group analysis to help better understand the needs of patients with or without multimorbidity. This will help to develop integrated health care models with well-balanced treatment plans tailored toward the needs of the individual person.

How does this affect me as a student?

Students need to recognise that most patients have multiple problems and develop a patient-centred rather than disease-centred approach to consulting. This involves understanding the patient's context, paying more attention to quality of life issues and the possibility of depression, sharing decisions with patients and reaching agreement about an individual management plan that reflects their priorities.

References and Further Reading

Barnett *et al*. 2012. Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *The Lancet*. 380(9836):37-43.
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7. Disability

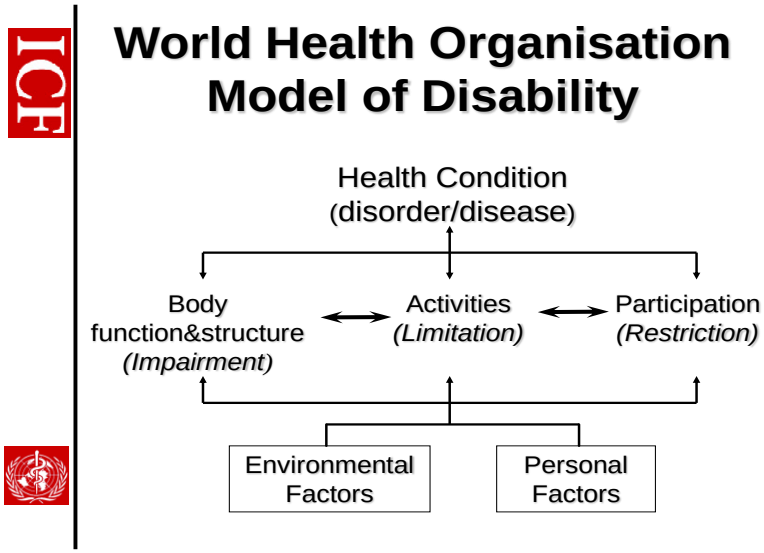
Aims of the seminar

- Understand the meaning and effects of disability for patients, carers, GPs and other members of the primary health care team
- Be aware of the importance of functional, social and psychological, as well as medical factors in the assessment of patients in primary care
- Appreciate the range of health, social and voluntary services available to people with disability in the community and how they are organised
- Develop skills for the clinical management of patients with disabilities in the community

The impact of chronic disease

In most of your training to be a doctor, you concentrate on learning about the medical model, about disorders and diseases and the medical treatments that are available to try to cure them or stop them getting worse. However in this seminar we will be concentrating on the other ways that you and other health professionals can help patients, such as by rehabilitation, psychological support, financial support and adjusting the person's environment, based on your experiences of seeing patients both in Primary Care and Medicine for Older People placements.

It is well worthwhile looking back at your handbook and notes from the second year Disability course, and reminding yourself about the **social model of disability** which sees people as being disabled not by their impairments as much as by physical, organisational, and/or attitudinal barriers in society. See if you can apply the **WHO International Classification of Functioning, Disability and Health (ICF)** to the different domains of a person who has had, for example a stroke.



Remember that there is not a linear relationship between impairment, and that there are patients with relatively mild impairments who have major problems participating in society and vice versa. Personal and environmental factors can make a big difference. Another advantage of this model is that it can apply equally to patients with mental illness and learning difficulties, as to physical disorders.

The size of the problem

The following table highlights the number of patients that an average GP practice of 10,000 patients will have. Students are often surprised that well over 10% of patients are disabled, and if hearing and visual impairment are included the figures are much higher. The prevalence increases with increasing age.

In a surgery with 10,000 patients (6 GPs) there will be 600-1100 physically disabled adults. 25% of these will be severely disabled.

- **Osteoarthritis** **1280-2900**
- **Rheum Arthritis** **100-250**
- **Ischaemic Heart Disease** **700**
- **CVA** **55**
- **Multiple Sclerosis** **8**
- **Epilepsy** **50**
- **Diabetes** **200**
- **Asthma (current)** **500**

The table shows arthritis is the commonest cause of disability overall. However in younger people (under age of 65) with severe disability, neurological conditions are of particular importance.

The role of the General Practitioner

Amongst the reasons that GPs have an important role in the care of disabled people are the following:

- GP is the first (and sometimes the only) health professional that patients see
- GP is the gatekeeper to other services. This may be because a GP referral is needed (egg. to hospital specialist), or because patients are not aware of other services available
- The GP often has longstanding contact with the patient and their family
- In GP training the emphasis on the patient as well as the disease, and is not limited to a single medical specialty.

Organisation of services in the community

The organisation of services for disabled people in the community is complex. Unlike a Medicine for Older People hospital ward, where nurses, doctors, social workers, physios. OTs and speech therapists, work together in the same building, and multidisciplinary team meetings regularly occur, community services available may vary according in different areas and are dispersed through different organisations. The usual pattern is as follows:

Based at GPs Surgery (or nearby):

- GPs, district nurses, health visitors

Based at Social Services Depts:

- Social workers, occupational therapists, home care, meals on wheels

Based at Hospitals (community outreach services):

- Physiotherapists, speech therapists, specialist nurses (e.g. Parkinson's, palliative care)

Other organisations providing care in the community include hospices (for palliative care), nursing homes (for people needing predominantly nursing care), elderly people homes (for people needing residential social care). In some areas there are community hospitals, with medical cover provided by local GPs. These are usually in rural areas, although one is being currently built in South Bristol. You should be aware of the types of patients who are suitable for care in these different locations. Other services are provided by voluntary organisations and self care groups.

This dispersal of community services has been somewhat changed in the last few years by the development of **Intermediate Care Services** – so called because the care is intermediate between primary (GP) and secondary (hospital) care. These services aim to reduce the bed occupancy in hospitals, both by preventing admissions (Rapid Response or Hospital at Home Teams) and allowing earlier discharge (Community Rehabilitation Teams). Such teams are jointly funded and staffed by Health and Social Services. They usually have nurses, social workers, care assistants and therapists working closely together. They usually have no doctors, medical input continuing to be provided by the GP. As well as treating people in their own homes, they often also have access to short term community beds in elderly peoples' homes, nursing homes and community hospitals.

Statements of Fitness to Work

Medical certification and deciding whether people are fit for work forms an important statutory role of doctors. The bulk of this work is done by General Practitioners, although specialist occupational health services exist, and the Department of Work and Pensions employ independent doctors and nurses to assess whether people are eligible for long term benefits.

1. **Self certificates**

Patients can complete their own self certificate to cover the first seven days off work due to sickness or incapacity. The form is available from their employer, or the Job Centre if they are unemployed. If a patient is seen by a doctor within seven days of the onset of the illness but is going to need longer than seven days off a medical certificate can be supplied.

2. **Medical certificates**

These are provided free of charge by the patient's doctor to the patient after seven days incapacity and are based on the ability of the patient to **do their own job**. They are usually provided by the GP but if the patient is receiving care in a hospital (e.g. a fracture clinic) they can be provide by hospital doctors.

Since April 2010 the previous Med 3 and Med 5 Certificates have been replaced by a new combined **Med 3** which has been renamed 'Statement of Fitness to Work' rather than the previous sickness certificates. The doctor can either sign that the patient is not fit for work, or that they may be fit within limitations e.g. altered hours or workplace adaptations. This is part of Department of Work and Pensions (DWP) efforts to get people back to work earlier, but the employer is not obliged to follow the recommendation.

The doctor does not personally have to see the patient, e.g. it can be based on a telephone consultation or correspondence from another doctor or healthcare professional. They can be backdated but cannot be issued for longer than three months. The Med 3 will be passed to the employer or the Benefits Agency if there is no employer, so sometimes this means the doctor does not feel able to write a precise diagnosis.

Statutory sick pay (SSP)

Paid by employers to employees who have paid sufficient National Insurance contributions who are ill and unable to work, for up to 28 weeks following receipt of medical certificates. They then get reimbursement from the government. Employers may have their own Company Sick Pay Schemes which are more generous than SSP which may keep people on full or half sick pay for variable lengths of time. The NHS is one of the best employers in this respect!

Employment and Support Allowance

Because of concern with the large number of people on long-term incapacity benefits and increasing evidence that work is generally therapeutic, the government introduced a new system in October 2008, all new claimants who are off sick for more than 13 weeks should be assessed for **Employment and Support Allowance** by the Department of Work and Pensions (DWP). This involves an independent Work Capability Assessment by a healthcare professional, and assesses their ability to do **any work**. This assessment is independent of the GP or hospital doctor.

The **Work Capability Assessment** divides people into four groups

1. Those fit to return to work
2. Those with capacity to regain work. This group are given considerable support and rehabilitation by Job Centres to try get them back to work as soon as possible
3. Those with limited capacity for work due to long-term illness or incapacity.
4. Those unable to work permanently

Sometimes people in groups 3 and 4 are allowed to do a few hours “permitted work” whilst remaining on Employment and Support Allowance, if it is assessed to be therapeutic.

Once people are on Employment and Support Allowance rather than Statutory Sick Pay, GPs and hospital doctors no longer have responsibility for providing medical certification.

Employment and Support Allowance replaced the previous system of long term **Incapacity Benefit**, on which some claimants before Jan 2011 remain. Incapacity Benefit involves less support and rehabilitation to help return people to work.

Welfare Benefits

Welfare benefits for disabled people

Just as important as providing medical support in terms of medication and other therapies, can be the improvement to the quality of life that you can give patients by informing them of the extra money through welfare benefits to which they are entitled. It is not usually a doctor’s role to do a detailed benefits assessment, but it well worthwhile having a broad feel for the main benefits, particularly Disability Living Allowance and Attendance Allowance, and where to refer patients for more detailed advice and support.

Key benefits

The two most important benefits for people with disabilities are **Attendance Allowance (AA)** and **Disability Living Allowance (DLA**), which is gradually being replaced by **Personal Independence Payment (PIP)**. These are paid in order to meet the extra cost of disability. They are paid to the person with the disability and not the carer. They are not means tested. These allowances lead to eligibility to other benefits such as housing benefit.

Attendance Allowance is for people more than 65 years old who require care and supervision, or are terminally ill* but not because of reduced mobility. There is a lower rate if day OR night care needed and a higher rate if day AND night care needed. Up to £4027 per year.

Disability Living Allowance is for people less than 65 years old who require care and supervision, and/or have reduced mobility, and/or are terminally ill *. Lower and higher rates apply in the same way as with attendance allowance. Up to £6838 per year.

Since April 2013 a new benefit, **Personal Independence Payment** is replacing Disability Living Allowance (DLA) for disabled people aged 16 to 64, initially only for new claimants. This involves more frequent reassessments, and more consideration on the individual's ability to complete a number of key everyday activities, rather than certain conditions. It should also take more account of fluctuating conditions. Certain conditions that automatically entitled people to DLA (e.g. blindness) will not automatically entitle people to PIP. Up to £6998 per year.

* Defined as someone who is likely to die within six months – there is a form DS1500 for the GP or other doctor to complete for this "special" case.

Other benefits available for disabled people

If someone is in full time work, but low pay, they may be entitled to **Disabled Persons Tax Credit.** Disabled people may also be eligible to financial help with their extra working costs for transport or equipment through the **Access to Work** scheme**.** The carer of a disabled person may be eligible to **Carers Allowance** if they provide 35 or more hours care per week and the person they care for is in receipt of AA, DLA or PIP**. Direct Payments** from local councils provides money for people who are severely disabled and need substantial care and wish to organise it themselves rather than have it provided by Social Services. For younger people aged 16-65 extra money may be available through the government's **Independent Living Fund**. Doctors are sometimes asked to confirm disability on the application form for the **Blue Badge Scheme** that gives parking concessions to a disabled person or their driver. If a person is claiming the higher mobility rate of the DLA they will be eligible to the **Motability Scheme** that provides leased or hire-purchase cars or wheelchairs for disabled people.

Other benefits that anyone, including disabled people, can apply for

Anyone with a low income not expected to work, including pensioners living on a state pension alone, may be eligible to claim **Income Support** and/or **Housing Benefit** and **Council Tax Benefit**, the rates of which will be higher in people receiving AA or DLA. If someone is in full time work, but low pay, they may be entitled to **Working Tax Credit**. Many people who have to retire early due to ill health get additional help through their private work pension scheme

Large numbers of disabled people do not claim the benefits to which they are entitled. Why?

This may be because of a lack of knowledge, difficulty applying (some forms are 40 pages long!), or to the stigma associated with dependency (doctors positive attitudes can help overcome this). Expert welfare benefits advice is available at specific **Welfare Benefits Advice Services** (some personnel from these centres do outreach work in GP surgeries and hospitals). People can also get advice from their local **Citizens' Advice Bureau** or phoning the **Benefits Enquiry Line**.

Communicating with People who have a Disability

Consulting with people who have a hearing impairment

- Find a suitable place to talk, with good lighting and away from noise and distractions.
- Establish how the patient wishes to communicate (e.g. using hearing aid, lip reading, interpreter).
- If using a hearing aid, check it is functioning adequately, or whether they would benefit from using an induction loop.
- Even if someone is wearing a hearing aid it doesn't mean they can hear you. Ask if they need to lip-read.
- If you are using communication support, talk directly to the person you are communicating with, not the interpreter.
- Have face-to-face or eye-to-eye contact with the person you are talking to.
- Remember not to turn your face away from a deaf person, particularly when using a computer.
- Speak clearly but not too slowly, and don't exaggerate your lip movements.
- Don't shout. It's uncomfortable for a hearing aid user and it looks aggressive.
- If someone doesn't understand what you've said, try saying it in a different way instead of repetition.
- Keep pen and paper handy in case needed and supplement the consultation with written material/patient information sheets if possible.
- Check that the person you're talking to can follow you. Be patient.
- Use plain language – avoid jargon.

Consulting with people who have a visual impairment

- Introduce yourself.
- Make sure you're talking to the right person.
- Make sure they know you're talking to them.
- Explain in detail what is going to happen next.
- Point out any potential hazards and ask if they would like help "Do you need any help?"

How to guide people with sight problems

- Ask them if they want to hold your arm/shoulder.
- If they have a guide dog approach them from side opposite the dog.
- Doorways: say which way door opens; make sure they are on hinge side and open the door with your guiding arm.
- Seating: never back them into a seat; guide them to a seat, then describe it; ask them to let go of your guiding arm and place their hand on back of the seat.
- Don't leave the room without telling them you are going.

Consulting with people who have speech or language impairments

- Encourage patients to use their own appropriate communication technique in their own time e.g. speech, writing, pointing etc.
- Ask patients to repeat what they have said, if necessary, and never make assumptions from what is unheard.
- Speak naturally and clearly and respect the patient's intelligence.
- Emphasise key words by inflection if the patient has language difficulties.
- Do not complete the words or sentences patients are having difficulty pronouncing.
- Only ask one question at a time – keep these brief and to the point.
- Do not attempt to hurry your patient – the added stress will exacerbate any speech problem. Instead, consider splitting problems over more appointments.
- If necessary, repeat key information as much as possible.

Consulting with people who have learning disabilities

- Focus on abilities, not disabilities, and try to recognise the person's strengths.
- If the person attends with a carer, address the person with learning disabilities first, if you then also need to speak to their carer or relative then ask them about this.
- You may need to allow extra time for the appointment, for example consider allowing a double appointment in general practice.
- Begin with a few simple questions to assess the person's verbal abilities, though bear in mind that some people with mild learning disabilities have good expressive skills but their receptive language skills may not be as good.

History taking

- Patients might have little concept of time and thus be unable to describe the duration of symptoms. Perhaps link symptoms to 'index events', e.g. did you have this problem at Christmas/your birthday?
- Patients with learning disabilities may answer 'yes' to closed questions even if this is not the actual answer, but some may find very open ended questions hard. Try open questions first, and then use closed question with alternatives if they are having trouble with open questions.

Explanation and planning

- When providing an explanation, avoid jargon, and use concrete examples. You might like to use repetition. It can help to use a paper and pen and draw pictures when describing or discussing events e.g. when to take medication, or some of the accessible leaflets and communication aids which are available. It can also be helpful to allow the patient to handle equipment, or to explain by pointing to the relevant body part.
- You may find you need to rephrase things in a different way to make it clearer.
- When asked 'do you understand?' a person with learning difficulties often answers in the affirmative. It is therefore better to ask them to repeat back, in their own words, what has been discussed.
- Involve the person with learning disabilities in the decision making and planning and be aware of the law around capacity and consent.

- Use your local Community Learning Disability Team as a teaching resource.

References

The first two references are from books that are essential reading for the COMP2 Course.

Oxford Handbook of General Practice. Simon C, Everitt H, Kendrick T. 3rd Ed. Oxford: Oxford University Press; 2009. Contains a lot of practical information including Benefits and Aids, Certifying Fitness to Work, Fitness to Drive.

A Textbook of General Practice. Stephenson A. 3rd Ed. London: Hodder Arnold; 2011. See Chapter 9: Chronic Illness and its Management in General Practice, and Chapter 10: Treating People at Home.

Government website on Disability giving further information on all aspects of care for disabled people. http://www.direct.gov.uk/DisabledPeople/fs/en

Statement of Fitness to Work. A guide for GPs and other doctors.
http://www.dwp.gov.uk/docs/fitnote-gp-guide.pdf

The Patient's Journey. In the last few years there has been a very illuminating BMJ series of articles written by patients with chronic illnesses and disabilities. http://bmj.bmjjournals.com and search using keywords 'patient's journey'.

University of Bristol's Disability Policies and support for students with disabilities
http://www.bristol.ac.uk/accessunit

Action for Blind People
http://www.actionforblindpeople.org.uk/donate/legacy/professionals/guiding-someone-who-is-blind-or-partially-sighted/

Royal National Institute for the Deaf
http://www.actiononhearingloss.org.uk/your-hearing/ways-of-communicating.aspx

Accessible information for patients with learning disabilities
http://www.easyhealth.org.uk

GMC website on learning disability. Includes very useful teaching video on doctors in different settings communicating with people with LDs
http://www.gmc-uk.org/learningdisabilities/

Care of the Adult with Intellectual Disability in Primary Care. Lindsay, P Morrison J. Radcliffe 2011.

8a. The Risk of Cardiovascular Disease

Cardiovascular disease includes

- Coronary Heart Disease (MI and angina)
- Cerebrovascular Disease (TIA and stroke)
- Peripheral Vascular Disease

The incidence of cardiovascular disease increases with age and is more common in men.

The British Heart Foundation estimates that in the UK there are approximately 2.7 million people living with cardiovascular disease.

1 million men have had an MI
½ million women had had an MI

There are more people than this who suffer from angina.

600,000 men had had a stroke
600,000 women have had a stroke

http://www.bhf.org.uk/heart-health/statistics/morbidity/living-with-heart-disease.aspx *(accessed 14 August 2013)*

Remember patients can have coronary artery disease & cerebrovascular disease & peripheral vascular disease.

Cardiovascular disease is the most common cause of death in UK.

As the prevalence of obesity and type 2 diabetes increase in the UK we may see an increase in the prevalence of cardiovascular disease.

The **National Service Framework (NSF) for Coronary Heart Disease** published in 2000 set 12 standards for medical care in this field. The first 4 standards are concerned with the prevention of coronary heart disease:

1. The NHS and partner agencies should develop, implement and monitor policies that reduce the prevalence of coronary risk factors in the population, and reduce inequalities in risks of developing heart disease.
2. The NHS and partner agencies should contribute to a reduction in the prevalence of smoking in the local population
3. GPs and primary care teams should identify all people with established cardiovascular disease and offer them comprehensive advice and appropriate treatment to reduce their risks
4. GPs and primary care teams should identify all people at significant risk of cardiovascular disease but who have not developed symptoms and offer them appropriate advice and treatment to reduce their risks.

What are the risk factors for cardiovascular disease?

- Smoking
- Blood pressure: both systolic & diastolic matter
- Serum Cholesterol
- Diabetes
- Age
- Sex
- Family history
- Ethnic group

The challenge for GPs is to successfully predict which patients are most at risk of developing cardiovascular disease. And, having identified those most at risk, GPs need to reduce this risk. A

patient's smoking status, blood pressure and serum cholesterol are the only modifiable risk factors so these are the things that GPs focus on.

The most established method of estimating the risk of a person developing cardiovascular disease relies on the Framingham data. These data relate to a community in North America 40 years ago and may not be applicable to the population in the UK. Peter Brindle, a GP in Bristol has studied this problem and has concluded that calculators which rely upon the Framingham data overestimate the risk of CVD in communities where the observed incidence of coronary heart disease is low (mostly affluent communities) and underestimate the risk of CVD in communities where the observed incidence of coronary heart disease is high (poorer communities). An alternative method of estimating a person's risk, derived from data collected in the UK, is gradually replacing the Framingham tables. The new risk calculator is called QRISK2. You can view the QRISK2 calculator at http://qrisk.org

At present NICE recommends that GPs should calculate people's risk of developing CVD using either the Framingham tables at the back of the BNF or using QRISK2. It states that all those whose risk is >20% over the next 10 years should take a statin and an antihypertensive drug if their BP is > 140/90mmHg. This strategy targets prevention at the people who are at highest risk of developing cardiovascular. However, these people form a minority of the population. In absolute terms more cases of cardiovascular disease occur in the majority of the population with average or low risk. This is what Geoffrey Rose calls the "prevention paradox".

