Long Term Conditions

Long Term Conditions

A Manual For General Practice Nurses

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Acknowledgments

This book is a collaborative effort. My heartfelt thanks go to all the practice nurses who have generously given me their time, their ideas and their encouragement.

I am especially grateful for the expert input of the Contributing Authors and Editors, whose names are given at the end of the chapters. Their invaluable comments and feedback have been incorporated into the final version, although they are not responsible for any errors or omissions.

The stunning artwork on the front cover was very kindly provided by the Coventry artist, David Pyke. It is a portrait of his grandmother, entitled "Memories".

My gratitude also goes to the generous and talented cartoonists who have contributed their work for this book, Felix Bennett and Kevin Smith (Kes).

Special thanks are due to my smart and insightful publishing team: Sarah Earle-Marsh, Jude Simpson and Dee Frankish. I have also received great help and advice from Steve Passiouras at bookow.com.

My family have cheered me on from the start and I am immensely grateful to them all.

For his unfailing support, I thank my husband Charles, to whom this book is dedicated.

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Preface

Long Term Conditions

This handbook is intended for nurses working in British general practice, to help them care for adult patients who have long term conditions. These are health conditions which can be treated but not cured. They affect an enormous number of people and account for a large part of our workload in primary care.

I was a GP in Coventry until I retired in 2015. My experience, of course, is not sufficient to write this book, but I have received tremendous help from the expert nurses who have reviewed individual chapters.

I was involved in the training and assessment of young doctors for twenty years, as a GP trainer and as an examiner for the Royal College of General Practitioners. I observed that when junior doctors move from hospitals to general practice, they find the transition challenging, but they receive structured support and guidance for several years. By contrast, the training for practice nurses seems to me piecemeal, although many of their responsibilities are similar. I look forward to a day when nurses entering general practice receive as much support as doctors doing the same.

Meanwhile, this book is a quick method for new practice nurses to learn the basics about long term conditions. It may also be useful for the wider

healthcare team, including more experienced nurses, student nurses and healthcare assistants.

The text explains the general principles of good care, so is suitable for all four nations of the United Kingdom, regardless of local performance targets. It has suggestions to help nurses meet revalidation requirements. The book is meant to be easy to read, although the material is underpinned by rigorous academic research.

Médecins Sans Frontières

www.msf.org.uk/about-msf

The book is also a money-making venture. I previously raised money for Médecins sans Frontières (MSF) by sponsored cycling and now I have turned to sponsored writing. Please will you sponsor my year as an author, by following this link www.msf.org.uk/make-a-donation

Every donation, however small, will help MSF. In addition, any author's profits will be sent to MSF.

If you have time for a speedy good deed, please go to www.amazon.co.uk, leave a favourable review and buy copies for your colleagues and friends. Then we can make even more money for MSF. For detailed feedback on the text, you are very welcome to contact me. Updates will be posted on the website.

MSF delivers emergency medical aid to people affected by conflict, epidemics and disasters, in countries most of us avoid. Thank you very much for supporting them and their patients.

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Disclaimer

Clinicians should use their own judgement when interpreting information in this book and should decide how best to apply the information to the management of their patients. The book is not exhaustive and may not reflect the most recent medical research.

The responsibility for a patient's care lies solely with the healthcare professional responsible for that care. We cannot be held responsible for any errors or omissions in the book, nor do we have any control over the content of external links.

Any patient reading this book is advised that general recommendations may not apply to them, so they should seek individual advice from a health professional.

The information in this book will gradually become out-dated. Anyone interested in producing a future version (as a book, a series, a website or an e-learning package) should please send an email to `LTCpracticenurses@gmail.com`

Chapter One
Consultation Skills

"They may forget what you said,
but they will never forget how you made them feel."

Attributed to Carl W. Buehner a century ago[1]
and taught to sales staff ever since.

Interpersonal Skills

Introductions

How best to start? Dr Kate Granger was frustrated by the number of hospital staff who failed to introduce themselves, when she was having treatment for cancer[2], so she started a campaign called "Hello, my name is…"

We should all introduce ourselves with our name and role. You can invite the patient to sit down, while smiling and making eye contact, but a wise clinician will never say, "How are you?" as a greeting.

This can be a good moment to find out what the patient likes to be called. One method is to say, "Hello, my name is Jo, I am one of the nurses here. May I just check your name please?" The answer might be "Mrs Waite"

and then you know how she wishes to be addressed. Or the patient might say, "My name is Patience Waite, but everyone calls me Pat."

To help staff say the correct name in future, it is useful to insert the patient's preferred name when typing free text, for example "Pat can walk faster now she has started salbutamol." Your computer system may let you enter the preferred name onto the patient's registration details.

The term "triadic consultation" means there are three people taking part in a consultation: you, the patient and a third person, who may be an interpreter, patient, relative or carer. You will need to check the name and role of this person. At the start, it helps if you arrange the seating to enable direct eye contact with the patient, with the other person equally involved or kept peripheral. When a parent is present, you can try speaking to the child first and then involve the parent. With an interpreter, try to keep eye contact with the patient throughout.

Agreeing an agenda

The next stage in the consultation is to agree an agenda, led by the patient. You could say something like "What has brought you to see me today?" Some clinicians just say "Now…" and wait. If you know the reason for the appointment, you could acknowledge that and then ask "Where would you like to start?"

To confirm the agenda, you could say "It sounds like we should talk about your breathing today, and I know you are due for a thyroid check. Shall we deal with both of those over the next fifteen minutes? Is there anything else you feel is important to discuss today?"

Then you might say "What has been happening recently with your asthma?" This is called an open directive question, as it does not restrict the patient to a yes/no answer, but focuses their attention on the topic. A closed question ("Has your asthma been OK recently?") tends to shut down good communication, one problem being that people may prefer to answer a closed question with "yes" rather than "no".

Active listening

Next, you stop talking and you wait. Silence will allow the person to speak about difficult emotions, worries or queries. You will probably encourage the patient by nodding or smiling, but you must not interrupt.

This is the "golden minute" of the consultation, the key to patient-centred consulting, where the patient's needs take precedence over yours. Hardly anyone will talk for longer than one minute, if given freedom to express their concerns without interruption, and you will gain a clear picture of the patient's needs.

You will have the opportunity to listen attentively, which is necessary to identify the ideas, concerns and expectations[3] (ICE) of the person alongside you. In this way, you will come to understand and respect them as an individual, which is the basis of good general practice.

If the patient starts to talk about other matters, you can gently draw them back to the agreed agenda. All the while, you will be gaining information about their way of life, the psychosocial context, which has a profound effect upon human health.

Data Gathering

Patients who go to hospital are bombarded with questions about their presenting complaint, past medical history, drugs, allergies, family history, and social history. We can work much faster in general practice, because most of this information is already summarised in the medical record. You need to glance through the history before the patient enters the room and it is sometimes worth flagging up to the patient that you have done so: "I have looked at your records and I know you had a very difficult time in hospital last month."

With background knowledge, the computer will intrude less into the consultation and you can give full attention to the reason the patient has attended today. The computer will seem less alienating (and you will appear more engaged) if the patient can look at the screen with you.

A good nurse is interested in how people tick, and wants to understand their experience. You must consciously make an effort to discover the patient's ideas, concerns and expectations (ICE). Having obtained this information, you will then be well placed to treat the patient as an individual and address their particular concerns.

For example, you may attribute a patient's fatigue to her poor diabetic control. It is helpful to ask directly "What are your thoughts about being so tired?" because patients often need permission to speak of their thoughts and deepest worries. The patient may know her fatigue is connected with on-going domestic turmoil, or she may fear it is the first sign of an undiagnosed cancer. Overwhelmed by troubles at home or expecting tests for cancer, she could dismiss your suggestion to increase the metformin dose.

Leading questions should be avoided when possible. For example, you could ask "Does walking make your pain worse?" which invites a yes/no answer. It is better to say "Does anything make the pain worse?"

Verbal and non-verbal cues

As you develop the skills of concentration and active listening, you will learn to identify and respond to cues. Cues are hints of important underlying emotions or concerns. They can be verbal cues, such as "I know about diabetes because of my mother" or they can be non-verbal, perhaps a sigh, a hesitation or just a downward glance.

It is important to acknowledge, reflect and clarify these cues, to help you and your patient work together towards greater understanding of their

health problem. You might say, "You mentioned that you know about diabetes because of your mother…" and then pause for the person to reply. Or "You looked thoughtful when you were telling me about…"

When patients are obviously upset, a good way to show empathy is to name the emotion and then clearly demonstrate that you have understood what they are saying. "I can see you are angry about the situation, and no wonder. It sounds like a dreadful experience". This technique shows you have heard and will often allow the consultation to progress.

Cues can be overt or subtle and are sometimes best observed on a video recording. If you work in a training practice, the trainer might help you make a video of some consultations, with the patients' consent, of course. Many clinicians feel anxious about video analysis of their work, but GP trainers have expertise in giving constructive feedback and the process can be an excellent way to hone and develop consulting skills.