In the coming years guidelines may be based on people's lifetime risk (not their 10 year risk) of developing cardiovascular disease.

Smoking

In the UK the prevalence of smoking is falling slowly and now the UK is the second best country in Europe for its non-smoking rates. But approximately 1 in 4 people in the UK still smoke. Smoking is commonest in young people.

The life expectancy of smokers is 10 years less than that of non-smokers.
People who smoke have a 1 in 2 chance of dying as a result of their smoking.

People can be persuaded to stop smoking by

- personal advice (from GP)
- national campaigns (such as banning advertising)

Nicotine replacement therapies double a smoker's chance of quitting. All nicotine therapies are now available on the NHS. They are more effective if they are prescribed alongside some sort of counselling.

For information on how to help smokers quit see the section "Helping People make Behavioural Changes" or look at Live Well section of the NHS website http://www.nhs.uk/Livewell/smoking/Pages/stopsmokingnewhome.aspx *(accessed 14 August 2013).*

Almost all GP surgeries offer Quit Smoking clinics. At these clinics patients can obtain prescriptions for medication to help them stop smoking providing they attend once a fortnight for counselling. Their compliance with cessation can be checked using a carbon monoxide meter.

Nicotine replacement therapy (NRT) is available in patches, gum and inhalators. The starting dose for a patch (which releases nicotine over the course of a day) depends on how much a person smokes. Someone who lights up a cigarette as soon as they wake up usually needs a high starting dose. There are no absolute contra-indications to NRT. Sometimes people benefit from using a combination of patches and gum.

Bupropion *(Zyban)* was invented as an antidepressant but is also effective at helping people to stop smoking. It is taken as an 8 week course and patients are advised to stop smoking on the 8th day of treatment. It is contra-indicated in those with epilepsy, bipolar affective disorders and eating disorders. It should not be taken whilst breast-feeding. The commonest side effects are a dry mouth

and sleeping problems. If taken whilst receiving counselling from a Quit Smoking counsellor, it is more effective than nicotine replacement therapy at helping people to stop smoking.

Varenicline *(Champix)* is a partial agonist of a subtype of nicotinic acetylcholine receptors. It is even more effective than bupropion but has more side effects and is prescribed less often.

Blood pressure

This is a continuous variable. It is not a disease. It is one of many risk factors for cardiovascular disease, second only to smoking in its importance as a risk factor. In an individual, BP varies during the course of day & night.

What level of blood pressure is high?

NICE defines hypertension as anything consistently over 140/90mmHg (clinic reading)

The latest NICE guidelines (http://guidance.nice.org.uk/CG127) published in August 2011 outline the new recommended pathways for diagnosing hypertension. The guidelines state that if, on a single visit to clinic, a patient has 2 consecutive blood pressure readings equal to or greater than 140/90mmHg they should have ambulatory blood pressure measurement (ABPM) or home blood pressure measurements to confirm or refute the diagnosis of hypertension.

Ambulatory blood pressure readings and home blood pressure measurements are lower than those obtained in a clinic. On average, ambulatory systolic BP readings are 10mmHg lower than those in clinic and ambulatory diastolic BP readings are 5mmHg lower. The normal ABPM for adults is less than 135/85mmHg during the day and less than 120/75mmHg at night. The lack of a nocturnal dip is a bad prognostic sign and is associated strongly with end organ damage.

Diagnosing Hypertension: Step 1: First Visit to Clinic

If BP > 140/90, take a 2nd reading.

If 2nd reading > 140/90 proceed to ABPM or home monitoring

If 2nd reading is substantially lower than 1st reading, take a 3rd reading & record the lowest of the 2nd& 3rd readings.

Diagnosing Hypertension: Step 2: Ambulatory Blood Pressure Measurement

Monitor should take 2 readings/hour & at least 14 readings over course of the day during waking hours
Take average of all these readings

Diagnosing Hypertension: Step 2 (alternative): Home Blood Pressure Measurement
On 2 occasions during the day the patient should sit down & take 2 readings, one minute apart. The patient should do this for at least 4 days, then discard the readings from the first day and calculate the average of all the other readings

If average BP > 135/85mmHg, diagnosis of hypertension is confirmed.

What investigation is necessary?

- Take history
- Examine pulses, site of apex beat, heart sounds (listen for murmurs) & listen to bases of lung fields. Check for aortic aneurysm. Test for oedema & hepatomegaly. Maybe listen for bruits. Not worthwhile looking at fundi unless BP is extremely high.
- Test urine for blood, protein & glucose
- Take fasting blood sample glucose, lipid profile & U&Es

- 12 lead ECG to look for evidence of left ventricular hypertrophy. If abnormal, request echocardiogram

How can you lower BP?

Do not start by prescribing medication. Start with lifestyle advice:

Lifestyle changes

- Stop smoking
- Increase exercise
- Reduce salt intake
- Moderate consumption of alcohol

You should reinforce this lifestyle advice periodically thereafter.

Anti-hypertensive medication

Consider stating anti-hypertensive medication immediately (before ABPM or home readings) if reading in clinic > 180/110mmHg.

Start medication if

- BP >160/100mmHg (clinic) or > 150/95 (ABPM) regardless of the patient's 10 year risk of developing CVD
- BP >140/90mmHg (clinic) or 135/85 (ABPM) & their risk of developing CVD over the next 10 years >20%. This includes all diabetics.
- BP >140/90mmHg (clinic) or 135/85 (ABPM) & there is evidence of end organ damage

The aim is reduce BP to

- < 140/90 mmHg (clinic reading) for patients under 80 years old
- < 150/90 mmHg (clinic reading) for patients over 80 years old
- Use clinic BP measurements to monitor treatment, except if you think patient suffers from "white coat hypertension".

There are several different classes of drug to choose from

A ACE Inhibitors (eg. ramipril) or Angiotensin II receptor blockers (eg. candestartan)
B Beta Blockers (eg. atenolol)
C Dihydropyridine Calcium Channel Antagonists (eg. amlodipine)
D Thiazide-like diuretics (eg. indapamide 1.5mg m/r or chlortalidone 12.5 to 25mg)

& Alpha blockers

Certain ethnic groups respond better to different drugs.

The new NICE guidelines can be summarised as follows:

Age >55, or Black of any age

Start with C (or D).
Add A if second drug is needed

Age <55

Start with A.
Offer angiotensin receptor blocker if patient doesn't tolerate ACE inhibitor
Add C or D if second drug is needed

If triple therapy is needed use A+ C +D

The combination of a beta-blocker + thiazide diuretic (B+D) should be avoided because of the increased risk of developing diabetes.

Do not combine ACE inhibitors & angiotensin II receptor blockers.

If patient is on a conventional thiazide diuretic (eg. bendroflumethiazide) & their BP is controlled, leave them on this.

Beta-blockers are fourth line therapy except:

- For those with established cardiovascular disease
- In women of child bearing potential
- Young patients who are unable to tolerate ACE inhibitors

Most patients need more than one drug to lower their blood pressure

In practice patients end up on a particular combination of drugs because

a) the other drugs haven't worked (they haven't lowered the BP)
b) the other drugs are contraindicated
c) the other drugs have caused side effects

Drug	**Contraindications**	**Side effects**
Thiazide-like diuretic (indapamide)	Gout Dyslipidaemia Urinary incontinence	Hypokalaemia Hyponatraemia Sexual dysfunction Gout Glucose intolerance
Beta blocker (atenolol)	Asthma Heart Block Peripheral vascular disease Dyslipidaemia	Fatigue Insomnia Cold peripheries Bradycardia
ACE inhibitor (ramipril)	Pregnancy Renovascular disease	Cough First dose hypotension Taste disturbance Angio-oedema
Calcium channel antagonist (amlodipine)	Myocardial infarction Heart failure	Constipation Peripheral oedema Flushing Headache

Cholesterol

Lipid lowering drugs cost the NHS more than any other category of drug but they are getting cheaper.
Approx 2 million prescriptions for statins (HMG CoA reductase inhibitors) are issued every month and each year the number of people on statins rises.

Statins are also available over the counter without a prescription.

Who should take statins?

The average serum cholesterol in the UK is over 5mmol/l. Regardless of the untreated cholesterol level a reduction in cholesterol level seems to reduce the risk of cardiovascular disease. So should we all take a statin every day? At present the NHS couldn't afford this. So GPs are encouraged to

prescribe statins only to those people whose 10 year risk of developing cardiovascular disease is greater than 20%. This includes all diabetics over the age of 40, all those over 70, and those with blood pressure consistently over 160/100mmHg. If we were to calculate the 10 year risk of developing cardiovascular disease for everyone in the UK and give statins to all those whose risk is more than 20%, then a half of all men would be taking a statin for the last 25 years of their life.

The commonest side effect of statins is gastro-intestinal upset. Statins can cause a myopathy and very rarely a rhabdomyolysis. They can also have an adverse effect on the liver. Before starting someone on a statin you should check their LFTs. You should check their CK if they complain of muscle aching. You should check their LFTs again 1-3 months after starting the statin, 6 months later, then at one year. You must stop the statin if

- CK rises above 5x the normal level or if
- ALT rises above 3x normal level

Causes of a very high serum cholesterol

- Familial Hypercholesterolaemia
- Hypothyroidism
- A diet rich in saturated fat

It is estimated that 110,000 people in the UK have familial hypercholesterolaemia but only 15% of these people have been identified and are on treatment.

When should you consider the possibility of familial hypercholesterolaemia?

- When total cholesterol is > 7.5mmmol/l
- When a first degree relative has premature coronary heart disease (under age of 50)

Secondary Prevention of Cardiovascular Disease, after an MI

The risk of further cardiovascular events can be decreased by taking 4 drugs

- Aspirin
- Statin
- Beta blocker
- ACE inhibitor

Anyone who has had an MI should take these drugs for life.

In addition patients should be encouraged to adopt the following “lifestyle” measures

- 20-30 minutes of regular exercise a day, to the point of slight breathlessness
- Mediterranean-style diet with more bread, fruit, vegetables and fish, and less meat.
- Three portions of oily fish (sardines, mackerel, tuna or salmon) a week. If this is not possible then they should be prescribed 1g of omega 3 acid ethyl ester a day
- Alcohol consumption < 21 units/week for men & <14 units /weeks for women
- Stop smoking. If they are still smoking they can halve their risk of having another MI by stopping smoking.
- Achieve & maintain a healthy weight

Anyone who has had an MI should be offered cardiac rehabilitation. This consists of a programme of exercises, education and stress management.

Anyone on an ACE inhibitor needs to have their U&E s checked at least once a year.

Patients with ischaemic heart disease also need an annual flu vaccine & should have a pneumococcal vaccine (this lasts for life).

Others things to consider when seeing someone who has had an MI

When should they return to work? No clear guidelines about this.

When is it safe to drive? The DVLA publishes very clear guidelines on this. Patients should not drive for at least 4 weeks after having an MI.

Patients who have had an MI are at risk of becoming depressed. If they are depressed it is safe to prescribe a SSRI. Sertraline is the SSRI of choice for treating depression following an MI.

Patients may not talk about their problems with sex but sexual activity is often impeded by depression, fear and the side effects of medication.

Chest pain (angina)
There is a recorded lecture available by Prof Gene Feder on chest pain within the Learning Resources for Primary Care, Lecture notes & presentations folder, on Blackboard. Viewing is strongly recommended!

8b. Breathlessness

Tutorial aim

To give an overview of the causes and assessment of breathlessness

Tutorial objectives

By the end of the tutorial students should:

- Have an awareness of the important causes of acute and chronic breathlessness especially those presenting in primary care
- Understand of the importance of history taking and questioning style to define the cause(s)
- Be able to apply this knowledge in establishing a differential diagnosis and initiating appropriate investigations

Definition

Breathlessness (or dyspnoea) is the sensation of increased work of breathing which the patient recognises as being abnormal for the level of physical exertion. This is different from the normal breathlessness that accompanies exercise, the onset of which is dependent on the individual's fitness.

Causes of acute breathlessness

The following are some causes of acute onset breathlessness. The first **6** listed are the ones most commonly seen in primary care. Although important to consider, the others are less commonly seen in primary care.

Think of the mnemonic **"10 PM"**

- **P**ulmonary constriction e.g. Asthma,
- **P**neumonia including acute aspiration
- **P**ulmonary embolus
- **P**neumothorax
- **P**ump failure e.g. LVF
- **P**sychogenic e.g. hyperventilation of panic attack / acute anxiety
- **P**eanut or other foreign body inhalation
- **P**ericardial tamponade
- **P**eak seekers - high altitude
- **P**oisons e.g. inhalations of noxious gases / chemicals
- **M**etabolic e.g. metabolic acidosis of DKA

Causes of chronic breathlessness

The following are some causes of chronic breathlessness. CCF, COPD and anaemia are the most commonly seen in primary care.

Think of the mnemonic: **"CPD MAN"**

- **C**ardiac e.g. CCF, CHD, mitral valve disease
- **P**ulmonary e.g. COPD, chronic asthma, pulmonary hypertension, pulmonary fibrosis, chronic aspiration, pulmonary infiltrates from sarcoidosis or malignancy, pneumoconiosis, multiple PEs
- **D**rugs e.g. B-blockers, amiodarone, drugs affecting the immune response, local radiotherapy, recreational drugs
- **M**usculoskeletal / habitus e.g. severe kyphoscoliosis, ankylosing spondylitis, obesity
- **A**naemia
- **N**euromuscular e.g. Motor Neurone Disease (MND), Myasthenia gravis (MG)

Acute or chronic breathlessness

Some breathlessness can be acute or chronic e.g. acute pneumonia or spontaneous pneumothorax in a patient with pre-existing chronic breathlessness from COPD

Multiple causes of breathlessness co-existing in the same patient

More than one pathology, as a cause of breathlessness, can co-exist in the same patient e.g. anaemia with CCF or COPD with CCF

History taking and questioning style

- Clarify exactly what the patient means by breathlessness.
- Use open-ended questions initially, then moving onto probing and / or closed questions to clarify and gather further information. Avoid leading questions.
- Always ask the patient's views on possible causes and what is their main concern or fear.
- Use a recognised sequence for history taking to avoid omitting important aspects i.e.

Presenting complaint and history of presenting complaint

- **Define what the patient means**: Tell me more about your breathing. Is it there all the time or does it come and go? What brings it on? Is it related to exercise or any particular time of the day or night? (ask about exercise tolerance)
- **Check if a new or recurrent problem:** When did you first notice your breathlessness? Was it sudden onset or has there been a gradual change? Has this ever happened before? If so, how long did it last? How was it treated? What were you told was the cause / diagnosis?
- **Associated features:** What else have you noticed that is new for you or not quite right? Ask specifically about pain anywhere; especially chest pain, cough, sputum and colour, fever, audible breathing/noises, ankle swelling, number of pillows or any **systemic symptoms**.
- **Check for alarm symptoms (red flags):** weight loss (sudden or gradual?), haemoptysis, night sweats or fever (how long?) if suspicious of a malignancy or TB?
- **Elicit patient ideas, concerns and expectations:** What do you think may be causing this or going on? What are you most concerned about?

Review of systems

It is important to appreciate that breathlessness can have a cause outside the respiratory system. Consider enquiring about:

- ***Cardiac symptoms*** if suspicious of LVF, CCF, CHD or mitral valve disease?
- ***Gastro-intestinal symptoms*** if suspicious of anaemia or reflux with recurrent aspiration?
- ***Musculoskeletal*** if suspicious of restricted chest wall movements or known RA (risk of pleurisy, effusions, nodules, fibrosis, obliterative bronchiolitis)?
- ***Neuromuscular*** if suspicious of respiratory muscle weakness?
- ***Systemic disease e.g. SLE*** (risk of pleurisy, interstitial pneumonia, effusions, fibrosing alveolitis or VTE)

Past medical history

Comprehensive past medical and surgical history but specifically asking about:

- Re**c**ent hospital admissions or operations (risk of chest infection or PE)?
- Recent trauma /contact sport (risk of fractured ribs or pneumothorax)?
- Past history of malignancy: many cancers can metastasise to the lungs some time after the primary event

Drug history

What medication are you taking at the moment? Have these been changed recently? Have you taken anything else in recent weeks or months? Are you taking any medication not prescribed by a doctor? Are you or have you ever taken any recreational drugs? Consider of note:

- B-blockers/ aspirin / NSAID (risk of bronchoconstriction)?
- Combined hormonal contraception/ hormone replacement (risk of VTE)?
- Cocaine (risk of pneumothorax, myocardial ischaemia or infarction)?
- Amiodarone (risk of pneumonitis or interstitial fibrosis)?
- Antidepressants/ benzodiazepines / hypnotics -could their breathlessness be related to their psychological disease?

Family history

In particular: TB, lung cancer, cystic fibrosis, asthma, atopy, CHD, clotting disorders?

Social and occupational history

- Do you smoke or have you ever smoked. If so, how many and for how long? If ex-smoker, how long ago did you give up?
- What's your occupation at the moment? How long have you been doing this for? What other work have you done over the years?

Social /occupational history	Consider risk of
Smoking documented in pack-years, current and past	COPD and lung cancer
Recreational drugs including alcohol	Myocardial ischemia, and pneumothorax ;risk of aspiration when drunk
Sexual and illicit drug practices	HIV. Pneumocystis carinii or other opportunistic infections
Periods of homelessness/lived in TB endemic area	TB
Poor housing conditions e.g. damp or overcrowding	Respiratory infections and asthma
Current and past occupations e.g. roofer, ship builder, smelter or passive smoking	Occupational lung injury e.g. pneumoconiosis, asbestosis, COPD or malignancy
Recent foreign travel	Respiratory infections or PE
Hobbies / pets	Atopic lung conditions; extrinsic allergic alveolitis in Pigeon fancier's lung
Sedentary lifestyle or periods of forced immobility	VTE
Recent weight gain	May be heart failure or a poor level of fitness as a cause of breathlessness

Differential diagnoses

Tie in various factors in the history, making particular note of the patients' age, associated features, past medical history, drug history, social and occupational history and other risk factors in order to compile a list of the most likely diagnoses. Some additional examples are included below:

Age

Older, infirm or immobile adults are at greater risk of respiratory infections, cancer or VTE. Older people are also more likely to have hypertension or CHD which also puts them at greater risk of heart failure

Associated symptoms	Consider
Fever	Infection
Night sweats	Infection, TB, lymphoma, cancer
Weight loss	TB, cancer, systemic illness
Discoloured sputum	Infection
Chest pain: Tight /constricting Relieved leaning forward Tearing mid-scapular Inspiratory	 Myocardial ischaemia Pericarditis Dissecting aneurysm PE, pleurisy, musculo-skeletal
Pedal oedema	Consider heart failure
Haemoptysis	Infection, infarction, TB, carcinoma, LVF, mitral stenosis, PE, illicit drugs
Post-operative breathlessness	Pulmonary atelectasis, bronchopneumonia, PE, LVF, pneumothorax
Noisy breathing: Stridor Barking cough Paroxysmal cough with whoop Wheeze Snoring/gurgling Bubbly	 Epiglottic /laryngeal narrowing Tracheal inflammation Pertussis Small airways narrowing Nasopharynx obstruction/ secretions LVF, bronchopneumonia

Guide to likelihood of diagnoses in primary care presentations

Disease / diagnosis	Young	Elderly	Smoker x-smoker or other risk factors	Acutely breathless	Chronically breathless
Asthma	√√	√	Smoking can trigger symptoms	√√	√ - in elderly, asthma can co-exist with COPD
Pneumonia	√ - very young	√ - very elderly	Smoking: COPD DM CVD Alcohol	√	If pre-existing COPD or CCF can cause acute on chronic breathlessness
Pulmonary Embolus	√ + FH of factor V Lieden Deficiency	√	Smoking Cancer Immobility/ debility COC pill / HRT Systemic diseases e.g. SLE	√	If pre-existing chronic lung disease, can cause acute on chronic breathlessness
Pneumo-thorax	√√ - Tall, thin, sporty men	√ - If COPD / bullae	Pneumonia TB, Asthma, Malignancy CF, abscess, silicosis	√	If pre-existing COPD can cause acute on chronic breathlessness
Hyper-ventilation	√√	√	Anxiety Depression	√	
LVF		√	Ischaemia, ^BP, aortic valve disease, mitral incompetence	√	
COPD		√	Smoking or x - smoker	√ - if acute exacerbation	√√
CCF		√	^BP, CHD, Rheumatic heart disease		√
Anaemia	√	√√	GIT disease Rx side-effects Haematological diseases	√ - if acute on chronic cause e.g. pneumonia, LVF	√√

Examination

Most diagnoses are made from the history. The examination allows confirmation of your diagnosis as well as providing additional information. Don't forget to take a general look at the patient especially as they enter the consultation room e.g. Is there exertional dyspnoea? Is there anything about their posture or gait that may point towards a cause for their breathlessness e.g. neuromuscular disease? Are they pale or cachetic? Be prepared to examine other systems, as relevant, as well as the respiratory system. It may be necessary to examine all of the systems.

Special investigations

These depend on your differential diagnosis and clinical signs.

Investigation	Indication	Comment
FBC(Full blood count)	Any cause of breathless. Low threshold for checking in the elderly.	Anaemia often forgotten cause. Poor correlation between clinical appearance and Hb. Other bloods may be needed depending on clinical picture
CXR (Chest x-ray)	Urgent if haemoptysis, or unexplained or persistent (lasting more than 3 weeks) symptoms or signs e.g. cough, dyspnoea, pain, weight loss, hoarseness, clubbing, LNs, LVF or pneumothorax. Also, pneumonia.	Do not be reassured by a negative CXR especially if symptoms persist. See also Chapter 7c – presentation of common cancers for guidelines on urgent referral
PEFR (Peak expiratory flow rate)	Asthma	> 20% diurnal variation on a PEF diary on >3 days in a week for two weeks
Spirometry	COPD Asthma	FEV1 < 80% predicted and FEV1/FVC ratio < 70% FEV1 >15% (and 200ml) increase after short acting beta2 agonist (e.g. salbutamol 400mcg by MDI + spacer or 2.5 mg by nebuliser)
ECG(electrocardiogram)	CHD CCF	May confirm CHD or elucidate cause of heart failure e.g. LVH, p-mitrale Those suspected of having heart failure should have a 12-lead ECG and/or BNP, with echocardiography being performed where the result of either is abnormal
ECHO(echocardiogram	CCF, valvular disease	See above
Pulse oximetry	Any cause of acute breathlessness. Gives non-invasive estimation of the arterial haemoglobin oxygen saturation	Be aware of inaccuracies caused by ambient light, shivering, vasoconstriction abnormal haemoglobins and alterations in pulse rate and rhythm. Therefore normal reading should not override clinical judgement

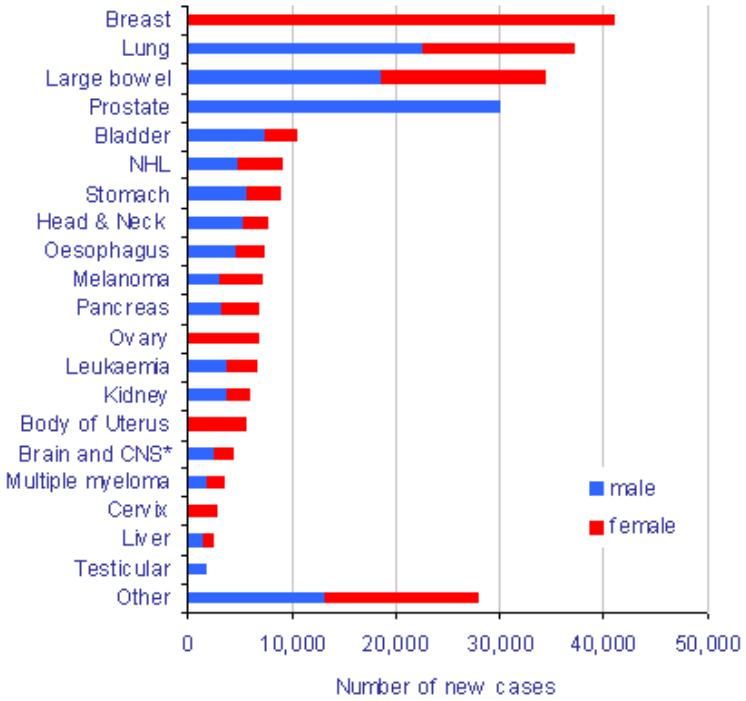
Abbreviations

- Left ventricular failure LVF
- Diabetic Ketoacidosis DKA
- Congestive cardiac failure CCF
- Chronic obstructive airways disease COPD
- Pulmonary emboli PE
- Coronary heart disease CHD
- Motor Neurone Disease MND
- Myasthenia gravis MG
- Rheumatoid Arthritis RA
- Systemic Lupus erythematous SLE
- Venous thrombotic event VTE
- Non steroidal anti-inflammatory (NSAID)
- Gastrointestinal tract GIT
- Tuberculosis TB
- Haemoglobin Hb
- Lymph nodes LNs
- B naturetic peptide BNP
- Forced expiratory volume in 1 second FEV1
- Forced vital capacity FVC
- Metered dose inhaler MDI

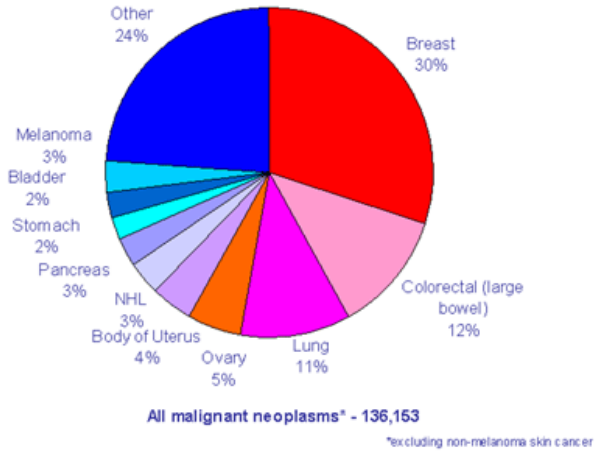
8c. The Presentation of Common Cancers

A quarter of us are going to die of cancer.
Most cancers present initially to the GP.

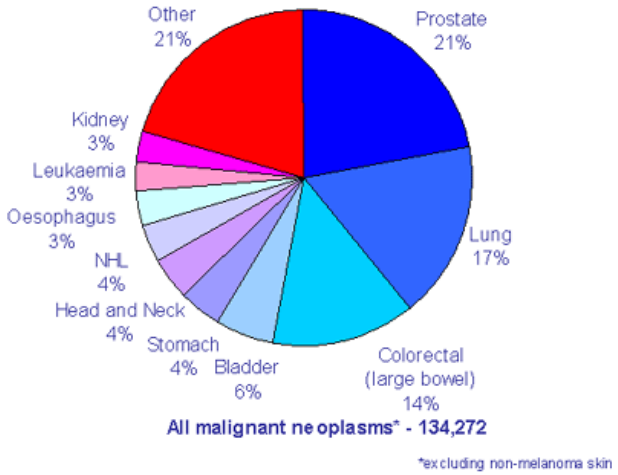
Which cancers are common?



In women:



In men:



Individual lifetime risk:

	% of cohort that develop cancer					
	Males			Females		
	by age 65	over lifetime	lifetime risk	by age 65	over lifetime	lifetime risk
Bladder	0.7	3.3	1 in 30	0.2	1.3	1 in 79
Brain and CNS	0.4	0.7	1 in 147	0.3	0.5	1 in 207
Breast	...	...	...	5.6	10.9	1 in 9
Cervix	...	...	...	0.6	0.9	1 in 116
Kidney	0.4	1.1	1 in 89	0.2	0.6	1 in 162
Large bowel	1.4	5.7	1 in 18	1.1	4.9	1 in 20
Leukaemia	0.4	1.0	1 in 95	0.3	0.8	1 in 127
Lung	1.7	8.0	1 in 13	1.0	4.3	1 in 23
Melanoma	0.4	0.7	1 in 147	0.5	0.9	1 in 117
Multiple myeloma	0.1	0.6	1 in 177	0.1	0.5	1 in 204
Non-Hodgkin's lymphoma	0.6	1.4	1 in 69	0.4	1.2	1 in 83
Oesophagus	0.4	1.3	1 in 75	0.2	1.1	1 in 95
Ovary	...	...	...	0.9	2.1	1 in 48
Pancreas	0.3	1.0	1 in 96	0.2	1.1	1 in 95
Prostate	0.9	7.3	1 in 14	...	...	...
Stomach	0.5	2.3	1 in 44	0.2	1.2	1 in 86
Uterus	...	...	...	0.6	1.4	1 in 73

A full-time GP with 2000 patients on average will see a new case of:

- breast cancer about every 8 months
- lung cancer about every 9 months
- colorectal cancer each year
- prostate cancer every 15 months
- ovarian cancer every 5 years

Most patients with a new cancer present to their GP first. In making a diagnosis the GP must go through several thinking processes:

- Patient has some feature that makes cancer a possibility
- GP makes judgement of the likelihood of cancer
- A test ordered by the GP suggests that the risk of cancer warrants referral
- GP refers patients & biopsy is taken to confirm diagnosis

Breast cancer

- About one third are now detected mammographically in NHS screening program.
- The rest present usually with a lump (90%) (refer urgently if enlarges or hard and fixed at any age or over 30 if persists after next period, or any post menopausal woman)
- Other symptoms include nipple bleeding and should prompt urgent referral, as should nipple distortion of recent onset.
- Unilateral eczematous skin change or inflammation that doesn't respond to treatment should also be referred urgently.
- Breast pain is not a particular feature of breast cancer.

Breast screening

- Offered to women aged 50 – 70 in 3 year cycles
- Most authorities believe it has a mortality benefit with relative risk reduction of ~15%
- Of 2000 attendees for 10 years, 1 life will be saved and 10 unimportant cancers diagnosed.

Colorectal cancer

- This is much harder for the GP (and patient) to diagnose as the tumour is internal.
- The possible symptoms are myriad and can be features of benign conditions.
- Even worse, the only test is quite invasive.
- Some are detected asymptomatically through screening.

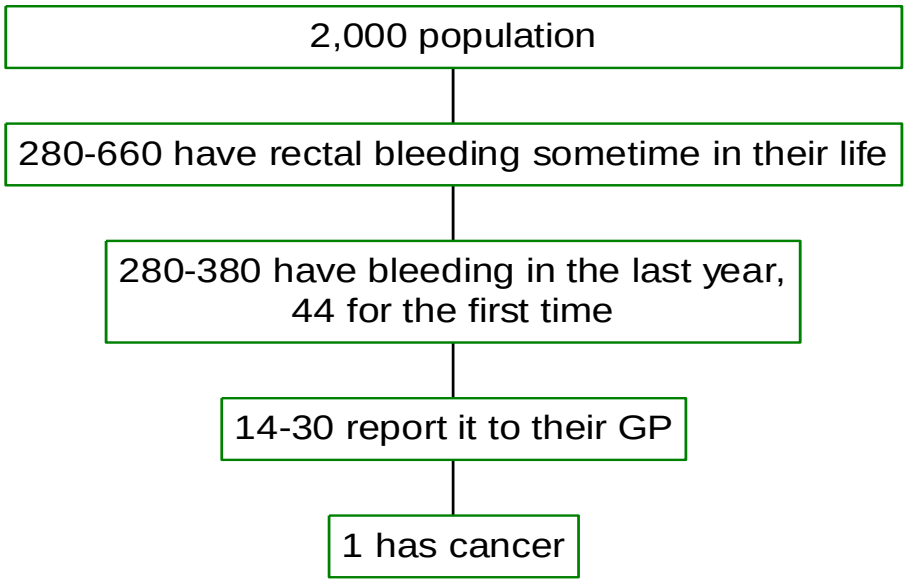
Colorectal cancer screening programme

- All men and women aged 60 – 69 years.
- Home FOB (Foecal Occult Blood) testing.
- Those with positive results will be offered colonoscopy.
- In pilot studies ~11% of those with a positive FOB had a cancer.
- Sensitivity is around 60%.

- Some present to their GPs as surgical emergencies.
- The majority present to their GPs with symptoms:

• Constipation	Risk 0.4%
• Diarrhoea	Risk 0.9%
• Weight loss	Risk 1.2%
• Abdominal pain	Risk 1.1%
• Rectal bleeding	Risk 2-5%
• Anaemia	Risk up to 13%

Rectal bleeding



Risk of cancer with rectal bleeding

- The risk of an underlying cancer with rectal bleeding rises from <1% in those aged under 60, to 5% in those aged over 80.
- The risk is at least twice as high if it is the main reason for presenting to the GP
- Males have a higher risk than females.

Fresh onset rectal bleeding is more worrisome than recurrent bleeding (which is very common). The risk of a cancer is approximately twice as high when new onset bleeding is described.

NICE recommend rectal bleeding for 6 weeks is referred urgently (under the 2 week referral rule) in any patient over 60 or if over 40 when accompanied by a change in bowel habit to looser/ more frequent stool.

Examination of a patient with possible colorectal cancer

- Examine abdomen for masses, and look for anaemia
- Do rectal examination / proctoscopy
- NICE recommend that any patient with a rectal mass is referred urgently

Diarrhoea

- It is a low risk symptom
- Risk: **1.1%** in over 40s, but increasing for every attendance
- NICE recommend urgent investigation if it lasts 6 weeks in any patient over 60, or a patient over 40 if accompanied by rectal bleeding

Constipation / abdominal pain

- Two figures summarise the problem for GPs
- 25% of colorectal cancers have constipation
- 5-10% of the normal population describe constipation in any one year
- Risk: **~ 0.4%** for over 40s for constipation and **1%** for abdominal pain

- NICE do not recommend referral of these
- NICE recommend that all patients with a right lower abdominal mass consistent with involvement of the large bowel are referred urgently.

Weight loss

- This is a feature of any advanced cancer
- About 1 in 100 of patients with weight loss under the age of 70 will have cancer – risk **~ 1%**
- Over 70 the risk much higher **~ 10%**

Anaemia

- Once again this is quite common in the normal population
- Iron-deficiency may represent occult GI bleeding

The NICE recommendations for anaemia…

- Men – a Hb < 11.0g/dl and features of iron deficiency
- Risk: **13%**
- Women – non menstruating women with a Hb <10.0 g/dl and features of iron deficiency
- Risk **8%**

Lung cancer

- Almost all lung cancers present to the GP
- No screening tests are any good
- The disease often presents late, and progresses rapidly

Lung cancer symptoms:

- Haemoptysis – risk 2.4% NICE recommends refer for urgent CXR (and urgent referral if persistent in a smoker/ex smoker over 40 yrs old)

NICE also recommends urgent CXR if the following are unexplained or persistent (more than 3 weeks duration):

- Cough
- Cervical/supraclavicular lymphadenopathy
- Chest pain/shoulder pain
- Chest signs
- Dyspnoea
- Finger clubbing
- Hoarseness
- Loss of weight – risk 1.1%

Other symptoms that may indicate malignancy should prompt a CXR e.g.

- Loss of appetite or
- Fatigue

NICE also recommends urgent CXR if metastasis from a lung cancer suspected.

Cough and haemoptysis

- The risk is really with persistent cough
- It rises from **0.4%** (1 in 250) for a 1st cough to **0.6%** for a second and **0.8%** for a third presentation
- Haemoptysis carries the highest risk, but is relatively uncommon
- **2.4**% rising to **17%** if reported again

Shortness of breath

- The issue with this one is that it is very rarely an isolated symptom
- Some of this may be a link with chronic obstructive airways disease

What to do when you suspect lung cancer:

- The only test worth doing is a CXR
- However CXRs may be negative even when the patient has cancer
- Sputum cytology is hopeless
- In hospital - CT, bronchoscopy

NICE recommend urgent referral to a chest physician when:

- chest X-ray suspicious/suggestive of lung cancer (including slowing resolving consolidation and pleural effusion)
- persistent haemoptysis in ex-smokers/smokers over 40 years of age

and consider immediate referral/emergency admission if:

- there are signs of superior vena caval obstruction (swelling of neck/face with fixed elevation of jugular venous pressure)
- or stridor

Prostate Cancer

Presentation

- Many are symptomless, with a great difference between the USA and the UK

PSA screening

- Currently not recommended in the UK as no UK data from RCTs to show the benefit to harm ratio of using PSA test for prostate cancer.
- There is some evidence from Europe to show PSA screening can save lives but with how much over diagnosis and over treatment?
- ..but many men have the test anyway

All of the following should prompt the doctor to examine the prostate gland, and to consider a PSA:

Symptoms of an enlarged prostate

- These are the same whether the enlargement is benign or malignant – nocturia frequency poor stream, etc.

Symptoms of local spread

- The cancer can spread into the rectum, seminal vesicles or bladder and cause haematuria
- The main symptom is impotence, which can occur quite early.

Symptoms of metastasis

- lower back pain
- bone pain
- weight loss, especially in the elderly

N.B. exclude urinary infection before PSA testing. Postpone the PSA test for at least 1 month after treatment of a proven urinary infection, and one week after digital rectal examination

NICE recommend urgent referral for:

- A hard, irregular prostate typical of a prostate carcinoma.
- With a normal prostate, but rising/raised age-specific PSA, even if asymptomatic. In this group borderline PSA should be repeated at 1-3 months
- With symptoms and high PSA levels (age specific)
- aged 50-59 >= 3.0 ng/ml;
- aged 60-69 >= 4.0 ng/ml;
- aged 70 and over > 5.0 ng/ml.
- (Note that there are no age-specific reference ranges for men over 80 years. Nearly all men of this age have at least a focus of cancer in the prostate.)

Further reading
The NICE quick reference guidance on referral for suspected cancer covers a lot of the common red flag symptoms. The advice for public is really good and worth a read available at:
http://guidance.nice.org.uk/CG27/PublicInfo/pdf/English [Accessed 01/08/2013]

8d. Emergency Contraception

- Hormonal
  - Levonorgestrel
  - Ulipristal acetate
- Insertion of intrauterine contraceptive device (IUCD).

Hormonal

Progestogen*:* levonorgestrel *(Levonelle-1)*

Effectiveness The NHS Clinical Knowledge Summary guidance states that: if 1000 women have unprotected sex in the fertile time of their menstrual cycle (the middle) and do not use emergency contraception, about 80 of these women will become pregnant. Use of levonorgestrel emergency contraception will prevent pregnancy in 70 of these 80 women, and use of the copper IUD will prevent pregnancy in 79 of the 80 women.

It is effective if given up to 72 hours after unprotected sex but the sooner it is taken, the more effective it is. The Faculty of Family Planning states that of the pregnancies that could be expected to have occurred if no emergency contraception had been used the emergency pill will prevent:

- Up to 95% if taken within 24 hours
- Up to 85% if taken between 25-48 hours
- Up to 58% if taken between 49-72 hours

Mode of action is unknown. It may prevent ovulation or disrupt implantation.

Regimen Single dose of 1.5mg levonorgestrel
Taken as soon as possible after unprotected intercourse.

If patient vomits within 3 hours of taking this she should repeat the dose (with an anti-emetic) or consider having an IUCD inserted.
Domperidone 10mg is a safe & effective anti-emetic to take with levonelle.

There are no absolute contra-indications to Levonelle-1 but if the patient is taking liver inducing enzymes (or has stopped these in the last 28 days) then the copper IUD is the only effective method of contraception.

For ages 13 – 60 years

Who offers it?

- GPs (free)
- Family planning clinics (free)
- Walk-in-centres (free)
- Pharmacies (over the counter cost approx £25)

What should you say to the patient about Levonorgestrel?

She may have a bleed:

- Immediately
- At usual time of menses
- Later than usual time of menses

Most have bleed within 3 days of the expected date

If she is 7 days late with her next bleed or if her next bleed is unusually light she should seek medical advice. A pregnancy test should be performed if any concern 3 weeks or more after taking emergency contraception.

She should abstain from sex or use barrier methods until

- She has begun bleeding, or
- Contraceptive cover has been resumed
    - This is once she has taken combined oral contraceptive pill again for 7 consecutive days
    - Or once she has been taken progestogen only pill again for 2 consecutive days

Ulipristal Acetate (*ellaOne*)

Ulipristal is a new hormonal emergency contraceptive. It is a selective progesterone receptor modulator (SPRM) and its primary mechanism of action is by inhibiting or delaying ovulation. It may also have an effect on the endometrium and inhibit implantation. It is as good as levonorgestrol and should be taken within 120 hours (5 days) of unprotected sexual intercourse. Like levonorgesterol it becomes less effective as the time from unprotected intercourse increases, so it should be taken as soon as possible. It is taken as a single dose. If the patient vomits within 3 hours of taking it they should repeat the dose or consider having an IUCD inserted.

What should you say to the patient about Ulipristal?

- It is more effective the sooner you take it
- If her period is more than 7 days late or her period is lighter or abnormal she should seek medical advice
- If the patient is taking hormonal contraception then she needs to abstain from sex or use barrier methods until after the next period or withdrawal bleed as urlipristal acetate can reduce the effectiveness of hormonal contraception
- If breastfeeding avoid this for 36 hours after treatment
- The main side effects are abdominal pain, nausea and menstrual disorders
- Most women have their period at the expected time. Some may have their next period earlier or later than normal

Insertion of intrauterine device (“the coil”)

The IUD provides the most effective (almost 100%) emergency contraception.

It can be inserted up to 120 hours (5 days) after unprotected sex or up to 5 days after estimated earliest date of ovulation.

Mode of action

The intra-uterine device (IUD) prevents fertilization.

The intra-uterine system (IUS/Mirena) is not currently used for post coital contraception. It is another long-acting method of contraception and it works by preventing implantation & has effects on cervical mucus

Contra-indications

- Suspected pregnancy
- Pelvic inflammatory disease
- Distorted uterine cavity or cervical abnormality
- Cervical or endometrial cancer
- Trophoblastic disease

May be uncomfortable to fit if patient has never been pregnant
Must screen for STDs at time of insertion & consider giving antibiotic cover.
If IUCD is kept in it provides ongoing contraception.