Difficult issues

Sometimes patients need to talk about very sensitive and personal issues, examples being domestic violence, sexual matters [4] and death[5]. A nurse who knows the patient well may be the best person to initiate the discussion, but the consultation may be challenging.

How best to start a conversation about domestic violence? You will need to see the victim alone. You might say "Violence at home can have a big impact on health. Does your partner ever treat you badly?" The term "partner" is gender neutral. You need information about local resources for people suffering domestic violence and you can advise a victim to have an escape plan, with all their important documents kept in one envelope.

The Sexual Respect Toolkit `www.sexualrespect.com` has guidance to help us talk about sex with our patients. If necessary, the nurse can

then give information about local organisations that provide psychosexual counselling, such as Relate.

When patients are approaching the end of life, you might say, "Have you thought about what sort of treatment you would want, if your health gets worse?" and "Does someone help you with decisions like that?" The answers should be entered onto the medical record and/or the advance care plan.

The nurse should remember that patients with long term physical conditions will often suffer from anxiety or depression. This book has a chapter on mental health, with suggestions about suitable questioning.

Data collection includes sensitive enquiry about risky activities, with a view to risk modification for the future. There is further information about health promotion in the next chapter.

Very occasionally, a patient's behaviour may be unpredictable, making you feel uneasy. Every consulting room should be arranged so the clinician can easily escape, past the patient and out of the door. There should also be a panic button, on your desk or computer screen, so you can call for help in the event of any emergency. You can test the system when new staff have their induction.

Telephone consultations have particular challenges. You will find some tips for phone consultations in the appendix at the end of this chapter.

Clinical Management

In patient-centred consulting, we try to negotiate a shared management plan. This requires understanding from both parties.

The nurse must speak in plain English, using words the patient will understand. Less is more. Choose a few words wisely. There is no point in

speaking at length, as the patient will forget most of what you say, you will get tired and your appointments will over-run.

Aim to back up your words with leaflets or websites, such as the NHS Choices website www.nhs.uk, which lists foreign language resources on its home page, or www.patient.co.uk. As you read these resources yourself, you will gradually become better at explaining health problems in simple language.

If you have concerns about a patient's ability to read, you can ask, "How would you feel about written information?" This is a relatively non-stigmatising enquiry, as it allows for difficulties with language and eyesight, as well as learning disability or lack of education.

We used to talk about "compliance" with treatment, in other words, the patients did as they were told – or so we liked to think. Now we use the word "concordance" to describe an agreement between patient and clinician, regarding treatment options. We try to enter into a dialogue with the patient, rather than telling them what to do. Your patient is much more likely to follow your advice, if they understand the reason for it.

This requires the nurse to explain the options. There are always options available and the patient should be encouraged to make an informed choice. Their options will include no treatment, non-pharmacological approaches and drugs. We should take reasonable care that the patient is aware of the risks of a proposed treatment, and has information about any suitable alternatives.

The choice of treatment will depend upon the patient's individual circumstances and how they see the situation. Sometimes a team will exclude a person from the practice's quality indicators, having decided with the patient or their family that certain management options are not appropriate. This often happens as a patient approaches the end of life,

and requires an explanation on their medical record, for example, "excluded from hypertension indicators because of frailty, falls and multiple co-morbidities".

Patients on repeat prescriptions need regular review of their medication, by a trained person. Sometimes the review will involve stopping medication. This is often appropriate in elderly patients with many long term conditions, who can accumulate a multitude of medicines as the years go by. Their metabolism will have changed as they age and the drugs can interact with each other. If you notice that such a patient is overdue for a medication review, it is worth asking a prescriber to check if all the medicines are still necessary.

It is very difficult to take medicines exactly as prescribed. If a patient is muddled, the prescriber could add explanatory labels on their prescriptions, e.g. "take one tablet each morning for blood pressure". You can also suggest the patient asks their pharmacist for a Medicines Check Up. Patients or relatives can buy pillbox organisers and pharmacists will sometimes dispense in blister packs. However, none of these work unless the patient agrees they need the tablets.

Finishing the Consultation

We have considered how to say hello. You have helped the patient make an informed decision about the management options. How best to say goodbye? A summary of the discussion can be useful, to close the consultation and check you are in agreement.

Before the patient leaves, ensure you have dealt with "safety netting" and the follow-up arrangements. For safety netting, you might say "If this happens, you should call me within a few days, if that happens you should dial 999 and go straight to hospital". For serious health conditions, check

that the patient understands, perhaps by asking them to repeat back what you said.

Follow-up arrangements might be "How about you see me next week if you are not improving? If things are going well, what about seeing me in six weeks?" Note this is again a shared management plan, an invitation rather than an instruction.

Sometimes you will need to signal to the patient that time is up. You can say "We have covered a lot today, can we leave it there?" Or if time has run out, you can acknowledge it. "Our 15 minutes has come to an end. I know there are still some issues we have not had a chance to cover. I will list them in your notes, I wonder if we could look at them when we meet next week?" This approach acknowledges the time pressure, but remains patient centred and respectful.

Returning to the quote at the beginning of this chapter, do you think your patient feels better, having seen you? GP trainees use anonymised Patient Satisfaction Questionnaires to assess the quality of their consultations and you may wish to do the same.

What about the nurse, how are you feeling? Roger Neighbour has written[7] of the importance of "housekeeping" at the end of a consultation. This is the moment where you sit back and take stock, reflect upon the last encounter or make a note of something to learn. It might be a pause for coffee and a chat with other members of the team. We all need these precious moments in the day, for our own wellbeing in a job that requires us to give so much.

Consultation Models

The ideas in this chapter are based upon consultation models described in the scientific literature. We are fortunate in British general practice to have various consultation models, built upon a bedrock of thoughtful academic analysis. We have:

- the four areas of a typical consultation described by Stott and Davis [6],
- the five checkpoints of Roger Neighbour [7],
- the six phases identified by Byrne and Long [8]
- the seven tasks of David Pendleton [9]

All of these consultation models merit further study. For training purposes, the Royal College of GPs has synthesised the concepts into three categories[10]: interpersonal skills, data gathering and clinical management. This chapter has taken the same approach.

Pause for Reflection

For revalidation purposes, you will need to prepare a reflective account with the theme "prioritise people". You could think about your own consultation skills by reviewing a morning's appointments. Did you manage to identify and address the ideas, concerns and expectations (ICE) of every single patient? If not, what was the reason? For a different viewpoint, you could try agenda, beliefs and choices (ABC).

Alternatively, you could reflect upon the cues you spotted in today's consultations. Was it challenging to respond to some of the cues? Would you respond differently if a similar situation arose again?

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Further Reading about Communication with Patients

1. Cheek B. *www.gp-training.net* [Online] Available from: www.gp-training.net [Accessed 5th August 2015] www.gp-training.net/

training/communication_skills/calgary/ice.htm This link has examples of good phrases for asking about ideas, concerns and expectations. The website has extensive information about communication skills and consultation theory.

2. Tate P. *The Doctor's Communication Handbook* (5th edn) Oxford: Radcliffe Publishing 2003. This book is concise and readable. Do not be put off by the title, highly recommended for nurses as well as doctors.

3. Silverman J, Kurtz S, Draper J. *Skills for Communicating with Patients.* Oxford: Radcliffe Medical Press; 1998. Another excellent text.

Appendix – Some Tips for Telephone Consultations

Oh no, it's an answering machine! You need to be prepared for this.

It may be inappropriate to leave any message on a landline, for reasons of confidentiality. Even on a mobile, consider leaving a message without any detail: "Please could you phone Jo King at Downtown Surgery, within the next couple of days. The number is xxx". If you avoid saying the patient's name, they can claim a wrong number to keep their health problem private.

Introduce yourself very clearly on the phone. "Please may I speak to Mrs Paige Turner? Hello, Mrs Turner. This is Jo King, practice nurse at Downtown Surgery. Is this a convenient and private moment to speak to you?"

You should speak to the patient if you possibly can, because a conversation with a relative or carer is generally less helpful. Do remember to find out the patient's ideas, concerns and expectations (ICE). For good communication, telephone consultations require sufficient time.

You can encourage self-care or over-the-counter medication if appropriate, so your patient does not have to travel to the surgery. Alternatively, a prescriber can send a prescription electronically to the patient's pharmacy, perhaps for home delivery.

Housebound patients deserve healthcare at least as good as everyone else and a phone call may not be sufficient to meet their needs. A home visit may be necessary for patients who are genuinely unable to attend, but it is reasonable to say, "Is there any way you can organise transport to get to the surgery?"

Safety netting is particularly important when you have not seen the patient and you should be sure to keep a record of the advice you have given by phone.

Contributing Editors for This Chapter

Elaine Bramhall has a background in midwifery, palliative care and counselling. Based in the North West of England, she delivers training on communication skills, for individuals and organisations, through her consultancy Effective Communication Matters.

John Linsie is a retired psychologist, who lives in Coventry. He has worked in a hospital and has personal experience as a patient.

Chapter Two
Health Promotion

"Do not judge. Behind every person,
there is always a reason why they are the way they are."

Anon.

This chapter is about life-style changes to achieve better health. It covers general principles and then four of the big hitters: obesity, smoking, alcohol and drugs.

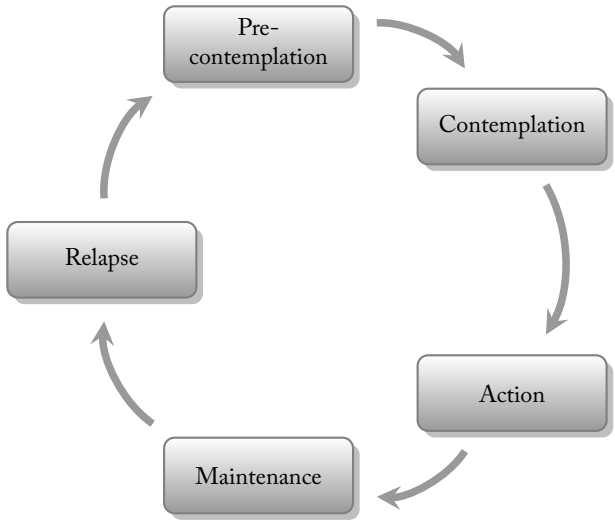
If you have a gap during a consulting session, it can be useful to review all the names on your appointment screen, to check that you took the opportunity for health promotion in every one of your consultations.

Principles of Change

Every consultation will offer opportunities for health promotion. A practice nurse with good consulting skills is well placed to encourage life-style change, having established rapport and learned about the patient's priorities, worries and health beliefs.

The next step is to establish where the patient is located in the Cycle of Change, a classification described by Prochaska and DiClemente back

in 1983[1]. Thinking about smoking cessation, they listed five stages of change: pre-contemplation, contemplation, action, maintenance and relapse.



Miller and Rollnick[2,3] used the Cycle of Change model to develop their concept of Motivational Interviewing. This method motivates people by reflection, affirmation and questioning, rather than bossy advice.

These authors highlight people's ambivalence about change, a feature of the contemplative phase. An example might be this sad response, "I know I should stop, but smoking is my only pleasure".

You can start by asking *"How important is it to you to change your smoking /drinking/weight now? Could you tell me on a scale from zero to ten, zero being not at all important and ten extremely important?"*

A convenient tool for this approach is the "Readiness Ruler", which you can make using images available online.

If the patient scores quite low, you could ask *"Why not higher?"* to determine the barriers to change. Then you can ask, *"What would help to move*

higher?" If the patient is in this pre-contemplative phase, you can offer verbal or written information and then move on, without nagging.

If they score high, they are in the contemplative phase. This is your opportunity to seize the moment and offer help. You could start by asking them how they see the benefits of change for their health.

Miller and Rollnick advise that you should use several reflective comments before further questioning. There are several different kinds of reflections and the patient may need you to essentially re-phase what they have said. You could try saying, *"You are telling me that life is pretty tough right now and giving up smoking isn't a priority"*. From here you could start to explore their current values and to determine where quitting smoking fits into this.

Another example might be in the area of weight. A patient might say to you, *"I know I'm heavier than I should be and I do try to eat healthy food, but I'm a single parent. I can't go out in the evening to the gym – I've got responsibilities"*. You could try, *"You have a lot on at the moment but it seems something is motivating you to improve your diet"*. This reflection emphasises a positive feature, so may allow the patient to talk to you about what is important to them and to build on the changes they have been trying to make.

By really listening to the patient, you are likely to boost their self-esteem and hence their confidence to make changes. Miller and Rollnick emphasise the need for "affirmation" to boost morale. So you could say something like, "That's brilliant, to have stayed off cigarettes for a week, that's the hardest part."

Obesity

It is easy to say, "How is your general health? Shall I check your weight and blood pressure today?" NICE[4] advises us to tell patients their Body

Mass Index (BMI) classification but also to recognise that surprise, anger, denial or disbelief may diminish people's ability or willingness to change. Using the Cycle of Change model, we know that next time someone measures the patient's weight, you may have prepared the person to consider change.

NICE and SIGN[5] classifications
BMI of 18.5 to 24.9 is healthy
25 to 29.9 is overweight
30 or more is obese.

NICE and SIGN[5] classify a BMI of 18.5 to 24.9 as healthy, 25 to 29.9 as overweight, and 30 or more as obese. The nurse can stress that obesity is a clinical term with implications for future health and wellbeing, not an observation about appearance. Obesity is linked to many serious diseases[6], but in summary, we are talking about energy levels, mobility and future quality of life.

Prevention of obesity begins in childhood, so you should take every opportunity to weigh your young patients. You will need to measure height and weight, then for ages 2 to 20 you can plot the measurements on the 1990 BMI Growth Reference Charts, as recommended by NICE. These charts can be downloaded from the website of the Royal College of Paediatrics and Child Health[7].

The results are given in centiles. Centiles compare 100 similar individuals, so if a child's BMI is on the 97th centile for age and gender, that means 96 children out of 100 would be more slender. The 91st centile defines overweight and the 98th centile defines obesity.

If a child is overweight or obese, this should be raised with the parent using the techniques described earlier in this chapter. Parents may already

have concerns about their child's weight and it is important not to sound if you are blaming them. The causes of childhood obesity are complex and include the influence of genetics and ill health, the food environment, physical activity, society influences, and individual psychology.

If both parents and the child are amenable, you should offer intervention, so check with your school nursing team about local resources. The child may also require referral to the local community paediatrician and/or dietitian. For overweight children, the aim will be to maintain a constant weight as the child grows taller, rather than expecting weight loss.

A study[8] asked 4979 adolescents about their weight. Many of the overweight and obese teenagers thought they were "about the right weight" or "too light". To counteract unhealthy beliefs, we need to weigh people of all ages. NICE recommends we inform them about their BMI classification.

Many of us will have an immense struggle to lose weight. A tailored approach is necessary, to increase activity levels and reduce energy (calorie) intake. For adults, a safe goal for weight loss is 1-2 lb a week (1kg is 2.2 lb).

Studies about healthy eating are notoriously difficult. Imagine telling a researcher what you have eaten over the last ten years. Michael Pollan[9] famously distilled all the "expert" advice into this: "Eat food. Not too much. Mostly plants."

Nurses can make a brief intervention, perhaps by giving the patient a leaflet from `www.patient.co.uk` or NHS Choices, but commercial slimming clubs such as Weight Watchers and Slimming World seem to have better success rates than the NHS[10]. You may find some men reluctant to engage with commercial slimming clubs, so be prepared to discuss alternatives.

Improving physical activity and reducing sedentary behaviour can help patients maintain a healthy weight. These behaviours need to be encouraged from an early age. For children and young people, aged 5 to 18 years, the UK Chief Medical Officers recommend at least 60 minutes of physical activity every day. They publish printable Fact Sheets[11] with recommendations about physical activity at different ages.

The practice nurse can help by reflecting with a patient on their opportunities to engage in physical exercise. It is useful to have some awareness of local facilities, such as walking groups or leisure centres with concessionary rates.

Sometimes patients will ask your opinion about very low calorie diets. NICE recommend that these diets (below 800 kcal/day) are for special circumstances, suitable for short term use only and they require on-going clinical support. There is a risk of cardiac arrhythmia if serum potassium falls too low, during extreme dieting.

Bariatric surgery may be available on the NHS if the BMI is greater than than 40, or the BMI is greater than 35 and the patient has an obesity-related condition (such as type 2 diabetes or hypertension) but has been unable to control their weight by non-surgical means[4]. You can consider referral at a lower BMI (27.5) if the patient has new onset type 2 diabetes, is at higher risk because of Asian ethnicity, or both.

There are several types of bariatric surgery, almost always laparoscopic (keyhole). Outcomes are variable. The NHS Choices website has detailed information to help your patient make an informed choice.

NICE advises that the drug Orlistat may be used if there is long wait for surgery. Orlistat is taken three times a day before meals. It makes fat pass through the bowel instead of being absorbed into the body, so smelly diarrhoea is a frequent side-effect and absorption of other medicines may be affected. Weight should be monitored to check that continued prescribing is worthwhile. Unfortunately Orlistat can be seen as a quick fix and it does little to encourage long-term behaviour change.

Finally, the practice nurse may need to consider his/her own weight as a challenge in raising the issue with patients. It is perfectly possible to have a helpful conversation with a patient about their weight, even if you are overweight yourself. The important thing is to be objective, rather than colluding with the patient or allowing your own difficulties to influence their motivation to change.

Smoking

Half of all smokers will be killed by a smoking-related disease, so a nurse can save lives by helping patients quit.