What should you say to the patient about the IUCD?

- Check that there are no contra-indications
- Does she want to use it for ongoing contraception?
- Warn her about likelihood of heavier bleeding
- Warn her about risk of pelvic inflammatory disease
- Warn her about very rare risk of uterine perforation.
- She must have a check up 6 weeks after fitting

Things to consider in all cases when emergency contraception is requested

- How long has it been since the first episode of unprotected sex?
- How important is it that she does not get pregnant?
- How will the patient access sexual health services in the future?
- Is there a need for ongoing contraception?
- She can start ongoing contraception at same time as taking emergency contraception.
- Risk of sexually transmitted infections (especially chlamydia) and any women attending for emergency contraception should be offered the opportunity for testing. Screen for Chlamydia all those under 25 years & those over 25 years who have had 2 or more partners in the last year.
- Give a leaflet.

Further Reading

Faculty of sexual and reproductive healthcare:
http://www.fsrh.org/pdfs/CEUguidanceEmergencyContraception11.pdf

Clinical knowledge summaries:
http://www.cks.nhs.uk/contraception_emergency

Look at the BMJ learning module on Sexual health: postnatal and emergency contraception in women at:
http://learning.bmj.com – **you will have to register to gain access to these**

8e. Depression

Aim

To give an overview of the assessment and management of depression in primary care.

Learning Objectives

- Be able to list the situations and illnesses in which depression is often seen.
- Be able to diagnose depression using screening questions and then perform a carefully directed history including assessing suicide risk.
- Be able to discuss management options with a patient including an understanding of the principles of stepped care, knowledge of one antidepressant medication and awareness of non drug treatments.
- Describe in which situations a patient with depression should be referred to secondary care.

Introduction

In the UK, around 2.3 million people suffer from depression at any time. The female to male ratio is 2:1.
It is estimated that 30-50% of all depression goes undiagnosed; much is likely to be mild and resolve spontaneously. Patients may be embarrassed or fear stigma. First presentation of depression may be with vague non specific physical symptoms.

Who is at risk of depression?

- *Social problems* – e.g. recent unemployment or other significant life event.
- *Other psychiatric problems* – e.g. substance misuse.
- *Physical disorders* – e.g. diabetes, coronary heart disease.
- *Drugs that can cause symptoms of depression* – e.g. β blockers.

Screening questions

1. During the last month, have you been bothered by feeling down, depressed or hopeless?
2. During the last month, have you often been bothered by having little interest or pleasure in doing things?

If the answer to either of these questions is yes then a more detailed history is needed and you also need to enquire if the patient actually wants help.

Assessment of depression

History
Chronological account from patient. Precipitating events? Past history of psychiatric problems/chronic disease? Alcohol and/or substance misuse? Family history of psychiatric problems? Social problems? Level of support from friends/family/work/community?

Core Symptoms (one of these must be present for a diagnosis of depression)

- Persistent low mood
- Loss of interest/pleasure
- Fatigue

If at least one of the core symptoms has been present most days for at least 2 weeks and is affecting the patient's life, then assess severity by asking about other associated symptoms:

- Disturbed sleep
- Poor concentration
- Low self esteem
- Change in appetite
- Suicidal thoughts/plans/acts
- Agitation
- Feelings of worthlessness/guilt/self-blame
- Feelings of hopelessness.

In some cultures there is no exact equivalent term for depression - they may present with unexplained/vague physical symptoms (somatisation).

Examination
Mental state examination as per psychiatry teaching.

Assessing severity
DSM IV assess the number of symptoms as listed above so that sub threshold depression has fewer than 5 symptoms required to diagnose depression. If these symptoms persist NICE guidelines recognise the distress this can cause and recommend treatment. If sub threshold symptoms persist beyond 2 years the patient may have chronic sub threshold depression (dysthymia). Severe depression has most of the 9 symptoms (including one of the core symptoms) where the symptoms markedly interfere with functioning. Severe depression can occur with or without psychotic symptoms. Depressive symptoms lasting 2 years or more is chronic depression.

In the UK, a self completed questionnaire is often used to assess severity, the **PHQ-9 (see ref)**.

If a diagnosis of depression is made, GPs are now expected to record a biopsychosocial assessment at the time of diagnosis. This includes: current symptoms including duration and severity, personal history of depression, family history of mental illness, the quality of interpersonal relationships with, for example, partner, children and/or parents, living conditions, social support, employment and/or financial worries, current or previous alcohol and substance use, discussion of treatment options, any past experience of, and response to, treatments and suicidal ideation.

Assessing suicide risk

1. If any self harm, assess and send to A and E if necessary.
2. Ask about suicidal ideas and plans.
3. Ask about present circumstances: Any support? Has anything happened recently to make them feel like this? Are these feelings ongoing?
4. Assess risk factors: male, increasing age, divorced>widowed>never married>married, profession (vets, pharmacists, farmers, doctors), admission/recent discharge from psychiatric hospital, social isolation, history of DSH, depression, substance misuse, personality disorder, schizophrenia, serious medical illness (e.g. cancer).
5. Assess psychiatric state. Increased risk of suicide: suicidal ideation, hopelessness, depression, agitation, early schizophrenia with retained insight (especially young patients), delusions of control/poverty/guilt.

Management of depression: Stepped-care model

- *Step one (all known and suspected presentations of depression)* – Assessment, support, psycho-education, active monitoring and referral for further assessment and interventions.
- *Step two (persistent sub threshold depressive symptoms; mild to moderate depression)* – Low intensity psychological interventions (CBT or structured group physical activity programme), consider medication/ referral for further assessment and interventions if symptoms persist or previous history of moderate to severe depression.
- *Step three (persistent sub threshold depressive symptoms or mild to moderate depression with inadequate response to initial interventions; moderate and severe depression)* – Medication, high-intensity psychological interventions (one to one psychotherapy), combined treatments, collaborative care and referral for further assessment and interventions.
- *Step four (severe and complex depression; risk to life; severe self neglect)* – Medication, high-intensity psychological interventions, electroconvulsive therapy, crisis service, combined treatments, multi professional and inpatient care.

Non drug treatments

- *Counselling* – This is not a NICE approved intervention but in reality is the most easily available resource in primary care. Local access varies and some practices have in house services. Involves reflective listening, encouraging the patient to think about and then try to resolve their own difficulties. Usually brief/time-limited. Specific services may be appropriate e.g. RELATE (relationship difficulties) or CRUSE (bereavement).
- *Exercise*—The exercise on prescription scheme enables GPs to prescribe exercise at a free or at a reduced cost for a range of conditions including depression.
- *Sleep hygiene*—if needed advice on: establishing regular sleep and wake times, avoiding excess eating, smoking or drinking alcohol before sleep, creating a proper environment for sleep, taking regular physical exercise.
- *Problem solving therapy* – Effective for mild to moderate depression. Write a list of problems (can be therapeutic). Rank the problems in order of importance and think about solutions for the most important problems first.
- *Cognitive behavioural therapy* – Helps a patient change the way they think and react. May involve systematic desensitisation (behavioural method) or focussing on people's thoughts and reasoning to challenge assumptions and consequential abnormal reactions. Benefit in the treatment of mild and moderate depression. Self help programmes in books, online (e.g. Beating the Blues) or over the phone are available. Can be accessed through the NHS via community mental health providers e.g. "LIFT".
- *Mindfulness based cognitive therapy*—for people who are currently well but experienced 3 or more episodes of depression.

Drug treatments

Please refer to the BNF for full listings of contraindications, cautions and side effects.
Drugs will not solve all of the patient's problems. Discuss the reasons for starting, time scale of action and side effects. Unlikely to have an effect for one week and the effect then builds to a maximal effect at 4-6 weeks. Most side effects tend to ease after the first 2 weeks and the most common reported are GI problems, dry mouth and increased anxiety. Review after 1 week of starting an anti-depressant if the patient is <30 years old or has an increased risk of suicide

otherwise review within 2 weeks and then every 1-2 weeks until stable; assess response, compliance, side effects and suicidal risk. Continue treatment for at least 6 months after maximal response, patients with ≥2 episodes of major depression should continue for 2 years. If has recurrent episodes of depression, patient may opt to continue medication long term.

- *Selective serotonin reuptake inhibitors (SSRIs):* e.g. Citalopram.
- *Other drugs to be aware of:* Serotonin and noradrenaline reuptake inhibitors e.g. Venlafaxine; tricyclic antidepressants (TCA's) e.g. Lofepramine; monoamine oxidase inhibitors (MAOI's) e.g. Phenelzine; Mirtazapine (presynaptic alpha2 adrenoreceptor antagonist).
- *St John's Wort:* Herbal remedy, sold in health food stores. May be effective in mild depression but note that NICE does not recommend due to lack of data on dosing and potential for interactions. Preparations vary. Side effects: dry mouth, GI symptoms, fatigue, dizziness, rashes and increased sensitivity to light. **It should not be used in conjunction with other medications as there can be interactions.** Interacts with antidepressants (especially SSRIs) causing sweating, shivering and muscle contractions. It also interacts with anticonvulsants, Warfarin, oral contraceptives, Ciclosporin, Digoxin and Theophylline. It may also interact with anaesthetic agents so should be discontinued 2 weeks prior to surgery.

Discontinuation reactions – Can occur if antidepressants have been used for ≥8 weeks. Decrease this risk by weaning off over a period of about one month. Warn patients about these reactions. Withdrawal of SSRIs can lead to headache, nausea, paraesthesia, dizziness and anxiety; withdrawal of other antidepressants (especially MAOIs) can cause nausea, vomiting, anorexia, headache, chills, insomnia, anxiety, restlessness.

Management of a patient with depression and anxiety

Combinations of anxiety and depression are common. Can lead to increased functional impairment and often becomes more chronic with poorer response to treatments. The general rule is to treat the predominating feature but CBT and SSRIs are indicated for both. The Hospital Anxiety and Depression score (HADs) can be used to help decide on the prominent feature.

When do you refer to secondary care?

- Routine – Poor or incomplete response to 2 interventions, recurrent episode within a year, patient or relative request, self neglect.
- Urgent – Suicidal thoughts but with protective factors, diagnosis not clear? mild psychotic or manic features.
- Same day – Actively suicidal ideas and plans, psychotic symptoms, severe agitation accompanying severe symptoms, severe self neglect.

In reality, when to refer comes from experience. It is mainly based around risk assessment and what services there are available to refer to. Safety netting is key with a clear care plan and contract agreed with the patient.

Patient resources

www.beatingtheblues.co.uk – on line CBT programme
www.patient.co.uk – patient information leaflets
www.samaritans.org – patient support (24 hours) and information
www.sane.org.uk
www.rcpsych.ac.uk/mentalhealthinfoforall/problems/depression/depression.aspx
www.moodgym.anu.edu.au – on line CBT need to register to use
www.llttf.com (living life to the full) – on line CBT need to register to use

Tasks

- Read chapter 5 of "A Textbook of General Practice", Anne Stephenson
- Make a list of all the drugs that can cause the symptoms of depression.
- Read about Citalopram in the BNF so you are fully aware of the contraindications, side effects and interactions.
- Think about special groups e.g. seasonal affective disorder, pregnant/postnatal. How would treatment vary and why?

Sources

Oxford Handbook of General Practice, third edition. Simon, Everitt and van Dorp

British National Formulary (BNF)

www.rcgp-innovait.oxfordjournals.org

www.patient.co.uk/doctor/Patient-Health-Questionnaire-(PHQ-9).htm

www.nice.org.uk/CG90

www.nice.org.uk/CG91

8f. Domestic Violence and Primary Health Care

Content of presentation

- What is domestic abuse and intimate partner abuse (IPV)?
- Prevalence
- Physical, medical and mental health consequences
- Responding: what should doctors do and how should they do it?

What is domestic abuse?

- ***Definitions***

Domestic abuse: Any incident or pattern of incidents of controlling, coercive or threatening behaviour, violence or abuse between those aged 16 or over who are or have been intimate partners or family members regardless of gender or sexuality (Home Office)

Intimate partner abuse: Any behaviour within an intimate relationship that causes physical, psychological or sexual harm (WHO, 2002). Includes:

- Physical: slapping, hitting, kicking, beating.
- Sexual: forced intercourse, sexual coercion
- Psychological: intimidation, constant belittling
- Control; isolation, monitoring, deprivation of basic necessities.

Case study highlighting coercive control – the Pemberton case

August 2002
Julia has a mastectomy; confesses to family and friends how unhappy her marriage has been...Alan's behaviour had been unpredictable, demanding and controlling throughout

September 2002
Told Alan their marriage was over. Alan wanted the marriage to continue...he would decide whether the marriage was working or not, or he would take his own life

September 2002-November 2003
- Death threats by telephone and text
- Document left on doorstep outlining hatred for Julia
- Super glued locks
- Abusive letters to William
- Attempts to cancel healthcare
- Emptied account and ceased maintenance
- Julia and William fear for their lives

November 18th 2003
Alan Shoots both William and Julia dead. He then takes his own life.

Gender asymmetry

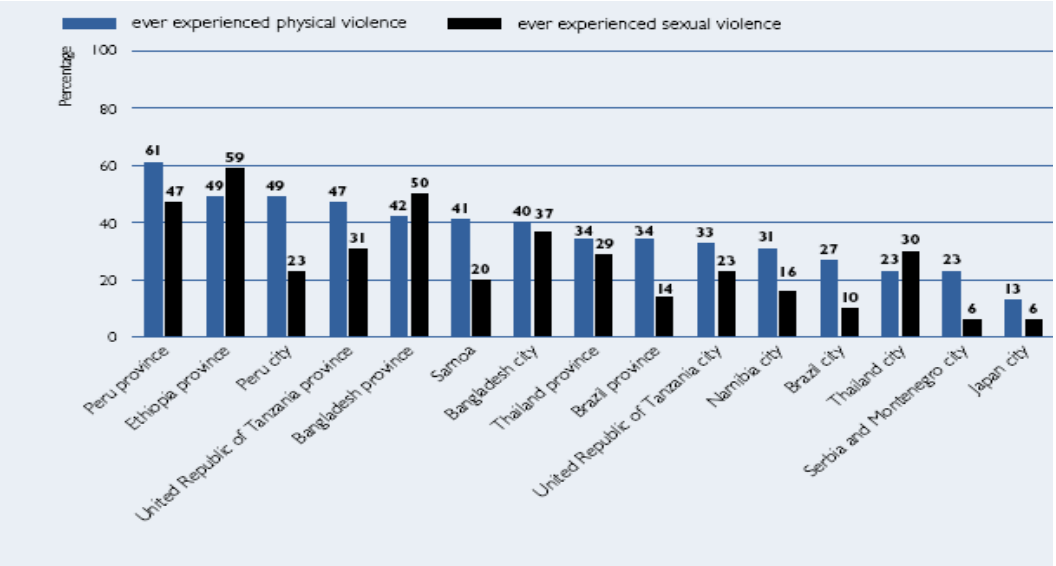
- IPV not confined to abuse of women by men, but severity and consequences of abuse are more severe than abuse perpetrated by women against men
- Canadian General Social Survey - compared with male victims of relationship violence, women are:
  - ***x3 more likely to be injured as a result of violence***
  - ***x5 more likely to require medical attention or hospitalisation***
  - ***x5 more likely to report fearing for their lives (Statistics Canada 2003)***

- Also manifests in same sex relationships

Lifetime prevalence (Crime Survey England and Wales 11/12)

Estimates of prevalence depend on definition of abuse and particularly whether or not emotional abuse is included.

Global issue, although significant variation

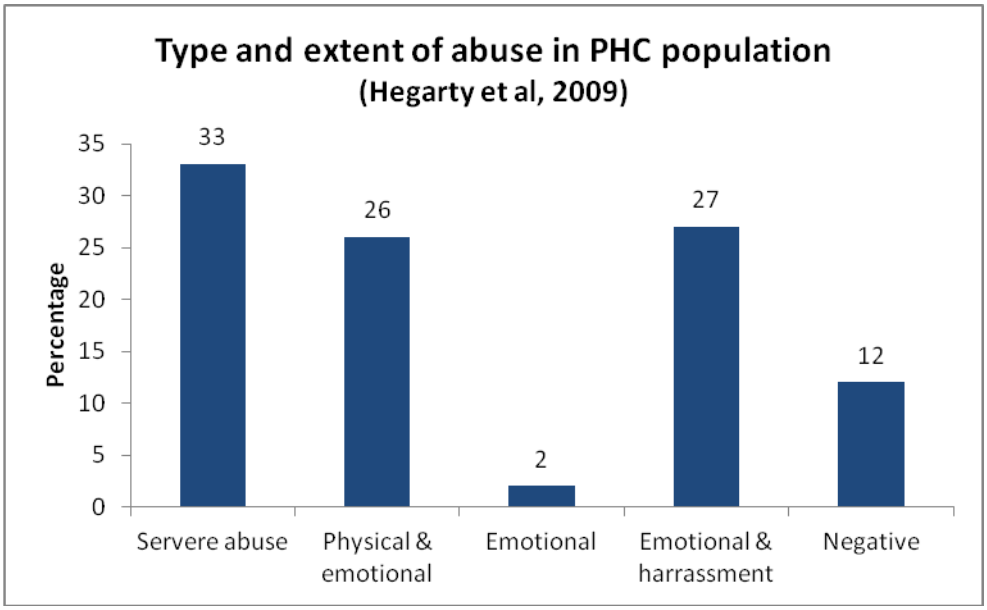


Prevalence in Primary Care population

- Richardson, 2001: 1027 women in 13 general practice waiting rooms
  - 41% lifetime experience of violence (physical or sexual assault) ever from a partner
  - 17% experience of violence from a partner in the past year

Figures from the Australian WEAVE trial give some indication of the type and severity of abuse experienced by women in primary care populations.

- 13% of women reporting being afaid of their partner in the last year
- Of these, in the last 12 months
  - 33% had suffered severe combined abuse
  - 27% emotional abuse and harrassment
  - 26% physical and emotional abuse
  - 2% emotional abuse
  - 12% reported no abuse despite having been afraid of their partner.



Risk Factors for intimate partner violence and abuse:

- Most demographic and social characteristics not consistently associated with increased risk.
- Exceptions include:
  - Younger age – (Britain, Canada, USA, developing countries)
  - Relative poverty
  - Separation (serious harm and homicide)

Mortality and morbidity

- 2 women a week are killed by a partner/ex-partner (BCS).
- Most common cause of injury in women <60.

But...

- The majority of women do not present with obvious trauma in health care settings, even in A&E departments.