How best to achieve this? You know already. You start a conversation to identify where the patient is in the Cycle of Change. If a smoker is not yet ready to stop, offer information and encourage harm reduction (by smoking fewer cigarettes). If the person is ready to stop, the best way forward is a combined behavioural and drug approach.

The Cochrane Collaboration aims to gather and summarise the best research evidence. Their review[12] in 2012 found that this combined approach increases the chance of quitting by 70-100% compared with brief advice only.

There will be arrangements in your area for health professionals to be trained in smoking cessation techniques. You also need a plan for patients who are unable to attend during office hours. This website has useful information `www.smokefree.gov.uk`

The behavioural approach recommends people set a quit date, tell everyone they are giving up and get rid of all cigarettes, ash-trays and lighters. Some people write down their reasons for stopping and cross off each successful day on a calendar.

The quitter should be forewarned about withdrawal symptoms. These are worst in the first 24 hours and ease over the next month. The symptoms include a temporary cough and increased appetite. Weight gain can be avoided by drinking water and eating healthy food.

If the person has tried stopping before, ask about the difficulties, and explain that most people make several attempts before they finally give up smoking.

Pharmaceutical approaches include nicotine replacement therapy (NRT), varenicline and bupropion. The large number of NRT products is confusing, so it is best to learn about a few versions and then give patients a choice. Your neighbourhood pharmacist may let you go behind the counter to talk through the products in stock.

Varenicline is used much more than bupropion, because trials comparing these drugs have shown better quitting rates with varenicline[13]. It binds with nicotine receptors in the body, to reduce craving.

Varenicline is started 1-2 weeks before the stop date and the dose is gradually increased. Lower doses are prescribed if renal function is impaired (chronic kidney disease stage 4 or 5). A course usually lasts 12 weeks. If the patient has a history of epilepsy or psychiatric illness, prescribe with caution and monitor closely. Epileptic seizures are more likely on varenicline. Patients should be warned to stop the drug and seek prompt medical attention if they develop agitation, depressed mood or suicidal thoughts.

E-cigarettes are nicotine products, promoted by clever marketing and available without a prescription. A battery-powered heating element vapourises a liquid and the resulting vapour is inhaled. The vaper gets a hit of nicotine, without the dangers of tar and carbon monoxide from tobacco.

There are a multitude of new products available, with no long term safety studies. We do know that nicotine is a highly addictive substance and

there are credible concerns that e-cigarettes will introduce children and young people to nicotine in all its forms[14].

How to best to advise patients who ask about e-cigarettes? The nurse can explain the hazards of addiction, and stick with a patient-centred behavioural approach, combined with a harm reduction policy. E-cigarettes are not advisable, except when used in a smoking cessation programme, where the smoker has professional help with quitting.

Alcohol

A quarter of the UK adult population drinks alcohol in a way that is potentially or actually harmful to health[15]. Drinkers come from all walks of life and it may be difficult to determine that someone has a problem on first presentation. We aim to identify drinkers at risk, have a non-judgemental conversation to establish their views and offer resources to help.

To identify drinkers at risk, the gold standard questionnaire for primary care is called AUDIT, approved by the World Health Organisation. This gives four categories for drinking; sensible, hazardous, harmful and possibly dependent. Shorter questionnaires may be favoured in your locality, such as AUDIT-C or FAST. If these give a positive score, you can proceed to AUDIT. We avoid words such as "addiction" and "alcoholic" as these may be considered pejorative. All these questionnaires (and much more useful information) can be found on this website `www.alcohol-learningcentre.org.uk`

NICE[16] recommends screening of adults, from age 16 (but be aware that some children under 16 may be drinking alcohol, raising child protection issues). Your screening can be opportunistic or you can target those at greatest risk, e.g. people with physical conditions such as hypertension

or gastro-intestinal problems, people with mental health conditions such as anxiety or depression, or people who often suffer injuries.

For opportunistic screening, reception staff could distribute AUDIT questionnaires when patients check in to see you. To make sure nobody feels singled out, the paperwork should make clear that the questionnaires are given routinely to everyone.

Some questionnaires require an understanding of units of alcohol. There is a useful booklet from the NHS called "Your drinking and you", another resource from `www.alcohollearningcentre.co.uk`. This includes a unit calculator with photographs of drinks, worth downloading onto your computer.

The alcohol content of a drink is described as "alcohol by volume" (ABV). A drink labelled 5% ABV is 5% pure alcohol. Units of alcohol are calculated as total volume (ml) multiplied by ABV (%) divided by 1000.

> How many units in a pint (568ml) of strong lager (ABV 5%)?
>
> 568 multiplied by 5 and divided by 1000 is 2.84, so a pint of strong lager is nearly 3 units.

The Chief Medical Officers have issued revised recommendations[17], recommending that nobody (male or female) should drink more than 14 units a week. They advise this should be spread over three days or more and suggest a good way to cut down is to have several drink-free days each week. For pregnant women, it is safest to avoid alcohol entirely.

Nurses need to be skilled at asking the right questions to identify drinkers at risk of health problems. The reflective techniques outlined at the beginning of this chapter may help.

If a patients says *"Of course I drink more than the guidelines, but I don't have a problem"* or perhaps if they refuse to take the score on the AUDIT seriously, you could try saying *"You don't feel your drinking is as serious as others say it is"*.

Once you have ascertained where they are on the Cycle of Change you could talk about the importance of alcohol in their life. It may be very important for some people to drink in a social context and acknowledgement may enable them to identify the circumstances when they could cut down.

Another option is to use your Readiness Ruler (see above) and ask patients to rate from 1 to 10 how confident they feel about making changes. Then ask what would have to happen to move them to a higher number[18].

For brief advice, you need quick access to reading material for patients to consider at home. A pile of NHS booklets on your desk helps reduce stigma, as you can say, "I keep these right here, because so many people have health problems due to alcohol".

It is important to remember that heavy drinking can be an addiction. Dependent drinkers should be offered written information about how to access specialist alcohol services in your area, so be sure to have this ready. Drop-in services tend to be quieter soon after opening time.

NHS alcohol services offer medically assisted withdrawal. Patients are given 7-10 days of sedative medication to prevent alcohol withdrawal syndrome. Without this, dependent patients who suddenly stop alcohol can suffer life-threatening symptoms, including seizures, hallucinations and circulatory collapse. Trained staff will supervise the patient during withdrawal, either at home or as an in-patient.

The patient will be offered long-term thiamine treatment, a vitamin which helps prevent brain damage associated with nutritional deficiencies in alcohol dependency. Some patients are prescribed relapse prevention drugs, such as naltrexone, which seems to reduce cravings, and

disulfiram, which interacts with alcohol to make people feel very ill if they have a drink.

People treated for alcohol dependency are vulnerable to relapse, often due to unresolved psycho-social problems. A.A. Gill describes "the self-loathing and the fear" in an illuminating interview with Lynn Barber, about the effects of his alcohol dependency[19].

Once sober, it may be helpful for the person to meet with a psychologist or visit the Citizen's Advice Bureau. Mutual aid groups such as Alcoholics Anonymous are helpful for many people, providing on-going support to patients and their families. Of course, the practice nurse can offer follow-up, as in any long term condition.

Drugs

Many of your patients will be misusing drugs and you may not find out unless you ask. According to the 2013/14 Crime Survey for England and Wales[20], 8.8% of adults age 16 to 59 had taken an illicit drug in the last year.

Having created an atmosphere of trust and respect, the nurse can supply information about drugs and ask users if they want to make changes. There are various useful websites for patients and their families:

`www.talktofrank.com` (England and Wales)

`www.knowthescore.info` (Scotland)

`www.drugsscope.org.uk`

As a nurse, you can explain the need for safe injecting techniques and remind users about safe sex (condoms), to protect against diseases spread by body fluids. You can ask permission to do blood tests for these diseases

(hepatitis B, hepatitis C and HIV) and offer hepatitis B immunisation to injecting drug users who are not already immune.

Sadly, some of your patients may be selling sex to fund their drug addiction. Regular sexual health checks will help prevent sexually transmitted infections and are a good opportunity to discuss additional, more reliable forms of contraception.

For drug users, goals need to be realistic. Be ready to give the contact details of your local substance abuse team, who can offer expert intervention.

Pause for Reflection

Try making a Readiness Ruler. Can you then describe a consultation where it has been helpful (or unhelpful)?

You could compile a resource pack of suitable leaflets and a list of contact details for the sources of help in your area.

You could perhaps arrange to visit local services as an observer. For example, you could ask to spend an afternoon with the Community Alcohol Team and then write about how the experience will improve your own clinical practice.

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Chapter Three
Chronic Obstructive Pulmonary Disease (COPD)

"Giving up smoking is the easiest thing in the world.
I know because I've done it thousands of times."

Attributed to Mark Twain

COPD is an affliction the world often fails to acknowledge. The onset is insidious. The phlegm is repulsive. The cause is avoidable. Sufferers can feel marginalised and ashamed.