Physical health consequences

- Survivors experience a range of chronic health problems including:
  - Chronic pain (e.g. headaches, back pain)
  - Increased minor infectious illnesses
  - Neurological symptoms (e.g. fainting and fits)
  - Gastrointestinal disorders (e.g. chronic IBS)
  - Raised blood pressure and coronary artery disease
  - Gynaecological problems (e.g. STIs, vaginal bleeding and infection, chronic UTIs)

Pooled data from WHO study (2005)

	Unadjusted OR	95% CI	Adjusted OR	95% CI
Self-reported general health: poor or very poor	1·9	1·7–2·1	1·6	1·5–1·8
Difficulty walking in past 4 weeks	2·0	1·8–2·1	1·6	1·5–1·8
Difficulty with daily activities in past 4 weeks	1·9	1·8–2·1	1·6	1·5–1·8
Pain in past 4 weeks	1·8	1·7–2·0	1·6	1·5–1·7
Memory loss in past 4 weeks	2·0	1·9–2·2	1·8	1·6–2·0
Dizziness in past 4 weeks	2·0	1·9–2·2	1·7	1·6–1·8
Vaginal discharge in past 4 weeks	2·3	2·1–2·5	1·8	1·7–2·0
Ever suicidal thoughts	2·4	2·2–2·6	2·9	2·7–3·2
Ever suicidal attempts	3·5	3·0–4·1	3·8	3·3–4·5

Adjusted ORs were adjusted for site, age group, current marital status, and education. *ORs and 95% CI are given for the

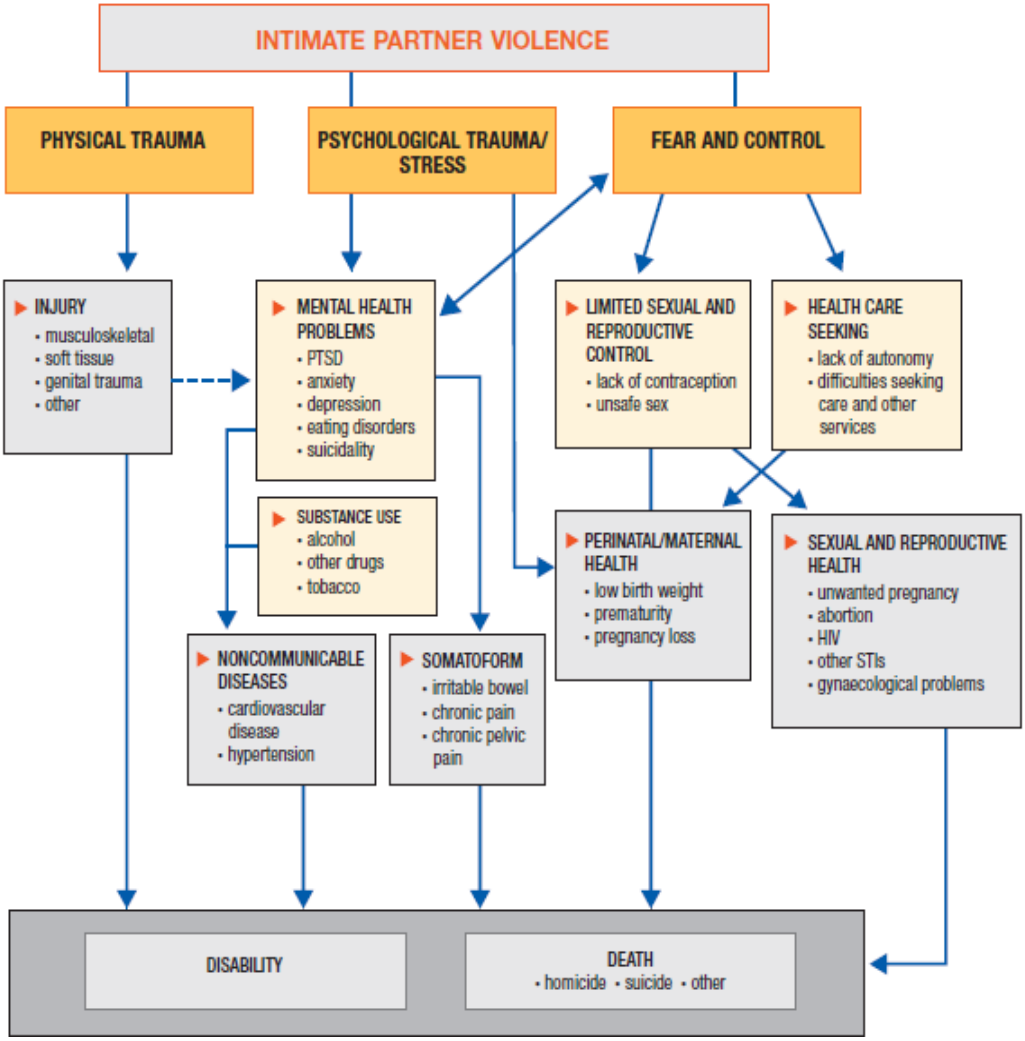
Mental health consequences (Howard et al, 2013; Golding 1999)

	OR (95% CI)
Depression	**2.8 (3.2 to 4.6)**
PTSD	**7.3 (2.1 to 6.8)**
Alcohol abuse	**5.6 (3 to 9)**
Suicidal thoughts	**3.6 (2.7 to 4.6)**

Contribution to disease burden
Global burden of disease study 2010 (WHO, 2013)

1 Maternal disorders	1.4 (1-3)
2 HIV/AIDS	2.5 (1-4)
3 Tuberculosis	3.5 (1-6)
4 Malaria	3.8 (1-8)
5 Lower respiratory infections	4.5 (2-6)
6 Diarrheal diseases	5.7 (3-7)
7 Major depressive disorder	7.7 (5-13)
8 Protein-energy malnutrition	9.0 (6-15)
9 Anxiety disorders	10.5 (7-17)
10 Road injury	10.8 (7-16)
11 Low back pain	12.0 (8-17)
12 Iron-deficiency anemia	13.4 (9-19)
13 Neck pain	13.7 (8-20)
14 Other musculoskeletal	13.7 (9-19)
15 Epilepsy	14.4 (8-22)
16 Meningitis	17.0 (12-22)
17 COPD	18.2 (9-32)
18 Cervical cancer	18.4 (7-34)
19 Schistosomiasis	22.7 (13-37)
20 Interpersonal violence	23.4 (16-35)
21 Fire	23.6 (9-41)
22 Bipolar disorder	24.6 (16-38)
23 Stroke	24.6 (16-37)
24 Iodine deficiency	25.6 (17-37)
25 Self-harm	27.2 (17-45)
26 Cirrhosis	27.4 (19-41)
27 Other hearing loss	29.2 (18-45)
28 Asthma	29.2 (19-45)
29 Drug use disorders	30.2 (18-46)
30 Diabetes	32.1 (19-45)
33 Ischemic heart disease	33.7 (24-45)
37 Rheumatic heart disease	38.6 (22-53)
73 Measles	72.8 (40-109)
159 War & legal intervention	155.2 (148-160)

Pathways and health effects



Risks to children

- Physical Health:
  - Pre and post-natal risk: Foetal distress, pre-eclampsia, low birth weight
  - All forms of maltreatment: 41% overlap (e.g. Appel & Holden, 1998), Association with severity, Not just escalated forms of abuse
  - Death and serious injury: DV noted in 1/3 serious case reviews 07-09 (Brandon et al, 2010)

- Psychological Health:
  - 75-90% of children in same or next room:
    - Forced to participate
    - Caught in the crossfire
    - Contact as an opportunity for abuse
    - Witnessing the aftermath/hearing accounts
  - Increased risk of negative mental health outcomes (Kitzmann et al, 2003; Evans et al, 2008) – clinical diagnosis 40% vs. 10% (Holden, 1998)
  - Amendment to definition of 'significant harm' (s.120 Adoption and Children Act, 2002)

Why do we need a health response?

- Cost:
  - Direct costs of DV 3.86 billion
  - Costs to NHS 1.73 billion
  - 2% of NHS budget! (Walby, 2009)

- Survivors of partner violence believe their doctor is one of the few people they can disclose violence to and want them to respond appropriately (Feder et al 2006)
- Evidence of effective interventions to which doctors can refer (Ramsay et al 2009; WHO 2013)

1) What do survivors of domestic violence want from doctors?
(Feder et al 2006)

- ***Before disclosure or questioning***
  - Understand the issue of domestic violence
  - Try to ensure continuity of care
  - Brochures and posters in medical settings so that women know DV is an issue that can be broached
  - Awareness of signs of abuse and consideration about DV along with other possibilities
  - Assurance about privacy, safety and confidentiality
  - Use of verbal and non verbal skills to develop trust

- ***When the issue of domestic violence is raised***
  - Non-judgemental, compassionate, caring questioning
  - Confidence and ease with asking about abuse
  - No pressure to disclose
  - Recognition that raising of topic in itself has importance
  - Ask several times (construct based on contradictory evidence)
  - Provide time for discussion

- ***Immediate response to disclosure***
  - Respond with support and belief of the woman's experiences
  - Acknowledge the complexity of the issue and be willing to respect the woman's unique concerns and decisions
  - Validate the woman's experiences, challenge assumptions and provide encouragement
  - Ensure that the woman believes that she has control over the situation, and address safety concerns

- **Response in later interactions**
  - Be patient and supportive, allowing to woman to progress at her own pace
  - Understand the chronicity of the problem and provide follow-up and continued support
  - Respect the woman's wishes and do not pressure her into making any decisions about changing the situation

2) Effective interventions

(Ramsay et al 2009; WHO 2013)

- ***Advocacy interventions and results***
  - Definition of advocacy: provision of support and access to resources in the community
  - Settings: refuges/shelters, antenatal clinics, primary care public health and criminal justice settings
  - Dose: 12 hours to 60+ hours
  - Outcomes: increased social support and QoL, increased safety behaviours and accessing of community resources, reduced abuse
  - Small effect sizes & methodological weaknesses

- ***Psychological interventions and results***
  - Type of psychological intervention: counselling CBT, expressive writing, forgiveness therapy (10 group, 7 individual therapy)
  - Dose: 30 minutes to 16+ hours
  - Outcomes: decreased PTSD and depression, increased self esteem
  - Small to moderate effect sizes
  - Largest effect sizes for CBT and women who had left the abusive relationships

- ***Conclusions on interventions***
  - Advocacy and psychological interventions are likely to improve the outcomes for a woman who has disclosed domestic violence
  - This is even more likely if the woman has actively sought help and has left the abusive relationship

- ***Identification and Referral by GPs***
  - IRIS model (Feder et al. 2011)

Results -12 months after the training sessions

Recorded disclosures of DV
Intervention practices 641 Control practices 236 (adjusted IRR 3.1)
Referrals of patients to advocacy
Intervention practices 238 Control practices 40 (adjusted IRR 6.4)

What should doctors do?

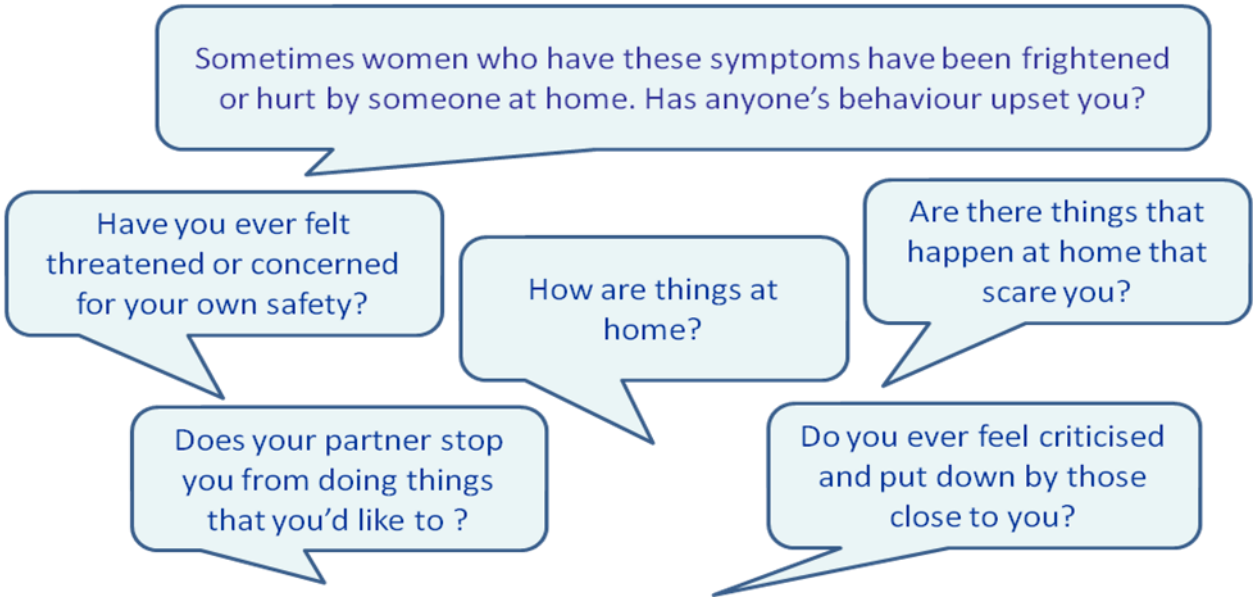
- Ask about abuse
- Non-judgmental support
- Check immediate safety
- Document
- Referral for domestic violence advocacy

- ***Does domestic violence fulfil the criteria for a screening programme?*** (Feder 2009)
  - Prevalence and health impact:
  - Valid, sensitive screening tool:
  - Acceptability to women: **probably**
  - Acceptability to health professionals: **X**
  - Effectiveness of interventions for women who have been identified via screening: **X** (with possible exception of antenatal settings)

- ***So, when should doctors ask?***
  When women present with:
  - Injuries
  - Symptoms of post-traumatic stress, anxiety, depression, substance abuse
  - Sexually transmitted illnesses
  - Chronic health problems - chronic pain, gynaecological conditions, gastrointestinal disorders
  - Repeated consults with non-specific symptoms
    …And in the course of ante/pre-natal care

- ***Barriers to asking:***
  - Time constraints
  - Discomfort with the topic
  - Fear of offending the patient or partner
  - Perceived powerlessness to change the problem

- ***Find your own way of asking:***



- ***Questions not to ask***
  - Why don't you just leave?
  - What did you do to make him/her so angry?
  - Why do you go back?

  Don't ask the woman when a potential perpetrator is present

- ***Reasons for non-disclosure***
  - Embarrassment/shame
  - Fear of retaliation by partner
  - Lack of trust in others
  - Economic dependence
  - Desire to keep family together
  - Unaware of alternatives
  - Lack of support system

- ***Responding to a disclosure***

  Things you can say:
  - "This is ***not*** your fault"
  - "No one deserves to be treated this way"
  - "I'm sorry you've been hurt"
  - "I am concerned about your safety (and that of your children)"
  - "Do you want to talk about it?"
  - "Help is available to you"

- ***Assessing a patient's safety***
  - Is either the woman or her children in danger?
  - Has violence escalated recently?
  - Are there weapons in the home?
  - If the patient is not safe, does she have a safety plan?

- ***Document your findings***
  - In the patient's medical record
  - In her own words
  - With a body map
  - With photographs if possible (get consent)
  - With specific details

Survivor feedback:

From a woman whose doctor didn't ask.....

I even went when I was 5 months pregnant and he's pushed me so bad up against the wall that I was shielding her in my belly. I went to the doctor and he said "Oh you'd be surprised how these babies can survive in you". I was absolutely shocked. And I cried all the way home.....nobody's going to help me. This is it.

I just cried. I was just so relieved that somebody, that somebody just said something. And he gave me the box of tissues, and I just sat and cried and cried and cried. And he said, "Tell me when you're ready." And he was just the most nicest person to me ever. And I poured it all out.....

.....and from a woman whose doctor did

8g. Diarrhoea in Adults

Causes

- Gastroenteritis (viral, bacteria, protozoa)
- Medication (e.g. antibiotics)
- Irritable bowel syndrome
- Inflammatory bowel disease
- Bowel cancer
- Overflow from constipation
- Alcohol misuse
- Coeliac disease
- Diverticulosis
- Thyrotoxicosis

Bowel cancer & diverticulosis are more common with advancing age. It is important to not make assumptions, particularly do not make a new diagnosis of irritable bowel syndrome in person over 50 years without first investigating to exclude another cause.

There is a strong seasonal variation in organisms causing gastroenteritis. Campylobacter is commonest cause of food poisoning in UK; it's most common in the summer.

Key points in history of the diarrhoea

- What do you mean by diarrhoea? Loose stool or increased frequency?
- Duration? If more than 2 weeks consider non-infectious causes
- Speed of onset. Staph aureus & bacillus cereus have the quickest onset
- Is there blood in the stool? Blood suggests campylobacter, E coli, shigella, inflammatory bowel disease or cancer

- Abdominal pain or cramps? Pain is intermittent in gastroenteritis; if continuous, or at night, take care to exclude more serious causes. If relieved by defaecation, IBS more likely.

- Fever?

- Weight loss? Over periods of weeks/months suggests cancer or malabsorption.

- Food? What did you eat in the 24 hours before this started?

- Travel? Have you been abroad? (amoebae & giardia common in Asia & Africa)

- Contacts? Is there anyone else you live/work with who has same symptoms?

- Job? What job do you do? Does it involve handling food?

- Medication? If on contraceptive pill they may not be able to rely on it. Are they taking any medicines that might cause diarrhoea?

- Aching joints? Common in campylobacter

- Headache? May indicate dehydration

Examination

Purpose is to assess degree of dehydration & identify clues to underlying cause

Conscious level
Pulse (Increased if dehydrated or febrile)
Temperature
Jaundiced?
Abdominal examination, remember to check for guarding.
Rectal exam (if suspicious of cancer), remember to offer a chaperone and document in notes

Investigations

Stool for MC&S if

- diarrhoea persists for >3 days
- person has been abroad
- 2 or more members of household have symptoms
- 2 or more people who ate the same food have symptoms
- Their job involves handling food

Lab will routinely test for salmonella, shigella, E.coli, campylobacter
Lab may only test for giardia or parasites if asked for specifically

Blood tests appropriate in a few cases

- CRP/ESR/plasma viscosity if suspicious of inflammatory bowel disease
- FBC if suspicious of cancer, inflammatory bowel disease or alcohol misuse
- LFTs if suspicious of alcohol misuse
- TFTs if other symptoms of thyrotoxicosis
- Tissue transglutaminase if suspicious of coeliac disease

Referral for barium enema/colonoscopy under 2 week rule may be appropriate e.g. patient over 60 years old has had diarrhoea for > 6 weeks

Management

Stress importance of hygiene – hand washing
People who handle food or who work in healthcare should not return to work until 48 hours after diarrhoea has stopped.

Oral rehydration

- Drink at least 2 litres of clear fluids a day (but not flat fizzy drinks). Drink an extra glass of water (200ml) for each loose stool.
- Replacement of salts with oral rehydration solutions (e.g. Dioralyte) often help symptoms of dehydration.

Loperamide (imodium) if it's important to stop diarrhoea (e.g. before long journey). Do not give loperamide to children.

Consider impact on more vulnerable patients, if they live alone is there help available?

Food poisoning is a notifiable disease. Public health teams trace contacts.

Antibiotics are rarely prescribed. Even if stool shows causative agent, such as campylobacter, do not prescribe an antibiotic because patient is likely to conquer infection without it. If patient is still unwell when stool result is received give ciprofloxacin for campylobacter, shigella or giardia. Treat giardia with metronidazole.

Suggested tasks and questions

Compile 2 lists of the causes of diarrhoea

- common causes of diarrhoea in an adult under 50
- serious causes of diarrhoea (that you must not miss) in adult of any age

If you're stuck read the section on diarrhoea in Symptom Sorter

What are the red flags? What symptoms would make you think of serious pathology?

Compile a list of the commonest causes of food poisoning in the UK

Other than food poisoning what other infectious diseases are notifiable in the UK?

Bristol stool chart often used in hospital, is it as useful in general practice?

Further reading

Read section on food poisoning in the Oxford Handbook of General Practice (2 pages)

Read the Health Protection Agency guidance on hand washing

Browse the Clinical Knowledge Summaries on gastroenteritis http://www.cks.nhs.uk/gastroenteritis

Read chapter 1.4 in the BNF on drugs for acute diarrhoea

8h. Heartburn

Definition

Heartburn is characteristically a retro-sternal sensation of burning, occurring in waves, and rising toward the neck. It may be localized to one area, e.g. the throat or xiphisternum. In approximately 20% of patients, the heartburn may radiate to the back. Generally heartburn is the result of gastric acid refluxing onto oesophageal mucosa. Oesophageal spasm also has a role in the sensation of heartburn.

It may be accompanied by reflux of acid into the mouth. Heartburn usually is worse 15-60 minutes after a meal, particularly if the meal is large in volume or of high fat content. Heartburn may be precipitated by bending or lying flat. It is also precipitated and aggravated by alcohol and smoking.

> Dyspepsia is different from heartburn and is primarily upper abdominal pain or discomfort but may also encompass bloating, nausea and vomiting, early satiety and may include heartburn as a symptom. (Dyspepsia is not covered in this tutorial)

Important causes of heartburn seen in primary care are **GORD** i.e. **oesophagitis or endoscopic negative reflux disease** and less commonly **oesophageal cancer.**

History taking

- Clarify exactly what the patient means by their terminology
- Use open-ended questions initially, then moving onto probing and / or closed questions to clarify and gather further information. Avoid leading questions but be systematic in your enquiry.
- Always ask the patient's views on possible causes and what is their main concern or fear.

Important learning bites
• Patients may use terms such as: indigestion, wind, belching, pain, ache, discomfort and acid reflux; your history taking should define what they mean by this terms.
• There is a poor correlation between symptomatic severity and pathological severity of oesophageal disease
• It is possible for two pathologies to co-exist e.g. oesophagitis and peptic ulcer disease or for the pathology to change over time e.g. an oesophageal carcinoma can arise from a previous Barrette's oesophagus. It is quoted that in 23% of cases there were two or more different pathologies present
• It may be difficult to differentiate heartburn from other causes of retrosternal ache or chest pain such as coronary heart disease or referred pain from gall bladder disease. It is therefore important to specifically enquire about symptoms suggestive of CHD and biliary disease. Some systemic diseases can also cause heartburn and should be part of your differential diagnosis.

Presenting complaint and history of presenting complaint

Some question examples are included below:

- **Define what the patient means**: Tell me more about your symptoms? What do you mean by heartburn indigestion/acid/wind? How long ago did you first notice this? How often are you troubled by it? Is it there all the time or does it come and go? What brings it on? Is it related to eating or any particular time of the day or night? Is it related to posture? Ask specifically about abdominal or back pain?
- **Check for alarm symptoms (red flags):** Is there pain on swallowing (odynophagia)? Difficulty swallowing (dysphagia)? If so, is this to liquids as well as solids? Is there any nausea or vomiting? If so, what colour (coffee grounds or frank haematemesis)? Has there been a change in appetite or early satiety? Has there been any weight loss (sudden or gradual unintentional) and how much? Has there been any bowel change? Any dark stools (consider melaena)? Severe or nocturnal symptoms? Any symptoms of anaemia?
- **Elicit patient ideas, concerns and expectations:** What else have you noticed that is new for you or not quite right? What do you think may be causing this or going on? What are you most concerned about? What were you hoping we would do today? What have you tried? Do you know anyone else with these symptoms? Has anyone else suggested to you what might be going on?
- **Check if a new or recurrent problem:** Has this ever happened before? If so, how long did it last? How was it treated? What were you told was the cause / diagnosis? Have you been completely well between episodes?