Nomenclature

COPD is a disease in need of a better name. A man unable to walk from his car to the football ground is unlikely to talk about "chronic obstructive pulmonary disease". He might call it "my bad chest", but nobody ever ran a support group or rattled a collection box for "bad chests". COPD has a branding problem.

COPD was formerly called "chronic bronchitis and emphysema". Chronic bronchitis means inflammation of the airways (bronchioles), causing swelling (narrowing) and discharge (sputum). Pockets of trapped air

develop beyond the narrowed airways, known to pathologists as "emphysema". This air trapping causes enlargement of the chest, sometimes visible when you examine the patient or look at their chest X-ray.

We have to accept the poor nomenclature and keep on saying "COPD" in conversations with our patients. There is an aphorism, "know your enemy". It is easier for the patient and nurse to tackle the problem if they give it a name.

Healthcare professionals know that "chronic" means long term, but many lay people misunderstand the word, vaguely linking it to severity. Persistent Narrowing of the Airways would be a better name than COPD.

Whether healthcare professionals say chronic or persistent, we know that COPD is a long-term, irreversible condition. Compare it with asthma, which is reversible obstruction of the airways. Later in this chapter, you will read how to differentiate between reversible and irreversible narrowing of the airways, using history and spirometry.

The Clinical History in COPD

As always in medicine, history is crucial. It is standard practice to take a history before proceeding to examination and then investigations.

A typical patient with suspected COPD will be over 35 years of age, a smoker who has attended several times with persistent winter coughs and colds. Look out for people who have had several courses of antibiotics for chest infections, as they may have undiagnosed COPD.

COPD is caused by tobacco smoke, in the vast majority of cases. Another cause is air pollution: from heavy traffic, from unregulated industry and from the biomass cooking stoves used in some parts of the world.

The patient will probably cough every day and produce sputum, especially on waking. The sputum will generally be white or clear, but may

change to yellow, green or brown during a chest infection. Coloured sputum (also called "purulent sputum") is a clue that bacteria may be present. Beware of blood in the sputum, which can be a symptom of lung cancer.

Breathlessness (dyspnoea) often starts gradually, so people barely notice. If their family and friends are smokers, they may accept their early morning cough as "just a smoker's cough" and their breathlessness as normal for their age. During an exacerbation of COPD, they will notice increased cough and breathlessness, and possibly coloured sputum.

The Medical Research Council (MRC) Dyspnoea Scale[1] is a simple way to classify breathlessness:

GRADE	DEGREE OF BREATHLESSNESS
1	Not troubled by breathlessness except on strenuous exercise
2	Short of breath when hurrying on the level or walking up a slight hill
3	Walks slower than most people on the level, stops after a mile or so, or stops after 15 minutes walking at own pace
4	Stops for breath after walking about 100 yards or after a few minutes on level ground
5	Too breathless to leave the house, or breathless when undressing

If you are not yet familiar with the MRC Dyspnoea Scale, it is worth thinking about an older person you know very well, perhaps a family

member. What is their score now and what would they have scored five years ago?

The MRC scale is widely used in research. You can decide if you find it useful in clinical practice, perhaps to assess disability or monitor decline. The nurse will also need to consider if this line of questioning is helpful to the patient. For ease of use, it is helpful to print the scale[2] in large font, onto a card the patient can hold and consider.

Find out if the patient's symptoms vary much. COPD is irreversible obstruction of the airways. Crucially, the symptoms are much the same from one day to the next, although there may be exacerbations (increased cough and breathlessness) if the patient gets an infection.

This is very different from asthma. Being reversible airways obstruction, asthma can show marked variability from hour to hour. For instance, a patient with asthma may give you a clear history of worse chest symptoms early in the mornings or if exposed to cold air, grass pollen, wet paint or perfume. In COPD the airways are less sensitive to changes in the environment, but it is still worth asking whether the patient's past or present occupations involved exposure to dust or chemicals, as not all COPD is smoking related.

There is another clue in the history will help you differentiate between COPD and asthma. Ask about the age of onset. Patients with asthma often recall symptoms back in their childhood. They tend to be atopic or have an atopic family (meaning there is a personal or family history of asthma, eczema, hay fever or perennial rhinitis).

A few patients have a genetic cause of COPD, called alpha-1 anti-trypsin deficiency. Consider this diagnosis when COPD starts in a young adult, especially if other family members are affected. Further investigations will be needed, along with referral to a respiratory consultant.

Some people have a dual diagnosis of asthma and COPD, called Asthma COPD Overlap Syndrome (ACOS). It is particularly important for them to stop smoking.

Examination Findings in COPD

In mild COPD, there may be no abnormal findings on clinical examination. In more advanced cases you may observe breathlessness at rest. The patient may have pursed lips for more efficient breathing. You may observe cyanosis (blue lips due to low oxygen), clubbing of the fingernails and an over-expanded chest. Some patients have ankle swelling when their lung disease strains the right side of the heart, called *cor pulmonale*.

Record the height, weight and body mass index and look out for unexpected changes in weight. Rapid weight gain could be due to fluid retention. Unexplained weight loss can be a sign of malignancy, perhaps lung cancer, although malnutrition is common in people living with COPD.

If the ankles look swollen, press your finger onto the ankle for a few seconds. If the finger leaves a dent, the swelling is called pitting oedema. This is due to poor circulation and fluid retention, often secondary to immobility or *cor pulmonale*. Elevating the legs will help but the patient needs further medical assessment.

Clubbing of the fingernails is seen in many serious diseases, including lung cancer, so you should seek medical advice if this is a new finding. There are many pictures on Google Images showing different stages of finger clubbing, the crucial feature being flattening of the nail angle at the cuticle. Look at your own nails sideways to see this angle.

It is useful to measure the oxygen saturation and the pulse rate, with a pulse oximeter. Beware if the saturation is less than 93%, as this could be an indication for further treatment, including long term oxygen therapy if the saturation is persistently low.

If the patient feels acutely unwell, measure the temperature. Consider infection if there is fever, the temperature exceeding 37.5 degrees. The sputum may be darker than usual and the patient more breathless. A fast

pulse rate (>90 beats per minute) suggests that the patient is not coping well and may need further intervention.

Sometimes infection progresses to sepsis. You should suspect sepsis[3] if there are two of the following three criteria: fast respiratory rate (>=22/minute), altered mental state (Glasgow coma score <= 13) or low systolic blood pressure (<= 100). A patient with sepsis will generally require rapid transfer to hospital.

Spirometry – What Do the Numbers Mean?

The spirometer is a valuable tool, but it has to be used correctly. The basics of spirometry are outlined here but you should read the spirometer manual and obtain credible practical training, to provide quality assured spirometry.

This video demonstrates spirometer technique:

`www.nationalasthma.org.au/health-professionals/spirometry-resources/spirometry-technique-video`

Post-bronchodilator results are obtained fifteen minutes after giving a bronchodilator, e.g. salbutamol 100mcg per puff, four puffs through a spacer such as a Volumatic.

To make sense of the complicated printout, it can help to look for the best spirometry result and then circle these numbers with a pen:

- Age and Body Mass Index
- FEV1 (predicted, the value expected for a healthy person of the same height, age and ethnicity)
- FEV1 (baseline, before bronchodilator)
- FEV1 (post-bronchodilator)
- Percentage change (comparing before and after bronchodilator)
- FEV1/FVC

Definitions:

- FEV1 is the volume exhaled (in litres) during the first second of forced expiration, starting from the level of total lung capacity. This is why we say, "Breathe in all the way, blow out hard and fast…"
- FVC is the volume change (in litres) between a full inspiration to total lung capacity and a maximal expiration. So we encourage the patient to breathe out as much air as they can, saying "Blow out hard and fast, keep going, keep going, keep going…"
- FEV1/FVC is the Forced Expiratory Ratio. This is the volume of air that a person can blow out in the first second of blowing, over the total air blown out.

Spirometry results are remarkably independent of effort, which makes them more useful than readings from a peak flow meter. FEV1 and FVC measurements depend on age, height and ethnicity.

Remember that the predicted value is the mean (average) for a population, and healthy people may have readings either side of the mean. Mean values for Asian people may be 10% less.

To get this clear in your mind, think about height. The average height for a white British man is about 177cm. Shorter and taller men can still be healthy but marked differences may be a sign of disease.

Along with history and examination, the Forced Expiratory Ratio helps you distinguish between restrictive lung disease (stiff lungs or a stiff, heavy chest wall) and obstructive lung disease (which means narrowed airways).

- FEV_1/FVC greater than 70% (or 0.7) is seen in healthy people as well as patients with restrictive lung problems such as pulmonary fibrosis or severe obesity.

- FEV_1/FVC less than 70% (or 0.7) *before bronchodilator* - suggests obstructive lung disease, as seen in COPD and asthma. FEV1 is reduced because of the narrowed airways.
- FEV_1/FVC less than 70% (or 0.7) *after bronchodilator* - suggests irreversible obstruction, as seen in COPD.