Review of systems

If appropriate, and not already covered, enquire about:

- ***Cardiac symptoms*** If the heartburn is related to exertion consider the possibility of angina
- ***Abdominal symptoms*** A patient with gallstone disease or peptic ulcer disease may say that they have “heartburn” or “indigestion”.
- ***Pregnancy.*** Heartburn is extremely common during the third trimester of pregnancy
- ***Respiratory symptoms*** Chronic cough, hoarseness, non-atopic asthma recurrent aspiration and pulmonary fibrosis can all be associated with GORD
- ***Neurological symptoms*** Some neurological conditions can affect swallowing
- ***Any symptoms suggestive of anaemia?***

Past medical history: Comprehensive past medical and surgical history but specifically asking about:

Previous or known conditions	Risks of
GORD	Barrett’s oesophagus, oesophageal stricture, iron deficiency anaemia or oesophageal carcinoma
Autonomic neuropathy of diabetes mellitus or Parkinson’s disease or systemic sclerosis	Can impede oesophageal function and produce GORD
Surgery for achalasia	Can causes a defective gastro-oesophageal valve
Past history of malignancy	Any previous primary tumour increases the risk of a second unrelated primary. Metastases or enlarged lymph nodes can causes compression of the oesophagus
Achalasia. Barrett’s oesophagus. Plummer-Vinson syndrome. Coeliac disease. Tylosis. Chronic GORD	Carcinoma of the oesophagus

Drug history

What medication are you taking at the moment? Have these been changed recently? Have you taken anything else in recent weeks? Are you taking any medication not prescribed by a doctor or you have bought yourself? Ask specifically what they have already tried for their symptoms? Consider of note:

- Tricyclic anti-depressants, other anti-cholinergics and anti-psychotics can affect the function of the lower oesophageal sphincter leading to GORD.
- Drugs that may cause heartburn include antibiotics e.g. (Tetracyclines), non-steroidal anti-inflammatory drugs, corticosteroids, iron compounds, nitrates, bisphosphonates, calcium preparations, calcium channel antagonists and theophylline.

Family history

- In particular a family history of oesophageal disease or malignancy?

Social and occupational history

- **Do you smoke or have you ever smoked?** If so, how many and for how long? If ex-smoker, how long ago did you give up?
- How much alcohol do you drink? (recorded in units/week). **Heartburn is often one of the first clues that a patient is drinking too much alcohol**

Differential diagnoses

Try to tie in various factors in the history, making particular note of the patients' age (older adults are at greater risk of any malignancy), gender, past medical history, drug history, social and family history in order to compile a list of the most likely diagnoses.

A **guide** is included below.

	GORD	**Oesophageal cancer**
Pain	Heartburn or acid reflux. Can be referred to between shoulder blades or a central chest pain if associated oesophageal spasm	Symptoms can be similar initially but short history common. Pain may be retrosternal or referred mid scapula. Any stricture will lead to dysphagia initially to solids, and diet may have been altered accordingly May be able to point to level of obstruction
Course	Chronic relapsing and remitting often over years. Untreated, fewer than 20% become symptom free	Short, progressive history
Gender	Common in pregnancy 30-50%	M>F
Age	Any age	Usually > 50
Incidence	May be increasing (?related to obesity)	Increasing
Vomiting	Unusual, although reflux common	Common if stricture or obstruction
Weight	Usually overweight or recent weight increase	Weight loss in established disease

Management

Routine endoscopic investigation of patients **of any age is not necessary** providing that there is response to initial elements of care listed below, and there are no "red flag" symptoms or signs. Endoscopy is estimated to be normal in 65% of cases and remember the poor correlation between symptoms and endoscopic evidence of disease.

If heartburn does not respond to these measures, becomes more frequent, or there are any red flag symptoms or signs then investigation is required – see referral guidance below

General Management

- Review medications for possible causes of heartburn (see list above) and make alterations as appropriate.
- Offer lifestyle advice especially regarding healthy eating, weight loss and stopping smoking. Advise avoidance of precipitants such as large fatty meals and alcohol.
- Raise the head of the bed and take a smaller meal earlier in the evening if reflux symptoms
- Self-treatment with an alginate (eg. *Gaviscon* 10ml after meals & at bedtime) or antacids (containing a magnesium or aluminium compound) may be an appropriate initial therapy. Alginates & Gaviscon can be bought without a prescription. Gaviscon is safe to take in pregnancy.
- Proton pump inhibitors (e.g. Omeprazole) and H2 receptor antagonists (eg. Ranitidine) are also available without prescription.
- Provide patients with access to educational material to support the care they receive either through practice leaflets or www.patient.co.uk (www.besthealth.bmj.com has useful information but is subscription based).

Should initial core elements fail or relapse, follow-on management is as follows:

	First line management	**If no response (or relapse)**	**If no response (or relapse)**	**If no response (or relapse)**	**If response**
Uninvestigated heartburn	Full dose PPI 1 month	H2RA or prokinetic for 1 month	Consider referral for endoscopy /opinion		Return to self care with low dose treatment as required and at least annual review
Oesophagitis	Full dose PPI 2 months	Double dose PP1 for 1 month	H2RA or prokinetic for 1 month	Refer for second opinion	Return to self care with low dose treatment as required and at least annual review
Endoscopic negative reflux disease	Full dose PPI 1 month	H2RA or prokinetic for 1 month	Refer for second opinion		Return to self care with low dose treatment as required and at least annual review

Who to refer

Symptoms requiring **urgent referral (seen within 2 weeks)** of patients of **any age** are:

- gastrointestinal bleeding
- iron deficiency anaemia
- progressive unintentional weight loss
- progressive difficulty swallowing
- persistent vomiting
- epigastric mass on palpation
- suspicious barium meal result or other suspicious imaging result

Symptoms requiring **urgent referral (seen within 2 weeks)** of patients aged **55 years and over** are:

- recent in onset rather than recurrent and
- unexplained (e.g. new symptoms which cannot be explained by precipitants such as NSAIDs) and
- persistent (despite appropriate treatment) continuing beyond a period that would normally be associated with self-limiting problems (e.g. up to four to six weeks, depending on the severity of signs and symptoms)

Referral may also be considered when patients have one or more of the following:

- atypical symptoms e.g. very severe or night symptoms, previous surgery, continuing need for NSAID treatment or raised risk of cancer or anxiety about cancer

If investigation is required the options include:

Endoscopy:

- the most common initial investigation
- can exclude other causes for dysphagia such as carcinoma
- is normal in up to 65% of cases

In about 30% of patients with symptomatic gastro-oesophageal reflux there is no endoscopic abnormality. If the endoscopy confirms oesophagitis and excludes other pathologies then this gives a firm diagnosis. If the endoscopy reveals no abnormality but the symptoms are characteristic of reflux oesophagitis then medical treatment may still be initiated/continued without further investigation.

Barium swallow

- may be used, particularly if a diagnosis of erosive oesophagitis is being considered
- good option if patient frightened of endoscopy

Oesophageal pH monitoring:

- particularly useful if a link between symptoms and acid reflux needs establishing
- a positive diagnosis of reflux oesophagitis is made if there is a pH of less than 4 for more than 5% of the time which correspond to episodes of heartburn.

Helicobacter pylori

In patients who have not responded to a month's course of a proton pump inhibitor it may be worthwhile testing for H pylori by sending a stool sample. However the patient must stop the PPI for 2 weeks before doing this test.

(Consider 'test and treat' for Helicobacter Pylori (do test then start immediate treatment after) in patients with first presentation epigastric discomfort dyspepsia)

For a detailed summary of dyspepsia management refer to the following:

NICE. Clinical guideline CG17. Issue date: August 2004. Quick reference guide." Dyspepsia-management of dyspepsia in adults in Primary Care". www.nice.org.uk

NICE Medicines and Prescribing Centre: http://www.nice.org.uk/mpc/

Review and follow-up

Reviewing patient care

- In some patients with an inadequate response to therapy or new emergent symptoms it may become appropriate to refer to a specialist for a second opinion.
- A minority of patients have persistent symptoms despite PPI therapy and this group remain a challenge to treat. Therapeutic options include doubling the dose of PPI therapy, adding an H2RA at bedtime and extending the length of treatment
- Offer patients requiring long-term management of symptoms for dyspepsia an annual review of their condition, encouraging them to try stepping down or stopping treatment
- A return to self-treatment with antacid and/or alginate therapy (either prescribed or purchased over-the-counter and taken as required) may be appropriate. PPIs and H2RA are available to purchase over the counter
- Reiteration of lifestyle advice regarding losing weight, stopping smoking and limiting alcohol consumption needs to be ongoing
- Review patients at least annually to discuss medication and symptoms. Common side effects of PPI's include gastrointestinal disturbances including diarrhoea, nausea, constipation and flatulence, headache and dizziness.

Abbreviations

GORD Gastro-oesophageal reflux disease

CHD Coronary Heart Disease

NSAIDs Non steroidal anti-inflammatory drug

PPP Proton pump inhibitor

H2RA H2 receptor antagonist

Sources:

1) www.gpnotebook.co.uk

2) NICE. Clinical guideline CG17. Issue date August 2004. Quick reference guide." Dyspepsia-management of dyspepsia in adults in Primary Care" which includes GORD

3) Joint Formulary Committee. *British National Formulary* (BNF) 61 ed. London: British Medical Association and Royal Pharmaceutical Society; 2011

8i. Blood Pressure Measurement

The Aim of this tutorial is to give an overview of the skill of blood pressure measurement. By the end of this tutorial students should:

- understand the importance of a correct blood pressure measurement technique
- Understand the meaning of the Korotkoff sounds and the “auscultatory gap”
- Appreciate the factors which influence the accuracy of blood pressure readings

Definition

Blood pressure is a peripheral measurement of cardiovascular function. It is one of the vital signs that many, if not all, initial clinical decisions are based upon in an unwell patient. The decision to treat persistently elevated readings is based upon the ability to accurately record, over time, several readings.
A correct technique and accuracy of measurement are therefore essential skills for all clinicians to acquire.

Types of sphygmomanometers

Indirect measurements of blood pressure are made with an aneroid or mercury sphygmomanometer. Although the most accurate, the mercury instrument, due to health and safety reasons, has mostly been banned. In general aneroid sphygmomanometers are inaccurate, tending to under-read unless regularly serviced. Electronic sphygmomanometers which do not require the use of a stethoscope are also available. They sense vibrations and convert them into electronic impulses which are translated into a digital readout. All instruments need regular calibration and servicing.

Learning bites

- Cuffs are available in a number of sizes to suit the size of a patient’s arm. A patient with a large arm will need a large cuff size and vice versa.
- For adults, choose a cuff containing a bladder whose length is >2/3rd circumference of the arm. The height of cuff bladder should be >1/2 circumference of the arm.
- Cuffs that are too big will underestimate the blood pressure; those that are too small will give an artificially high measurement.
- A loose cuff will give an inaccurate diastolic reading
- Blood pressure generally increases with age; also the taller or heavier the individual, the more likely it will be for the blood pressure to be higher than in a leaner, shorter person of the same age.
- Readings between both arms may vary by as much as 10mmHg and tend to be higher in the right arm. Unless there are good reasons for not doing so (such as patient discomfort) you should use the patient’s right arm.
- In an unsupported or dependant arm, the blood pressure will be erroneously raised.
- If you are using a mercury sphygmomanometer, keep the manometer vertical and make readings at eye level, no more than 3 feet away.
- If you are using an aneroid, position the dial so it faces you directly, approximately 3 feet away.
- Avoid too slow or repeated inflations of the cuff, which will cause venous congestion and inaccurate readings. If repeated measurements are needed, wait 15 seconds between readings or remove the cuff and elevate the arm for 1-2 minutes.
- With even impeccable technique, the accuracy of the blood pressure can be underestimated by the following conditions:

a. Cardiac dysrhythmias – it is a good idea to take the average of several readings and to add a note about the uncertainty.
b. Aortic regurgitation – the sounds may not disappear, therefore obscuring the diastolic pressure
c. Venous congestion – can cause the systolic pressure to be heard lower and the diastolic higher than it actually is
d. Valve replacement – the sounds may be heard all the way down to a zero reading; this is less common with modern valves

Korotkoff sounds and the auscultatory gap

The Korotkoff sounds are low pitched sounds produced by turbulent blood flow in the artery. They are best heard with the bell of the stethoscope.

- 1st Korotkoff sound: The first appearance of faint, repetitive, clear tapping sounds that gradually increase in intensity for at least two consecutive beats. This is the systolic blood pressure.
- 2nd Korotkoff sound: A brief period may follow during which the sounds soften and acquire a swishing quality. In some patients sounds may disappear altogether for a short time. This period of silence is the Auscultatory gap. Sounds will reappear again 10-15mmHg lower.
- 3rd Korotkoff: The return of sharper sounds, which become crisper to regain, or even exceed, the intensity of phase 1 sounds.
- 4th Korotkoff: The distinct, abrupt muffling sounds
- 5th Korotkoff sound: The point at which all sounds finally disappear completely is the diastolic pressure.

Checking the palpable systolic blood pressure first will help you avoid being misled by an auscultatory gap when you listen with the stethoscope. You should be aware of the possibility of the auscultatory gap, or you may underestimate the systolic blood pressure or overestimate the diastolic pressure. 20-30mmHg pressure is added on to the palpable systolic pressure so that, because of the auscultatory gap, the 3rd sound is not mistaken for the first sound

The gap widens in systolic hypertension in the elderly (with loss of arterial pliability) or with a drop in diastolic pressure (severe aortic regurgitation). It narrows in the event of pulsus paradoxus (with cardiac tamponade or other constrictive cardiac events)

Step by step guide to a correct blood pressure measurement technique

- Ensure the patient is relaxed and comfortable.
- Explain the procedure to them.
- Check that the sphygmomanometer and stethoscope are clean and in good working order.
- Select the arm that is most comfortable for the patient (if equally comfortable you should choose the right arm).
- Ensure that the patient's sleeve is rolled up high enough for the cuff to be applied.
- Ensure that the patient is comfortable with the arm extended and supported, so that the brachial pulse is at the same level as the heart.
- Choose a cuff which contains the right size of bladder. The length of the bladder should be >2/3 circumference of the arm. The height of the bladder should be > ½ circumference of the arm.
- Wrap the cuff around the patient's arm so that the centre of the bladder is over the brachial artery and the lower border of the cuff is 2-3cm above the antecubital fossa.

- Position the sphygmomanometer so that it is facing you, with the gauge level with your eye.
- Palpate the brachial artery and make a rough assessment of its rate and rhythm. Keep your thumb or fingers on the brachial pulse.
- Inflate the cuff with the handbulb until you can no longer feel the brachial pulse. Make a mental note of this pressure.
- Inflate the cuff by another 20-30 mmHg.
- Quickly place the diaphragm of the stethoscope over the brachial pulse and begin deflating the bladder whilst listening with the stethoscope.
- Deflate the bladder at a speed which is proportionate to the patient's pulse so that you can measure the blood pressure to the nearest 2mmHg. So if the patient's pulse is 60bpm, deflate the cuff by 2mmHg every second.
- Note the pressure at which at the 1st Korotkoff sounds appear (systolic).
- Note the pressure at which the Korotkoff sounds completely disappear (diastolic).
- Release the valve in order to deflate the bladder completely.
- Remove the bladder from the patient's arm.
- If the Korotkoff sounds did not disappear repeat the measurement but this time note the point of muffling (the 4th Korotkoff sound)
- Repeat the measurement if the first reading is abnormal.
- Explain the result to the patient.
- Record the result in the patient's notes as systolic / diastolic to the nearest 2mmHg e.g. 142/94mmHg

Pulsus paradoxus

The paradoxic pulse is the exaggerated fall in systolic pressure during inspiration. The difference in systolic blood pressure between expiration and inspiration should be 5mmHg. It may be an important diagnostic finding if it is greater than 10mmHg. Causes of an exaggerated paradoxic pulse are conditions that seriously constraint the heart's action e.g. cardiac tamponade, constrictive pericarditis, severe asthma or emphysema. Associated findings include a low blood pressure and a weak pulse.

To determine a paradoxic pulse:

- Ask the patient to breathe as comfortably as possible.
- Apply the cuff and inflate until no sounds are audible
- Deflate the cuff gradually until sounds are audible only during expiration. Note the pressure
- Deflate the cuff further until sounds are also audible during inspiration. Note the pressure

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8j. Migraine

Definition

A common condition of recurring attacks of headaches, usually lasting 4-72 hours accompanied by autonomic & neurological symptoms.

Prevalence

10-12% of adult population & affects children too. More common in women
Sometimes runs in families.
Migraine is the commonest type of disabling headache seen in primary care.
Attacks occur in episodic fashion over decades of a sufferer's life.

Aetiology

Levels of serotonin (5-HT) fall during the headache stage of a migraine attack.

Attacks are precipitated by:

- Stress, fatigue or relaxation after stress
- Certain foods: chocolate (phenylethylamine), cheese (tyramine)
- Hormones: puberty, menopause, menstruation & combined oral contraceptive pill
- Other factors: changes in environment such as strong light, high altitude or head injury

There is a link between the existence of a patent foramen ovale and recurrent migraine.

Clinical features

<u>Migraine with aura (classical migraine) has 2 stages</u>

1. Prodromal (aura)
    - Transient neurological symptoms develop over 5 minutes & last up to one hour.
        - Visual: Scintillating Scotoma
            - Unilateral blindness
            - Hemianopic field loss
            - Teichoposia (flashes)
            - Fortification spectra/jagged lines
        - Transient aphasia
        - Tingling/numbness
        - Weakness

2. Headache
    - Starts before the end of the aura or within one hour of the aura finishing.
    - Lasts several hours, sometimes more than a day.
    - Often unilateral
    - Often begins in one spot then becomes generalised
    - Associated with nausea +/- vomiting
    - Associated with photophobia (patient prefers to be in darkened room)

<u>Migraine without aura (common migraine)</u>

The commonest form = recurrent headache associated with nausea & vomiting.
Difficult to differentiate from tension headache.
Prodromal symptoms are vague.

<u>Other rare forms</u>

Childhood periodic syndrome (includes periodic vomiting and abdominal migraine)
Retinal migraine

Differential diagnoses

- Tension headache
- Cluster headache
- Sinus headache
- Medication overuse headache
- Temporal arteritis
- Transient ischaemic attack
- Meningitis
- Subarachnoid haemorrhage
- Brain tumour (primary or secondary)

The following features of a headache should alert you to the possibility of an alternative, serious diagnosis:

- Onset after age of 50. Migraine does not usually start at this age
- Worst headache patient has ever had/very rapid onset (subarachnoid haemorrhage)
- History of cancer, especially lung or breast (cerebral metastasis)
- Headache that progressively gets worse over days (tumour or cerebral abscess)
- Headache that wakes patient at night (tumour)
- Early morning vomiting (raised intracranial pressure)
- Unilateral loss of power (TIA/stroke)
- Seizure (tumour)
- Weight loss (tumour or cerebral TB)
- Altered consciousness (meningitis)
- Fever (meningitis)
- Immunodeficiency

Examination

If you are in any doubt about the diagnosis you should do the following examination:

- Pulse & BP
- Look at optic fundi (papilloedema warrants emergency admission)
- Test for neck stiffness
- Palpate scalp for tenderness
- Examine cranial nerves
- Assess power & co-ordination in all 4 limbs.

Management

Aims

- to reduce frequency of attacks
- to reduce intensity of symptoms
- to reduce duration of headache
- whilst minimizing side effects
- such that patient's quality of life is improved

- Reassure & relieve anxiety
- Avoid precipitating dietary factors
- Try different brand of combined contraceptive pill or switch to another form of contraception such as progesterone-only pill (mini-pill)
- Combined contraceptive pill is contra-indicated if patient has focal symptoms e.g. unilateral numbness
- Simple analgesia- soluble aspirin or NSAIDs (there is no evidence that paracetamol is effective). Overuse can lead to analgesic-rebound headache

- Anti-emetics (domperidone or metoclopramide)
- Acupuncture is used by some doctors to treat migraine attacks and *Clinical Evidence* states that there is some evidence from randomised controlled trials to support their use
- 5 HT1 receptor agonists (triptans) – currently a choice of 7: sumatriptan, almotriptan, eletriptan, naratriptan, rizatriptan, zolmitriptan & frovatriptan.

Choosing the best triptan

Meta-analysis (Lancet 2001; 358: 1668) compared the triptans & concluded that they are all very effective. In general they are all well tolerated.

Oral triptans start working within one hour
Nasal & subcutaneous forms have more rapid onset.

All triptans are contra-indicated in patients with angina or those with high risk of ischaemic heart disease.

Side effects include:

Unpleasant, short-lived feelings of pain, heaviness or tightness anywhere in body
Nausea
Drowsiness
Dizziness

Sumatriptan was the first triptan to come on the market. It is available over the counter without a prescription as a 50mg tablet.

Choosing the best prophylaxis

Consider prophylaxis if >2 attacks per month or if attacks are particularly severe/prolonged

Propranolol is first line.
Tricyclic or anti-epileptic drug (sodium valproate or topiramate) are second line.