GOLD is the Global Initiative for Chronic Obstructive Lung Disease. GOLD advises that the diagnosis of COPD requires three criteria to be met[4]:

1. exposure to a risk factor such as tobacco
2. typical symptoms
3. post-bronchodilator FEV1/FVC <70%

GOLD classifies the severity of COPD according to FEV1 as a percentage of the predicted value:

- GOLD 1 – mild (FEV1 >80% predicted)
- GOLD 2 – moderate (FEV1 50-80% predicted)
- GOLD 3 – severe (FEV1 30-50% predicted)
- GOLD 4 – very severe (FEV1 <30% predicted)

There are other ways to classify COPD[5,8]. Selecting the best classification is a Goldilocks decision: we can under-treat, over-treat or get it just right for the patient in front of us.

REMEMBER...

- Suspect COPD and offer spirometry
- COPD does not have to be progressive or disabling
- Early diagnosis allows us to warn our patients
- Information is power, for the patient and for the nurse

Non-Pharmacological Management of COPD

It is a good principle in the management of any disease to think first about non-pharmacological management. Here are ten ways to help your patient with COPD, no prescription required. The well-organised nurse might keep a checklist to ensure all these topics are considered, each time the patient is reviewed. More detail can be found in the Health Promotion chapter.

1. Stop Smoking

After childhood immunisations, encouragement for smoking cessation is probably the most important health intervention a nurse can make. Elsewhere in this book, the Health Promotion chapter offers suggestions to help your patients quit.

Smoking cessation is crucial to prevent COPD getting worse, but do not under-estimate the difficulties. Patients addicted to heroin and cigarettes sometimes find it easier to give up heroin than smoking. To their credit, many people do successfully stop smoking, but it may take several attempts.

2. Immunisation

Does your patient understand the importance of an annual flu jab? Does the patient understand that the benefits of influenza vaccination in COPD far outweigh any minor side-effects[6]?

Has the patient been vaccinated against pneumococcal pneumonia? If not, why not? The vaccine prevents a very unpleasant illness[7] and could be life-saving.

3. Healthy Eating

People with COPD should be advised to lose weight if their body mass index (BMI) is greater than 25. Everyone knows we become exhausted and breathless if carrying a heavy load. It is better to travel light.

You will observe that some patients with advanced COPD become very thin, with a BMI less than 20. The effort of breathing is so great that they burn calories and lose weight. The nurse can increase the patient's energy levels and general wellbeing by encouraging more calories in the diet.

Life expectancy is short in these circumstances, so it does not matter much whether these calories come from carbohydrate or fat. Your local dietician should be able to give you some leaflets about high calorie foods. As we all know, these can be delicious. Chocolate snacks or sip feeds can be taken between meals, for additional calories. Sip feeds such as Complan are available from pharmacies, without a prescription.

4. Encourage Activity

The nurse should encourage patients to be as active as possible, in the early stages of COPD. Good levels of fitness will make people feel better, breathe more easily and assist with weight control.

If FEV1 drops below 50% or the MRC score is worse than 2, consider referral for Pulmonary Rehabilitation[8], a very worthwhile intervention. Programmes vary in content, but usually include exercise training, smoking cessation advice and education. The nurse should be aware of local arrangements for Pulmonary Rehabilitation and could perhaps attend a session, as an observer.

5. Mobility

We want COPD patients to maintain their fitness levels by walking whenever possible. For this reason, mobility scooters may not be a good idea.

The nurse should know how patients can obtain a disabled parking badge and also be familiar with local bus arrangements for disabled people, such as Ring and Ride. You can remind your patient that train companies offer assistance for disabled people.

How does your patient travel to see you? For patients who are genuinely housebound, consider if they receive equally good care from your practice team.

6. Benefits

Is your patient receiving all the benefits to which they are entitled? Any patient in poor health should be advised to check on this. There is a great deal of information on the government website `www.gov.uk/browse/disabilities/benefits`

Alternatively, the Citizens Advice Bureau may be able to help. Some benefits are paid regardless of income, without a means test.

The payments can greatly improve quality of life. Your patient may enjoy sitting in the garden if she can afford to get the grass cut, she might choose to upgrade her television channels to help with the boredom of being housebound or to pay for an occasional taxi for a better social life.

7. Screening for Depression and Anxiety

Please see the Mental Health chapter for further details.

8. Control of Panic Attacks

Rapid breathing occurs in various physical diseases, including COPD and asthma, but hyperventilation is also a feature of anxiety. Some patients with COPD will have panic attacks, making their breathing even worse. The nurse can show people a technique to control their breathing during a panic attack.

The patient needs to sit in a chair and crucially, drop their shoulders. Then breathe in quickly and deeply through the nose, and let the air out very, very slowly through the mouth, keeping the shoulders low. Repeat a few times. Traditionally people breathe into a paper bag in these circumstances, but a bag is unnecessary and seems melodramatic in a public place.

9. Continuity of Care

Continuity of care is immensely important, in all long term conditions. In many practices, the nurses can offer better continuity of care than the doctors. A patient who knows you is more likely to trust you, to disclose sensitive information and to follow your advice.

Young, healthy patients may consider easy access to healthcare more important than continuity of care with a clinician they know. Older patients with chronic illnesses place more value on an on-going therapeutic relationship[9].

10. Teamwork

Consider referral to the rest of the multidisciplinary team e.g. GP, community matron, community COPD service, physiotherapists, dietician, occupational therapy, social services, palliative care team.

Pharmacological Management of COPD

The Electronic Medicines Compendium[10] is an excellent source of information about your patients' medicines. You could try it now, by typing eMC into an internet search engine and then searching for the name of a medicine. You can select SPC (Summary of Product Characteristics, detailed information intended for prescribers) or PIL (Patient Information Leaflet, the leaflet supplied to the patient by the pharmacist). For inhalers, the PIL gives instructions on how best to use them. Another useful source of information about medicines is the British National Formulary, online or as a book.

Nurse prescribing is beyond the scope of this book, but here is the story of an imaginary patient and his medicines, to give some understanding of the common therapeutic interventions.

Robin Banks is a plumber, divorced and living alone. He was diagnosed with COPD age 52, when he was smoking 10-20 cigarettes a day.

At diagnosis, his FEV1 was 65% with FEV1/FVC 60%. He was offered Nicotine Replacement Therapy to help him stop smoking, but shocked by the diagnosis, he felt he could stop by willpower alone.

He was prescribed[11] a salbutamol metered dose inhaler (MDI), to use when needed. This is a blue reliever inhaler, called a short acting beta agonist (SABA). It relaxes the muscles around the airways, allowing the passage of more air.

He saw the practice nurse, Nicki Teen. She showed him how to use the inhaler and explained that the Patient Information Leaflet would give further information. Mr Banks had good inhaler technique. Had he been unable to use the MDI, the nurse would have arranged a prescription for a spacer (such as Volumatic or Aerochamber) to deliver the medicine more effectively into his lungs.

Mr Banks did not use his salbutamol inhaler every day, but he found it helped his cough and breathlessness, if used before a round of golf. Unfortunately, he continued to smoke.

Nicki saw him every year for review. After three years, she noticed that he had requested five salbutamol inhalers over the last twelve months. Each inhaler contains 200 doses. Even allowing for one inhaler at home and one in his van, Mr Banks was using considerable amounts. Knowing that people forget how to use their inhalers correctly, the nurse checked his inhaler technique and found he was using it effectively. FEV1 had now deteriorated to 55%.

Mr Banks understood the role of smoking in his illness and had seen a community pharmacist for help with smoking cessation. In spite of various nicotine replacement therapies (NRT), he had been unable to quit. The nurse offered him oral therapy (varenicline) but he was reluctant to take the tablets. He was ambivalent about smoking, saying "I know I should stop, but I'm not sure that I can".

The patient agreed to add another bronchodilator inhaler, a long acting muscarinic antagonist (LAMA). This inhaler would be used on a regular basis every day. Rather than giving rapid relief, a LAMA works gradually, opening the airways for at least twelve hours.

Nicki wanted to show him how to use the new inhaler, as the device is different from salbutamol, but she could not find the demonstrator normally kept in her drawer. She added a message to the prescription: "pharmacist, please show how to use".

Time went by. Unfortunately Mr Banks continued to smoke and his FEV1 fell to 45%. He saw the nurse for a vaccine to prevent pneumococcal pneumonia and for annual flu immunisation. She continued to review symptom control, MRC breathlessness score, activities of daily living, exacerbations and FEV1. She also checked his inhaler technique and his compliance with prescribed medications.

Every few months, Mr Banks would have an infective exacerbation of his COPD and call to request an emergency appointment. He would complain of increased breathlessness, more sputum and general malaise. These episodes were generally treated by the GP with antibiotics and oral steroids.