	For	**Against**
Propranolol (1st line)	Proven efficacy Also treats hypertension & anxiety	Contra-indicated by asthma & by peripheral vascular disease
Amitriptyline	Also treats insomnia & depression	Lack of evidence Not licensed
Sodium valproate		Side effects: nausea, tremor, dizziness & birth defects
Topiramate	Recent licence. Proven efficacy	Side effects: paraesthesia, impaired concentration & sleep, weight loss Affects efficacy of combined contraceptive pill, progestogen only pill Interacts with some other drugs
Pizotifen		Side effects: weight gain & sedation Evidence limited
Feverfew (Herbal remedy)	Safe	Lack of evidence

Botulinum toxin type A is recommended by NICE for the prevention of headaches in adults with chronic migraine (experiencing headaches for at least 15 days each month with migraine on at least 8 of these days) who have tried at least 3 other drugs to prevent migraine. It is given by im injection at multiple sites around the head and back of the neck every 12 weeks.

At present NICE does not recommend routine percutaneous closure of patent foramen ovale for the prevention of migraine, because of the risks associated with this procedure.

Reference:
Fenstermacker N, Levin M, Ward T. Clinical Review: Pharmacological Prevention of Migraine. *BMJ* 2011;342:d583

8k. Non Specific Low Back Pain

Non-specific low back pain (LBP) is tension, soreness and/or stiffness in the lower back region for which it isn't possible to identify a specific cause of the pain. Several structures in the back, including the joints, discs and connective tissues, may contribute to the pain.

Non-specific LBP accounts for 90% of cases of LBP seen in primary care.

The size of the problem:

- 60-70% of population have had back pain by age 70
    - Sciatica from prolapsed disc lifetime prevalence 5%
    - Mechanical back pain can cause radiation causing leg pain
- Most commonly affects ages 35-55
- Largest single cause of time off work (52 million days/year)

Back pain in general practice:

- 4-8 % of population consult GP with back pain/year
- Approx. 80-160 consultations for back pain/GP/year
- Majority of episodes resolve within 6 weeks
- Up to 7% develop chronic pain

Diagnostic triage

It is important to differentiate between

1. Non-specific low back pain
2. Nerve root pain
3. Possible serious spinal pathology

History and examination focus on looking for red flags and specific causes, to guide management and referral (see NICE guidance below).

History

- Duration, nature and severity of pain
- Associated symptoms (numbness, weakness, bowel or bladder disturbances)
- Past illnesses (malignancy), trauma, occupational history and red flags
- Exclude pain from elsewhere (GI, GU, Aneurysm)

Examination

- Palpate for tenderness
- Flexion, extension, lateral extension and rotation whilst standing
- Straight leg raise (SLR) is the single best prognostic factor (poor SLR means probable disc prolapse and poorer prognosis)
- Lower limb neurological examination (power, numbness, reflexes, ?saddle numbness)
- Palpate abdomen (?Peptic Ulcer, ?aneurysm)
- Red flag signs

Red Flags – consider urgent referral, <1% cases

- Presentation under age 20 or onset over age 55
- Non-mechanical pain including night pain
- Thoracic pain
- PH – Carcinoma, steroids, HIV, immune suppression
- Unwell, weight loss
- Widespread neurological signs and symptoms – cauda equina symptoms
- Trauma
- Structural deformity

Yellow flags – predict poor outcomes

- A belief that back pain is harmful or potentially severely disabling
- Fear-avoidance behaviour and reduced activity levels
- Tendency to low mood and social withdrawal
- Expectation of passive treatment(s) rather than a belief that active participation will help

Management of non-specific low back pain

1. Reassurance and explanation
2. Keep diagnosis under review at all times
3. Promote self management
    a. Advise simple exercises
    b. Remain physically active
    c. Continue normal activities as much as possible
4. Analgesia - Paracetamol +/- Ibuprofen (if not contraindicated)
5. Consider offering following treatments:
    a. Exercise programme
    b. Course of manual therapy
    c. Course of acupuncture
6. Consider referral of persisting symptoms – see NICE guidance below

Should any radiological imaging be requested in non-specific low back pain?

- Do not offer x-ray lumbar spine routinely – high radiation dose and positive finding are rare
- Only offer MRI for non-specific LBP if severe persistent symptoms or in the context of a referral for spinal fusion
- Consider MRI if one of these diagnoses is suspected:
    - Spinal malignancy
    - Infection or fracture
    - Cauda equina syndrome
    - Ankylosing Spondylitis or other inflammatory disorder

Prognosis

Acute back pain has a good prognosis – 80% should resolve within 6 weeks, (although a recent study in Australia showed slow recovery with a third of patients having not recovered at 1 year). Chronic back pain has a poor prognosis, particularly if present over a year. In view of this, aim to address yellow flag symptoms early, with multidisciplinary care and support if possible

Referral Guidance from NICE for acute low back pain

The majority of patients with acute low back pain can be managed in primary care. They should, however, be referred to a specialist service if:

✪✪✪✪ they have neurological features of cauda equina syndrome (sphincter disturbance, progressive motor weakness, perineal anaesthesia, or evidence of bilateral nerve root involvement)
✪✪✪ serious spinal pathology is suspected (preferably seen within 1 week)
✪✪✪ they develop progressive neurological deficit (weakness, anaesthesia) (preferably seen within 1 week)
✪✪✪ they have nerve root pain that is not resolving after 6 weeks (preferably seen within 3 weeks)
✪✪ an underlying inflammatory disorder such as ankylosing spondylitis is suspected
✪✪ they have simple back pain and have not resumed their normal activities in 3 months. The effects of pain will vary and could include reduced quality of life, functional capacity, independence or psychological wellbeing.

✪✪✪✪ is seen immediately
✪✪✪ is seen urgently
✪✪ is seen soon

Resources for patients:

Back pain patient information leaflets can be found at:
http://www.arthritisresearchuk.org/arthritis-information/common-pain/back-pain.aspx
http://www.patient.co.uk/health/Back-Pain.htm

A good book to recommend to patients: The Back Book
Roland, M.O et al. (2002). London: The Stationary Office.

References

NICE guidelines – Low back pain May 2009
http://www.nice.org.uk/nicemedia/pdf/CG88QuickRefGuide.pdf

NICE Guidelines on referral
http://www.nice.org.uk/media/94D/BE/Referraladvice.pdf

Koes BW, van Tulder MW & Thomas S. Clinical Review: Diagnosis & Treatment of Low Back Pain. BMJ 2006: 332; 1430-34 (17 June)

Little P et al. Randomised controlled trial of Alexander technique lessons, exercise, and massage (ATEAM) for chronic and recurrent back pain. BMJ 2008;337:a884

Henschke N et al. Prognosis in patients with recent onset low back pain in Australian primary care: inception cohort study BMJ 2008;337:a171

8l. Upper Respiratory Tract Infection (URTI)

(also covered in Minor Illness lecture in week 9)

The upper respiratory tract includes the nose, throat, larynx and upper trachea. An URTI is the most common reason for consulting a GP and includes common colds, tonsillitis, sore throat, sinusitis, laryngitis and croup. The majority are caused by viruses and are rarely serious. It is important to advise patients about how long they should expect their illness to last so that they do not have unrealistic expectations.

Condition	**Average total illness length**
Acute sore throat/acute pharyngitis/acute tonsillitis	1 week
Common cold	1.5 weeks
Acute rhinosinusitis	2.5 weeks
Acute cough/acute bronchitis	3 weeks

See below for the current NICE guidelines for care pathways of RTIs.

Acute Sore Throat

At any time 12% of the population complain of a sore throat. It is a symptom and can be further characterised as:

- Tonsillitis – inflammation of the tonsils
- Acute pharyngitis – inflammation of the part of the throat behind the soft palate

Infectious causes

1. Common cold viruses e.g. rhinovirus – 25%
2. Bacterial – most commonly group A beta-haemolytic streptococcus (GABHS) (15-30% in children, 10% in adults)
3. Influenza
4. Herpes simplex
5. Epstein Barr virus <1% (peak incidence in 15-25 year olds). See below.

History:

Most people do not see their doctor if they have a sore throat so remember to ask why the patient has attended. The history should also include:

- Duration of symptoms
- Systemic symptoms – fever, malaise
- Dysphagia?
- Rash?
- History of previous episodes.

Examination

General examination should include temperature, pulse, inspection of the throat and palpation for cervical lymph nodes.
Also examine any rash – consider infectious mononucleosis or scarlet fever or guttate psoriasis
If there is stridor do not examine the throat as it may provoke acute airways obstruction from epiglottitis.

Investigations
In the majority of patients no investigations are required. Throat swabs are not routinely indicated. 20% of people carry group A beta-haemolytic streptococcus (GABHS) as a commensal and there is no way to distinguish between carriage and infection.
If Epstein Barr virus is suspected a monospot blood tests can be used for diagnosis plus a FBC and LFTs.

Management
Reassure that most sore throats are self limiting and resolve within 7 days with or without antibiotic treatment. It is not possible to tell by looking at a sore throat whether it is caused by a virus or bacteria. Antibiotics should not be prescribed routinely and, in particular, should not be used to secure symptomatic relief or to aim to prevent complications in otherwise healthy individuals.

However, there are **Centor criteria** to aid diagnosis of GABHS as the cause of the sore throat:

- Tonsillar exudate
- Tender anterior cervical lymph nodes
- Absence of cough
- History of fever

Presence of 3 or 4 of these clinical signs suggests that the chance of the patient having group A beta-haemolytic streptococcus (GABHS) is between 40% and 60%, so the patient may benefit from antibiotic treatment. Absence of 3 or 4 of the signs suggests there is an 80% chance that the patient doesn't have the infection and so antibiotics are unlikely to be necessary.

In patients with tonsillitis who are unwell and have 3 or 4 of the criteria the risk of the commonest complication, a quinsy* is 1:60 compared with 1:400 in those who are not unwell.

Indications for referral
- Quinsy* – peri-tonsillar abscess and patient often systemically unwell, may be dehydrated. Usually requires admission for IV antibiotics, fluids, analgesia and steroids are often used.
- Very unwell patients – use your common sense and admit anyone who is very unwell, has stridor or upper airways obstruction (both uncommon).

Note:

- For patients with a sore throat who are taking disease modifying anti-rheumatic drugs (DMARDs), Carbimazole or on chemotherapy - arrange an urgent FBC and seek specialist advice. This is due to the risk of neutropaenia and agranulocytosis
- Consider non-urgent referral for tonsillectomy if 5 or more episodes of tonsillitis per year for at least 1 year, disrupting normal activities.

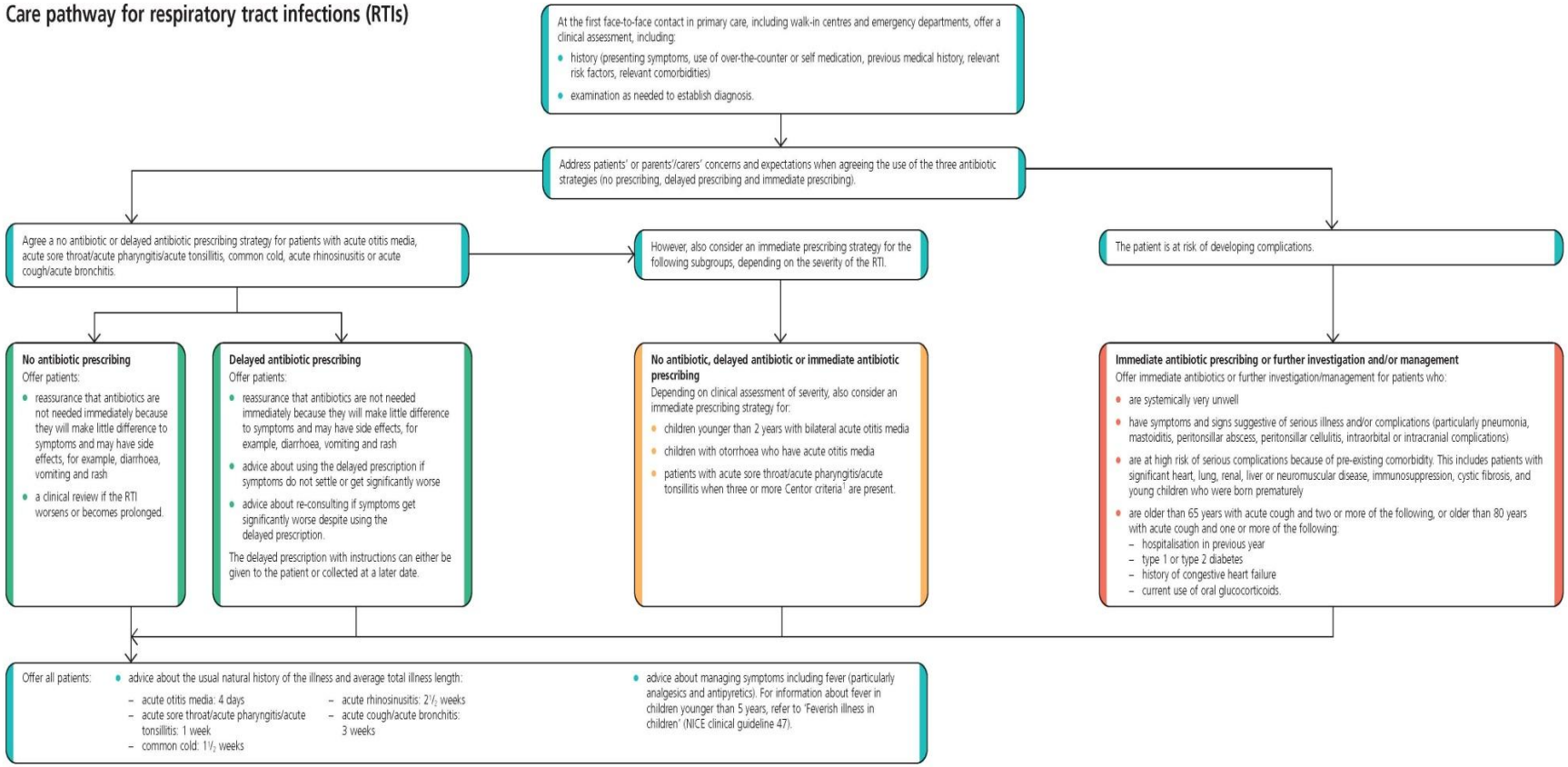
Infectious Mononucleosis
This is a common illness; over 90% of adults been exposed (often they are asymptomatic or have a mild illness only). It is more commonly symptomatic in adolescence/early adulthood, presenting with the classic triad of: fever, acute pharyngitis and lymphadenopathy. Tiredness and headache are also common and the fatigue can sometime persist 1-2 months.

Management of Infectious mononucleosis
This is usually a self limiting illness with no specific treatment. Supportive care with adequate hydration, analgesics is usually all that is required. Up to 50% of people affected develop splenomegaly and should be advised to avoid contact sports until resolved. Abnormal LFTs are also common but usually resolve with time.

Avoid prescribing Amoxicillin as this typically causes a rash in people with infectious mononucleosis hence it is advised to avoid this in treatment of presumed bacterial sore throats.

Respiratory tract infections – antibiotic prescribing | Care pathway for respiratory tract infections (RTIs)

Care pathway for respiratory tract infections (RTIs)



[1] Centor criteria are: presence of tonsillar exudate, tender anterior cervical lymphadenopathy or lymphadenitis, history of fever and an absence of cough.

NICE clinical guideline 69 Quick reference guide

Influenza

Symptoms

Fever
Headache
Aching limbs
Tiredness & lack of energy
Cough (dry)

Sometimes, sore throat, vomiting, diarrhoea

Incubation period about 2 days
Unwell for about one week – 10 days

Adults are infectious (i.e. keep shedding the virus) for 2-3 days
Children are infectious for 3-6 days

People tend to get influenza about once a decade on average
There is a seasonal peak every winter (usually in January)
An epidemic is declared when > 200 out of every 100,000 people (1 in 500) consult their GP about an influenza-like illness in a single week. (A pandemic is an epidemic occurring over a very wide area and usually affecting a large portion of the population.)

For most influenza is an unpleasant but self limiting illness but it can be more serious in high risk groups:

- Chronic respiratory disease, including asthma.
- Chronic heart disease.
- Chronic renal disease.
- Chronic liver disease.
- Chronic neurological disease.
- Diabetes mellitus.
- Immunosuppression – various causes

Common complications: otitis media & bronchitis.
Pneumonia is a less common complication.
In the UK, each winter there is an excess of deaths caused by flu; this excess varies from about 3,000 to 30,000.

Differential diagnosis

Other viral respiratory tract infections
Meningitis (always ask about photophobia & neck stiffness)
Malaria (always ask about foreign travel)

Diagnosis is confirmed by taking nasal & throat swabs but these are not taken routinely. Most of the time the diagnosis is made on the basis of the history and examination. The principle role of lab diagnosis is for disease surveillance.

The virus

Influenza is caused by an orthomyxovirus – this type of virus can infect birds, pigs & humans.
Virus contains 8 segments of RNA – these can undergo re-assortment if 2 different viruses infect the same cell.

Surface of virus has 2 proteins:

Haemaglutinin (H)	anchors virus to cell 16 forms used to prepare the vaccine
Neuraminidase (N)	digests mucus secretions allowing virus to get to host cell 9 forms inhibited by Tamiflu & Relenza

Only 3 permutations infect humans: H1N1, H2N2 & H3N2

Treatment

Rest
Regular Paracetamol +/- Ibuprofen (if not contraindicated)
Fluids

Keep away from others as much as possible, but need someone to look after you.

Anti-viral medication (Neuraminidase inhibitors) – only given during an epidemic when certain requirements met, or when there is an pandemic

Oseltamavir (*Tamiflu*) – tablet, 75mg twice a day for 5 days (contra-indicated in pregnancy)
Zanamivir (*Relenza*) – inhaled, 5mg twice a day for 5 days

These neuraminidase inhibitors reduce the duration of the illness by 1 to 1½ days, but only if given within first 24 hours of illness.

Prevention in UK

Vaccination programme in October-December every year, delivered at GP surgeries.
Vaccine is prepared according to guidance from WHO on which strains are likely to be in circulation. 3 strains are selected for the vaccine each year. In the northern hemisphere the selection is made in February.

Vaccine is offered to:

- Everyone over age of 65
- Residents of long-stay institutions such as nursing homes
- Front line health professionals, such as GPs
- Those under 65 with certain chronic illnesses (at risk patients)
    - Diabetes
    - Chronic lung disease (including asthma requiring treatment with inhaled steroid)
    - Chronic heart disease
    - Chronic kidney disease
    - Chronic liver disease
    - Chronic neurological disease (e.g. stroke, post-polio syndrome)
    - Those who are immunosuppressed
- Pregnant women
- Carers

Vaccine is given as an i.m. injection (usually deltoid)

Contraindications to vaccination:

- Egg allergy (because it is cultured in eggs)
- Guillain-Barre
- Previous hypersensitivity to influenza vaccine

Prophylaxis after close contact with someone who has flu

Neuraminidase inhibitors can be given as prophylaxis to the following groups if they haven't been vaccinated (or if there is a poor match of the vaccine to the circulating strain)

Household/close contacts* of a confirmed/probable case

- who are at high-risk for complications of influenza (e.g. chronic illness, over 65yrs)
- children younger than 5 years old
- pregnant women

*Close contact = 6 metres – during infectious period (1 day before-7 days after illness onset)

Antibiotic prescribing in primary care

- 25% of the population will visit their GP annually with a respiratory tract infection (RTI)
- 60% of antibiotic prescribing in primary care is for RTIs
- Antibiotic prescribing is increasing and not always appropriate

Why are antibiotics not usually appropriate for URTIs?

- May be viral
- Usually mild symptoms
- Discourages self/home management
- Promotes expectation that antibiotics are needed
- Risk of side-effects/allergy
- Increases resistance
- Cost
- Usually self limiting illnesses with short duration

Note:

- A thorough history and examination will usually give the diagnosis without needing further investigations
- Absence of evidence for using symptoms and signs to help distinguish viral from bacterial illnesses
- Prognosis of illness is more important than the diagnosis
- There is a raft of research is underway to see if symptoms and signs can be used to distinguish illness that may have a poor outcome (e.g. hospitalization) from illness that is likely to have a good outcome (e.g. self recovery).

- Patients may know antibiotics don't treat viruses but differ in their perception of "viral illness" – Explain and give experience
- Have strategies for explaining why antibiotics may not be needed.
- Good communication skills are vital – see 10 top tips (study guide)
- Give information about what to expect and when to reconsult for this and future illnesses
- Always 'safety net'.

Top Tips for antibiotic prescribing in primary care

There are lots of reasons why we prescribe antibiotics: we don't want patients to experience potential complications of infectious diseases, rising patient expectations and we don't like to dissatisfy our patients. However many of us would like to minimise our antibiotic prescribing for conditions where antibiotics are not strictly necessary. Here are 10 tips to help in doing this:

1. **Ask the patient if s/he is expecting an antibiotic**

Studies have shown patients who state prior to the consultation that they expect an antibiotic are more likely to receive one, even when the clinician does not think they are warranted.

Studies have also shown that clinicians are quite inaccurate if they try to guess which patients expect an antibiotic.