The patient learned to recognise the early signs of an exacerbation and was prescribed a rescue pack of antibiotics and steroids, to keep at home. The rescue pack was

- amoxicillin capsules 500mg three times a day for five days
- prednisolone tablets 5mg, six tablets to be taken daily for seven days, preferably after breakfast.

Had Mr Banks been allergic to penicillin or amoxicillin, the antibiotic might have been doxycycline 200mg on the first day and 100mg daily for the next four days. (Please note that in your area, antibiotic prescribing guidelines may be different.)

The nurse advised him that steroid tablets can irritate the stomach, so are best taken after food. They can cause wakefulness, so should be taken after breakfast, except in an emergency situation.

He was asked to contact the practice nurse after using a rescue pack, so she could check that he was improving and issue another pack. The nurse was aware that frequent courses of oral steroids can cause side-effects, including weight gain, hypertension, diabetes, cataracts and osteoporosis.

Patients using more than three courses of oral steroids a year should be considered for bone protection medication such as alendronic acid.

Given that his FEV1 had dropped below 50% and Mr Banks was having frequent exacerbations, the LAMA was replaced with a combination product, containing an inhaled cortico-steroid (ICS) and a long acting beta agonist (LABA). There have been some safety concerns about LABA inhalers prescribed alone, so it is usual to combine a LABA with a steroid. GOLD recommends that only people with frequent exacerbations should have inhaled steroids, because of the risk of side-effects.

Mr Banks was troubled by sticky phlegm, which was especially hard to clear in the mornings. The nurse suggested inhalation of steam, from hot drinks or by leaning over a sink of hot water, the head covered with a towel. She encouraged him to drink plenty of water to avoid dehydration and she arranged a trial of carbocisteine capsules, to reduce the stickiness of the sputum.

He was encouraged to attend for pulmonary rehabilitation and referred to the local COPD team. He was again offered help with smoking cessation and a month later he sent a message to the practice nurse, saying that he had finally managed to quit.

Soon afterwards, pulse oximetry showed that his oxygen saturation on air was persistently below 90%. After a detailed assessment by the COPD team, an oxygen concentrator was supplied for his home. This is a machine which converts room air (typically about 21% oxygen) to an atmosphere of about 95% oxygen. Long tubes are attached to the skirting boards, taking oxygen to nasal cannulae worn by the patient. Mr Banks was also prescribed a lightweight oxygen cylinder to use when travelling in his son's car. The COPD team explained that he would need a flight assessment before any air travel, due to reduced oxygen levels in aircraft.

He continued to see the practice nurse occasionally, but more often he had home visits from the GP and the COPD team. They discussed with

Mr Banks how and where he would like his health to be managed, in the event of further deterioration. An advance care plan was completed.

A year later, Mr Banks' son called the practice nurse to say that his father had died in in the local hospice. The cause of death was a chest infection secondary to COPD. He was 64 years old. The death notice in the local newspaper thanked his vicar and the practice team.

The team had a policy of discussing all deaths at their weekly meeting. Nicki was congratulated on the exemplary care provided for this man, during his long illness.

Pause for Reflection

Consider what was done well in the fictional case history above. Then you could review the records of a real patient with severe COPD. How did the illness start? What happened as the years went by? What aspects of care were good? With the benefit of hindsight, would you do anything differently?

Thinking about equality in healthcare, do your housebound patients with COPD receive the same standard of care as patients who can attend the surgery? If not, what could be done to improve the situation?

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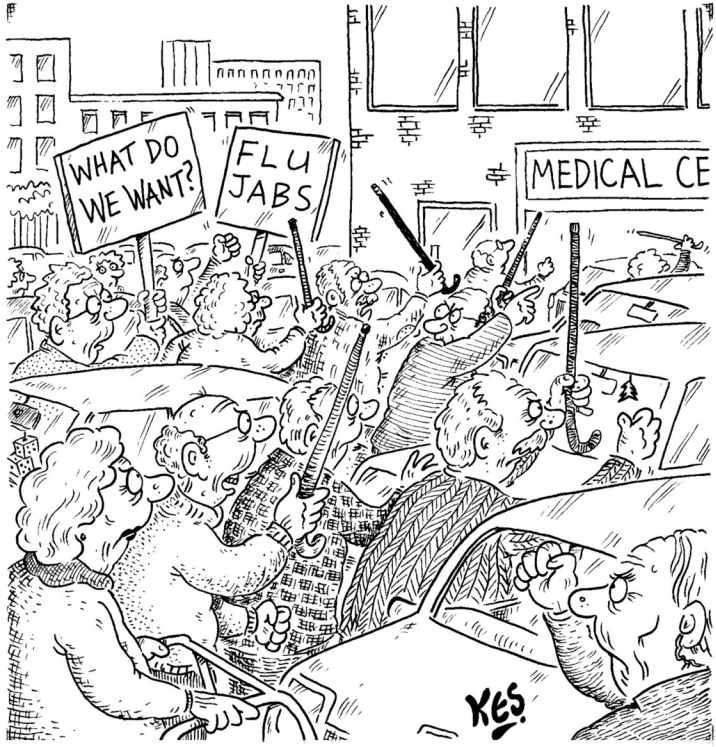

"What do we want?... Flu jabs!
When do we want them?... Now!"

Chapter Four
Asthma

People with an asthma action plan are four times less likely to be admitted to hospital because of their asthma[1].

www.asthma.org.uk

Making the Diagnosis

Asthma is a condition of reversible airways obstruction, so the symptoms can vary from hour to hour. You know from the previous chapter that COPD is different, as it is not fully reversible.

In asthma, inflammation causes narrowing of the airways and spasm of the surrounding muscles (bronchospasm). The patient then experiences the symptoms of asthma: cough, wheeze, chest tightness and breathlessness.

Who gets asthma? The disease is partly genetic and partly environmental. We are cautious about diagnosing asthma in very young children, because many children will have at least one episode of wheeze before they start school, without on-going problems. This does not mean that young children cannot have asthma, it just means that we do not rush into a diagnosis.

In Britain, asthma often occurs in families who have atopy, a cluster of conditions comprising asthma, eczema, hay fever and perennial rhinitis. Smoking increases the risk of asthma. Other environmental factors that can affect sensitive airways include air pollution, passive smoking, maternal smoking during pregnancy, industrial toxins and the moulds which grow in damp homes.

People with asthma will tell you that their symptoms are worse in particular circumstances. Many become breathless if exposed to perfume, sprays, wet paint or animals (especially cats). Asthma tends to be worse early in the morning, particularly when the weather is cold and damp. It can be affected by emotions. Exercise causes wheeze when asthma is not well controlled, so the patient can enter a vicious circle, believing they are not sufficiently fit to exercise.

Where the diagnosis is in doubt, a peak flow diary can demonstrate to the patient their variable airflow obstruction. Peak flow meters are available on prescription. If peak flow is measured at least twice a day for a couple of weeks, the chart will show peaks and troughs, with variability of 15% or more being strongly suggestive of asthma.

In the clinic, spirometry is the preferred initial test, $FEV_1/FVC < 0.7$ suggesting airways obstruction. Spirometry is generally feasible from the age of six and can be useful to confirm the diagnosis of asthma in children, avoiding overdiagnosis. However, spirometry can be normal when an asthmatic patient is free of symptoms.

The diagnosis of asthma should always be confirmed by a clinician who has the skills to rule out other causes of breathlessness. These include anxiety, obesity, anaemia, heart failure and various lung diseases. The rest of this chapter is about the follow-up of confirmed cases, at asthma review appointments.

History and Examination During Asthma Reviews

As usual, when we review a patient we take a history and then proceed to examination. History starts with recent symptoms. The Three Questions from the Royal College of Physicians[2] are recommended, as long as you take action to adjust treatment (up or down) according to the responses. The questions are about sleep, day-time symptoms and lifestyle.

IN THE LAST WEEK (OR MONTH):

- have you had difficulty sleeping because of your asthma symptoms (including cough)?
- have you had your usual asthma symptoms during the day (cough, wheeze, chest tightness or breathlessness)?
- has your asthma interfered with your usual activities (housework, job, school, etc.)

WHAT DO THE RESPONSES MEAN?

- Two or three "yes" answers – poor control
- One "yes" answer – sub-optimal control
- Three "no" answers – good asthma control

SHARE THIS INFORMATION WITH YOUR PATIENT

Asthma reviews by a nurse can be an important opportunity for "stepping down", which means a gradual, supervised reduction in therapy,

when asthma is well controlled. Freedom from symptoms can be a signal for the nurse to take action, to protect the patient from unnecessary or harmful medication.

Check current smoking status – see the Health Promotion chapter of this book. With asthmatic youngsters, you can talk to them about the dangers of starting smoking and have a conversation about what they might say if someone offers them a cigarette.

Then you need to find out about treatments used, from the computer record and from the patient. Do they have a Personal Asthma Action Plan and have they brought it today? What reliever and preventer medications do they use? What delivery device? Do they have a spacer? Importantly, have they needed urgent medical attention for their asthma or have they required steroid tablets since they last attended? These last questions will highlight patients at risk of acute exacerbation.