2. **Reassure the patient that URTIs are a normal part of life**

Average adult experiences 4 to 6 infections per year (children 6-8).

3. **Tell the patient what to expect regarding the natural history of their condition**

Setting realistic expectations as to how long the symptoms may last is likely to reduce unnecessary consultations.

4. **Offer advice about symptom relief**

Advice, rest, plenty of fluids, Paracetamol/Ibuprofen. Explain to parents that they are doing all the right things for their child – this can be very reassuring. It may be appropriate to challenge misconceptions that antibiotics were responsible for curing symptoms during a previous infection.

5. **Discuss clinical prediction tools e.g. Centor criteria. Give the patient a leaflet.**

6. **Discuss the advantages of prescribing**

For most patients with RTIs there are few if any meaningful advantages to prescribing. See the notes above and NICE guidelines regarding who should be offered an immediate prescription.

Certain patient groups may benefit from antibiotics due to high risk of complications e.g. pre-existing heart disease, cystic fibrosis

7. **Discuss the disadvantages of prescribing**

Side effects, anaphylaxis, clostridium difficile infection.
Antibiotic resistance – increasing numbers of studies are demonstrating direct links between antibiotics prescribed in primary care and the subsequent development of bacterial resistance of patients in primary care. One study has shown that resistant infections last for longer and increase consultations.

8. **Consider a delayed prescription**

Shown to be effective for acute otitis media, sore throat, acute bronchitis and conjunctivitis. Advise the patient to only take the antibiotics if the condition is worsening and be careful not to advise use 'in a couple of days if no better' as most patients will not be better within this time.
There are no reductions in patient satisfaction with this strategy.

9. **If prescribing, offer the shortest course possible and use a narrow spectrum antibiotic**

Evidence shows that the degree of antibiotic resistance increases with every milligram of antibiotic taken, so courses should be the minimum necessary to treat the infection.
Broad spectrum antibiotics such as Cephalosporins and Quinolones will kill a broad range of 'healthy' bacteria leaving space for colonisation of resistant bacteria to cause potential infection.

10. **Offer review if the underlying condition is worsening**

Never forget to safety net!

8m. Earache

Earache is a common presenting condition in primary care. It may be due to a local cause, most commonly otitis media or otitis externa, or referred pain. Causes of pain referred to the ear include:

- Dental abscess via the auriculo-temporal branch of the trigeminal nerve
- Tonsillitis or carcinoma base of tongue via the glossopharyngeal nerve
- Herpes/Ramsey Hunt syndrome via the facial nerve
- Carcinoma of the larynx via the auricular branch of the vagus nerve.

Acute Otitis Media (AOM)

AOM is infection of the middle ear, characterised by the presence of a middle ear effusion and the signs and symptoms of middle ear inflammation.

Signs of a middle ear effusion include bulging of the tympanic membrane (TM), an air-fluid level behind the membrane and otorrhoea (discharge).

Middle ear inflammation causes redness of the TM and otalgia (earache).

Who gets it?
- 75% cases under age 10y.
- Peak incidence between 6 months and 15 months old.

Risk factors include:
- Passive smoking
- Nursery/day care attendance
- Formula milk
- Craniofacial syndromes e.g. cleft palate, Down's syndrome
- Male
- Genetics

It is caused by bacteria (Strep pneumonia, Haemophilus influenzae, Moraxella catarrhalis) and viruses; commonly both are present.

Symptoms

Acute onset of earache or in small children, non-specific signs such as tugging at ear, fever, crying and unsettled, poor feeding).

Examination findings – red, yellow or cloudy TM
(+/- bulging, an air-fluid level, perforation & discharge (otorrhoea).

Management

1. Treat pain – Paracetamol/Ibuprofen
2. Consider whether an antibiotic is indicated – Amoxicillin or Erythromycin for 5 days

Antibiotic prescription is not routinely recommended for AOM. 80% cases recover in around 3 days with no antibiotics. There is a risk of adverse effects from antibiotics such as vomiting, diarrhoea and rash, in addition to increasing resistance. See the section on URTI for tips for antibiotic prescribing. For many people appropriate management is watchful waiting, with either no antibiotics or a delayed prescription to use if symptoms do not improve within 4 days.

Offer immediate antibiotics if:

- Under 3 months age (and have low threshold for admission)
- Systemically very unwell
- People at high risk of serious complications due to other health problems
- People who have had symptoms for 4 days without improvement

Consider immediate antibiotics in children under 2y with bilateral symptoms and those with perforation/ otorrhoea.

3. Consider whether an admission or a referral is indicated

    - Children under 6/12 with high fever, consider admission.
    - Suspected complications – mastoiditis*, meningitis
    - Repeated AOM in adults may be sign of nasopharyngeal carcinoma (unilateral epistaxis, cervical lymphadenopathy, persistent effusion between episodes)
    - Referral may be needed for people with recurrent AOM, e.g. 3 episodes in 6 months or unresolving perforation

* Mastoiditis – a rare complication presenting with pain, tenderness and swelling in the mastoid region which may be red, and the patient can be quite unwell. Suspect if >10 days of discharge. Urgent referral is needed for assessment, imaging and IV antibiotics. If untreated, it can result in facial palsy, meningitis or abscess

Treating fever in children under age 5

Health professionals in the past have recommended that a child with a high temperature should have antipyretic agents (Paracetamol, Ibuprofen) to lower it. However evidence has now shown that antipyretic agents do not prevent febrile convulsions. Guidance from NICE (2007) states that we should not give medication with the sole aim of reducing fever but use Paracetamol or ibuprofen to treat symptoms and give if the child is distressed.

NICE guidelines feverish illness in children - http://guidance.nice.org.uk/CG160

- Measure & record the following – see normal values in box below
    - Temperature (tympanic or electronic axilla)
    - Heart rate
    - Respiratory rate
    - Capillary refill time
- Assess for signs of dehydration - prolonged CRT, abnormal skin turgor, abnormal respiratory pattern, weak pulse, cool extremities.

Age	Respiratory rate (breaths/minute)	Heart rate (beats/minute)
<2 months	<60	
2-12 months	<50	<160
1-5 years	<40	<120
6-8 years	<30	<110
9-14 years	<20	<110

Measures to reduce fever:

- Tepid sponging is not recommended.
- Do not over or under dress a child with fever.
- Do not routinely give antipyretic drugs to reduce body temperature (no evidence this prevents febrile convulsions)
- **Consider Ibuprofen/ Paracetamol if child is distressed/unwell**
- Based on Bristol research (PITCH study) NICE (2013) now state to use alternating antipyretics if required, but don't administer Ibuprofen/Paracetamol together.
- Take the views and wishes of parents and carers into account
- Safety net: Provide the parent/carer with verbal and/or written information on warning symptoms and how further healthcare can be accessed (and document this has been done)
- Arrange follow-up if necessary

Measuring temperature

It is expected that the student will

- Understand the theory behind each type of thermometer that is used in clinical settings
- Understand the sources of error when using each type of thermometer
- Know the reference range for the temperature of adults and children
- Understand the significance of a low or high temperature
- Know how to document temperature on a patient's notes/chart

Step-by-step guide to measuring temperature

1. Explain procedure and obtain consent
2. Ask patient if they have earache or any ear problem
3. Wash hands
4. Check thermometer is working properly
5. Apply new cover for ear probe
6. Hold pinna & pull backwards and upwards (for adult)
7. Insert ear probe into auditory canal and press record button for correct length of time
8. Share reading with patient
9. Dispose of ear probe
10. Document reading in notes
11. Interpret reading and discuss with patient
12. Decide if further action/investigation is necessary

Otitis Externa

Otitis externa is a diffuse inflammation of the skin lining the external auditory meatus (outer ear canal). It is one of the most common pathologies in the ear and is more common in people who have a narrowed ear canal or if the canal is continually wet e.g. swimmers, people on holiday in hot climates.

Causes of otitis externa

- Infection - Bacteria (particularly staphylococcus), Fungi (Candida, aspergillus)
- Allergy - Eczema, contact allergy to cosmetics
- Iatrogenic - Frequent ear syringing, especially when it causes trauma

Precipitants of otitis externa

- Moisture – swimming, perspiration
- Foreign objects in the ear canal – cotton bud, hearing aids
- Trauma to ear canal
- Chronic skin diseases – eczema, psoriasis

Clinical features

The main symptom is irritation in the ear. Commonly patients complain of itching which may be severe, sometimes scanty discharge and if secondary bacterial infection occurs there may be pain which can be severe. Mild hearing loss is sometimes incurred.
Examination findings include tenderness at the meatus, especially on movement of the pinna. The canal often appears swollen with signs of dermatitis (erythema, thickening of the skin) and meatal debris, or discharge. Cervical lymphadenopathy can also occur.

Management

Usually no investigations are needed. If initial treatment fails, take a swab of any discharge for M,C+S (microscopy, culture and sensitivity).

1. General measures – stop using cotton buds, use olive oil for wax removal, remove any aggravating factors, consider screening for diabetes.
2. Analgesia
3. Topical ear preparation for 7 days:
    a. Aminoglycoside antibiotic & corticosteroid
    b. Non-aminoglycoside antibiotic & corticosteroid
    c. Antibiotic only drops (gentamicin contraindicated if tympanic membrane perforation)
4. Aural toilet – if symptoms persist. This is microsuction to remove infected material. Some GPs/specially trained nurses can do this, but many patients will need referral to an urgent ENT clinic for this.

Indications for referral include erysipelas, malignant otitis externa (osteomyelitis, this is rare) or if symptoms not controlled.

8n. Substance misuse

Care of Drug Users in Primary Care

GPs come into contact with users of a wide variety of drugs and all GPs provide general medical services to drug users. Some practices also offer enhanced services and prescribe substitute opiate drugs. These practices work closely with specialist drug workers to provide packages of care for addicts.
GPs and primary healthcare teams are increasingly likely to be to be consulted by drug users and are often a first point of contact. The initial assessment is the first important step in agreeing a future plan and should include the following:

- Establish type of drug use – experimental, recreational, problematic or dependent?
- Identify which drugs and which route
- Offer brief interventions that provide specific advice on risk and harm reduction
- Assess patient's motivation to address problems or concerns about their drug use
- Determine if the drug use is causing health or social problems

The sooner treatment for drug use starts the better the outcomes are likely to be but it is important to establish a full drug and medical history, examine the patient and screen for drug use first. Screening is done by urine testing. A sample is usually sent to a laboratory for analysis. This is done to confirm that the patient is using drugs and to show which ones. Although it will show the range of drugs being used it does not give information of quantities being used. If the user is dependent opiates persist in urine up to 24 hours, methadone up to 48 hours, cocaine 24-48 hours. If urine is negative and there is no clinical evidence of withdrawing, the user is not dependent.

Assessment of physical health: Medical problems (acute or chronic); complications of drug use such as abscesses, septicaemia, fits, chest or heart problems; hepatitis/HIV status; known; Prescribed medication history.

Assessment of mental health: depression or psychosis; psychiatric history inc history of overdose, accidental or deliberate.

Assessment of social situation: Using/non-using partner or friends; Any children – details needed; Accommodation; Employment history; Financial situation.

After the initial consultations for assessment by both the GP and usually a drugs counsellor the management plan should be to set realistic goals and agree follow up times. This may start with addressing areas of risk such as reducing illicit drug use, reducing levels of injecting and sharing. Specific treatments are available for opiate users and these are prescribed in Primary Care for suitable patients, alongside regular counselling and support from a drugs counsellor.

Opiate substitute prescribing

Untreated opiate dependency, particularly heroin use, can cause significant physical problems but also damage to the general life of the user and their families. The cost of the drugs is high and can drive the user towards criminal behaviour and time in prison. The 'harm reduction approach' has been developed in response to the serious consequences of opiate dependence, the difficulty many users have in becoming drug free and the chronic relapsing nature of the condition. The harm reduction goals include cessation or reduction of illicit drug use, cessation of injecting, reduction of morbidity. These goals can be achieved by using substitute opiate medication on a maintenance basis. The drugs commonly used are Methadone and Buprenorphine, both synthetic opioids with a long half life. They are taken once daily to give relatively stable blood levels, avoiding euphoria and

withdrawal. The doses are gradually titrated up to abolish withdrawal symptoms. Prescriptions are usually initially given to a pharmacist to dispense daily, with supervised consumption. Some patients may remain on opiate substitutes long term.

Resources

www.talktofrank.com – drugs advice for young people

www.smmgp.co.uk – substance misuse management in general practice

www.bdp.org.uk – Bristol drugs project

Alcohol Use Disorders

All GPs come into contact with patients who have problems with alcohol. Some patients will actively seek help with their drinking, others may be discovered by screening when attending for other problems, such as hypertension. It is important to identify this group of patients and have strategies to help them.
Harmful drinking is defined as a pattern of alcohol consumption causing health problems directly related to alcohol. This could include psychological problems such as depression, alcohol related accidents or physical illnesses. These people may go on to develop hypertension, cirrhosis, heart disease and some types of cancer.
Alcohol dependence is characterised by craving, tolerance and a preoccupation with drinking and continued drinking in spite of harmful consequences. It affects 4% of people in England between 16 and 65 years old. Over 24% drink alcohol in a way that is potentially or actually harmful to their health or well being.
According to Alcoholics Anonymous, alcohol is involved in 15% of road accidents, 26% of drownings and 36% of deaths in fires.

AUDIT Questionnaire

Use the following link to complete this screening questionnaire designed to pick up early signs of harmful drinking. It is commonly used in general practice.

http://www.patient.co.uk/doctor/Alcohol-Use-Disorders-Identification-Test-%28AUDIT%29.htm

If a patient has been identified as having as alcohol-use disorder the GP can:

- Screen for health problems related to alcohol (note checking LFTs is not a good screening test for detecting harmful drinking)
- Offer brief interventional therapy
- Give details of Alcoholics Anonymous and other local counselling resources/charities
- Consider a community-based assisted withdrawal (often prescribing reducing dose of chlordiazepoxide). This needs to be carefully planned, ensuring the patient has adequate support
- Refer to NHS specialist services for detoxification and counselling

Resources

www.alcoholics-anonymous.org.uk

http://www.addictionrecovery.org.uk

8o. Dysuria in Women

Causes

- UTI (commonest bacterial infection managed in primary care)
- Chlamydia (obligate intracellular bacteria)

Incidence

Urinary tract infections are extremely common. Analysis of mid stream sample is one the tests most commonly requested by GPs. By the age of 24 years 1 in 3 women will have had a UTI. Its annual incidence increases with age.

Incidence of Chlamydia has increased over last decade. Rates are highest in women age 16-24 & in men age 20-24. Amongst those screened for Chlamydia in England 1 in 10 people under 25 have Chlamydia.

Ask about

- Frequency of micturition. Increased frequency of small amounts in UTI
- Appearance of urine: is there any blood or grit in it?
- Fever
- Abdominal pain: suprapubic pain consistent with simple UTI
  loin/groin pain consistent with pyelonephritis
  iliac fossa consistent with pelvic inflammatory disease
- Nausea
- Sexual history
- Contraception
- Any possibility of pregnancy?
- Pain on intercourse (dyspareunia)
- Inter-menstrual & post-coital bleeding
- Vaginal discharge
- What over the counter (OTC) treatments has the patient tried already?

Useful examination

- Pulse & temperature
- Abdominal palpation
- Sometimes vaginal examination

Near patient tests

<u>Urine dipstick</u>
It's useful to test for the presence of nitrites, leucocytes & blood
Presence of nitrites alone has positive predictive value of about 80%
Presence of nitrites + leucocytes/blood has positive predictive value over 90%
But the absence of nitrites/leucocytes/blood does not rule out the possibility of a UTI if the patient has symptoms.
Urine can be tested for chlamydia (not widely available because of cost)

<u>Pregnancy test</u> – if any doubt

Step-by-step guide to performing urinalysis

1. Explain procedure to patient and obtain consent.
2. Supply appropriate receptacle, with name label, to patient.
3. Check that reagent strip has not passed expiry date.
4. Ask patient when urine sample was passed.
5. Put gloves on.
6. Observe colour, opacity and odour of urine.
7. Remove reagent strip from bottle, replace lid immediately and check that test pads are the correct colour at the start.
8. Dip the reagent strip into the sample of urine, ensuring that all the test pads are covered.
9. Remove reagent strip immediately and tap off excess urine.
10. Replace lid on urine sample bottle.
11. Hold the reagent strip horizontally and wait the appropriate time before reading each result.
12. Use stopwatch to record time accurately and hold colour key next to the reagent strip.
13. Decide if urine sample needs to be sent to laboratory and then dispose of reagent strip and gloves. Dispose of urine in sluice or return to patient.
14. Wash hands
15. Explain results to patient and decide what further action is necessary.
16. Record results accurately in notes.

Laboratory tests

Microscopy, culture & sensitivity of mid-stream sample of urine (MSU/MSSU).

- In the UK a UTI is diagnosed by presence of leucocytes and the growth of $>10^5$ colony forming units/ml on culture. In the rest of Europe the threshold for diagnosis is $> 10^3$ cfu/ml.
- Contamination is detected by presence of epithelial cells.

How to collect a MSU

- Clean peri-urethral area by wiping perineum from front to back
- Hold labia apart while passing urine
- Discard first portion of urine & catch middle portion

Storage of MSU

- May be kept in fridge (at 4^oC) for up to 48 hours but is then only suitable for culture.

Common organisms causing UTI

- *Escherichia coli* (commonest)
- *Staphylococcus saprophyticus*
- *Proteus mirabilis*

Sterile pyuria is seen with chlamydia.

To test for Chlamydia:

- Women: low vaginal swab for nucleic acid amplification test (NAAT)
- Men: first-pass urine sample for NAAT

Treatment

Uncomplicated* UTI in woman

Three day course of *Trimethoprim* 200mg bd. or *Nitrofurantoin* 50mg qds.

Side effects from Trimethoprim are rare. Nitrofurantoin is more likely to cause nausea and vomiting. 20% of UTIs may be resistant to Trimethoprim and local guidelines should be checked.

*An uncomplicated UTI is one caused by a typical pathogen in a person with a normal urinary tract and normal renal function.

UTI in pregnancy

Seven day course of *Nitrofurantoin* 100mg m/r bd or 50mg QDS or *Trimethoprim* 200mg bd

Both Nitrofurantoin and Trimethoprim can be used in pregnancy for short term use, however the advice is to avoid Nitrofurantoin in the third trimester and Trimethoprim in the first trimester. You should not prescribe trimethoprim if patient is taking a folate antagonist.

Acute pyelonephritis

Broad spectrum antibiotic is required, check local guidelines but example is a seven day course of *ciprofloxacin* 500mg bd.

Most of the time GPs start patients on a course of antibiotics without waiting for the result of a midstream sample of urine. So why should they bother to send an MSU at all?

Advantages of sending MSU to lab	**Disadvantages of sending MSU to lab**
It may show that patient does not have a UTI	It takes at least 24 hours to get a result
It tells the GP what antibiotic to switch to if the patient is not responding to the first antibiotic	It is expensive
It may help the GP to decide which antibiotic to use when treating future UTIs in the same patient	Most of the time it doesn't affect management
It enables microbiologists to monitor rates of resistance	

An excellent and interesting editorial on this question was published in the British Journal of General Practice in 2010: Hay A. Managing UTI in primary care: should we be sending midstream urine samples? *Br J Gen Pract* 2010; **60**(**576**):479-480.

If you do send a mid stream sample of urine ask patient to phone for result 2 days later (she may need different antibiotic or it may not be a UTI)

If the patient is symptoms of suggestive of acute pyelonephritis tell them that they must contact a doctor if they are not starting to improve within 24 hours; they may need admission to hospital.

Chlamydia

- One week course of doxycycline 100mg twice a day or single dose of azithromycin 1g (more convenient but more expensive). Give erythromycin if pregnant/breast feeding. Azithromycin is available over the counter if the patient is over 16 with proven Chlamydia and no symptoms but it is more expensive than getting it on prescription.
- Contract tracing of all partners within previous 6 months
- Consider screening for other STIs
- Offer leaflet
- Repeat testing not necessary unless symptoms persist or re-infection suspected (NAAT may remain positive for 6 weeks after treatment)

Refer if

- Patient has recurrent or unexplained cystitis especially associated with microscopic haematuria
- Patient fails to respond to treatment
- Patient has painless macroscopic haematuria at any age, or is over 50 with unexplained microscopic haematuria

9A. Consultation Log

Use these tables to record your reflections on consultations you observe, and to record comments from your GP on your consultations. It is useful to have a record of your learning especially to share with your 2nd GP tutor if you have 2 separate attachments.

Consultations you have observed

No	Date	Summary	Reflection	Consultation skills used	Any vertical themes?
e.g.	*03/9/2013*	*Woman brings child with rash. Rash is almost invisible. Turns out woman is not mother – suspects birth mother of neglect.*	*Clearly the woman is projecting her negative feelings about birth mother onto doctor*	*Explored concerns and expectations and great way GP brought out true agenda*	*WPC: ICEBERG*
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

9B. Consultations observed by GP Teacher

No	Date	What happened?	What have I learned from this?	What will I do (read/practice) to improve my next consultation?
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Handover Form

Any comments:

Clinical Knowledge

Consultation Skills

Goals