Proceeding to examination, you should measure weight, compare it with the last measurement and tell the patient their body mass index (BMI) classification. If you have time, take the opportunity to measure the blood pressure. You can test peak flow and compare it with the predicted peak flow for a similar person and with the best ever peak flow for that patient.

A patient who is obviously breathless is likely to need urgent medical assessment, starting with temperature, pulse, respiratory rate and oxygen saturation. Worrying signs would be a pulse >100, respiratory rate >25, SpO_2 <92% or an inability to complete sentences in one breath. Full medical assessment is necessary in these circumstances, because the breathlessness could be due to another cause, such as pneumonia or pneumothorax.

At every routine asthma review, it is important to check inhaler technique, because people gradually change their technique as time goes by.

You will need a selection of inhalers in your room. Clean them thoroughly after use, with the patient watching. The nurse must know exactly the recommended method for using the common inhalers. To read the instructions, you can search for the Electronic Medicines Compendium (eMC) online[3] and select the medicine. You will then see the Summary of Product Characteristics (SPC) for prescribers and the Patient Information Leaflet (PIL). The latter should have clear instructions on inhaler technique.

Your patient should be offered a Personal Asthma Action Plan (PAAP). These may be available on your computer system or can be downloaded from the excellent website[4] of Asthma UK, `www.asthma.org.uk` The website has a great deal of useful information, including videos demonstrating how to use various inhalers. Your mailshots to patients could direct them to this website and you could show an inhaler video during a routine asthma consultation.

Pharmacological Treatment of Asthma

The management of asthma is well described[5] in the BTS/SIGN guidelines of 2014, which every general practice nurse should read. Here is an overview of their stepwise pharmacological treatment for adults.

Step 1 "mild intermittent asthma"

The patient inhales a short-acting beta$_2$ agonist (SABA) as required, typically salbutamol (Ventolin). This is "reliever" medication, in a blue pocket-sized inhaler which contains 200 doses. It rapidly opens the airways, the effect lasting several hours.

Patients using their blue inhaler more than twice a week or being woken by asthma more than once a week, should have their inhaler technique

checked and be considered for Step 2. In the same way as we have targets for diabetes and hypertension, "reliever more than twice a week" is a suitable target for asthma intervention. Patients with asthma who request more than two blue inhalers per year are a cause for concern and should be reviewed.

Step 2 "regular preventer therapy"

The patient requires an inhaled steroid, to prevent asthma symptoms. A common initial prescription for an adult would be beclometasone metered dose inhaler 100mcg (Clenil Modulite), two inhalations twice daily (total 400mcg daily). It is best given through a spacer such as Volumatic or Aerochamber Plus, to deliver the medicine to the depths of the lungs. Budesonide is a similar product. We advise patients to gargle after inhaling steroids, to prevent thrush in the mouth and throat.

You will need to keep a spacer in your room, for demonstration purposes before a prescription is issued. After use, you can wipe the mouthpiece with alcohol gel and thoroughly rinse the entire device.

Beclometasone and budesonide inhalers are brown. The patient needs to understand this is a "preventer" and will not give immediate relief. The prescriber can type "your preventer" on the prescription. For adults, the dose can be increased if necessary to beclometasone 800mcg daily, a reasonable target being minimal symptoms and a peak flow at least 80% of predicted or best. It is best to aim close to 100% when possible.

Many people are fearful of steroids, but Step 2 doses are likely to help the airways without harming other parts of the body. The nurse should be aware that some inhaled steroids are much more potent than beclometasone and budesonide. Fluticasone, mometasone and Qvar are probably twice as strong. Keep an eye on doses for children under 12 years, as some take unlicensed doses of over 800mcg beclometasone per day, with risks of serious side-effects, including stunted growth.

Step 3 "initial add-on therapy"

Before moving to Step 3, it is worth reviewing trigger factors for asthma, inhaler technique and concordance. Trigger factors include smoking, occupational causes and aero-allergens such as pollen. People with occupational asthma generally improve during weekends and holidays and a peak flow chart will demonstrate this. Hayfever sufferers generally feel better after a non-drowsy anti-histamine tablet.

Concordance is important – does the patient take the medicine as prescribed? You may need to explore their ideas, concerns and expectations.

At Step 3, the patient uses a combination inhaler, containing an inhaled steroid and a long-acting beta agonist (LABA), such as salmeterol or formoterol. These are like long-acting salbutamol.

LABAs are normally prescribed in combination inhalers with steroids, as there have been some safety concerns about LABAs taken alone. Commonly prescribed combination products are Seretide, Symbicort, Flutiform and Fostair. Further information can of course be found in the British National Formulary[6]. Be careful not to over-do the steroid doses, by comparing them with beclometasone (see Step 2 above). Not everyone is helped by a LABA, so the patient could try one month using the inhaler and one month without, to decide it helps.

If there is no response to the LABA, the patient could have a similar trial of an oral therapy, such as montelukast tablets or Slo-phyllin capsules. Unfortunately these can interact with other medicines.

Step 4 "persistent poor control"

Step 4 involves high dose inhaled steroids, up to beclometasone 2000mcg daily, and there should be medical input. The hazards of high dose steroids include hypertension, diabetes, cataracts and osteoporosis.

Step 5 "continuous or frequent oral steroids"

The patient will probably need specialist care. A bisphosphonate tablet should be considered if the patient requires oral steroids for more than three months continuously or for three courses a year, to protect the bones from osteoporosis.

Deaths from Asthma

Because asthma is so common, it is easy to become complacent, but we need to remember that asthma does kill. An expert panel reviewed asthma deaths in the UK for the year ending February 2013. The title of their report[7] is "Why asthma still kills". Shockingly, the report identified potentially avoidable factors in over two thirds of the 195 deaths.

The report is very clear and might be a good topic to discuss at an educational meeting in your practice. It emphasises the need for regular asthma reviews, by staff with adequate training. You should, of course, speak to your employer if you require training.

The experts noted over-prescribing of reliever medication. The majority of people who died from asthma were prescribed more than six salbutamol inhalers in the year before their death. Your practice team could ensure that no patient with asthma is routinely prescribed more than one salbutamol inhaler on each of their repeat prescriptions.

Less than half of the patients had an asthma review in the year before they died. This means we need to chase patients who fail to attend and arrange telephone consultations when a face-to-face assessment is impossible. This can be challenging, as many of the high risk patients will have complex psycho-social problems.

It is very important to follow up every patient who has had an acute asthma attack, treated in A&E or in the community. This is a good

opportunity to review their Personalised Asthma Action Plan. You can check that your practice has a reliable system to arrange follow-up and you can contact people who fail to attend.

The expert panel noted that of those patients who died from asthma, only 23% had a Personal Asthma Action Plan. This is something which could be audited in your own clinics.

Pause for Reflection

Are you offering every patient a Personal Asthma Action Plan (PAAP) and are you reviewing the PAAP together, at every asthma appointment?

Read a recent report[7] on asthma deaths. You could then review current procedures with the practice team and consider whether anything more should be done to keep your patients safe.

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Chapter Five
Prevention of Cardiovascular Disease

"First, do no harm."

Attributed to Hippocrates of Kos, circa 460 BC

The most satisfying aspect of our job should perhaps be the events which do not happen. Preventing a stroke is a great day's work.

To achieve good outcomes, we need to target people who are at high risk of cardiovascular disease (CVD). Guidelines[1] called JBS3 were published in 2014, suggesting that we focus on the following three groups:

- apparently healthy individuals who have >20% risk of developing CVD over the next ten years (often called "primary prevention")
- people with established CVD ("secondary prevention")
- people with diabetes (primary prevention for people who have high risk of CVD)

It can be difficult to communicate information about the risk of cardiovascular disease, but you can start a conversation with your patient, talking about the prevention of strokes and heart attacks. As always, you need to find out the person's ideas, concerns and expectations, so you can help your patient make a decision about how to proceed.

Risk Assessment

The NICE guideline[2] on lipid modification was also published in 2014. It recommends QRISK2 as a tool to estimate cardiovascular risk.

Patients will often ask you to comment on their level of cholesterol or blood pressure. These individual risk factors have little meaning on their own, but can be entered onto QRISK2 to obtain a holistic overview of a person's health. You can see QRISK2 online[3].

QRISK2 is available on practice computer systems and you can learn to calculate risk scores using a dummy patient. Try changing the data from "current smoker" to "never smoked" at different ages and see the altered outcomes. Reducing blood pressure also makes a big difference to risk, as described in the Hypertension chapter of this book.

NICE suggests we monitor cardiovascular risk in people over 40 years. QRISK2 can be used up to age 84, but it should not be used for patients with type 1 diabetes, chronic kidney disease (eGFR<60 or albuminuria), pre-existing CVD or familial hyperlipidaemia.

Lifestyle Issues

Some risk factors are modifiable (for example, smoking) and some are non-modifiable (such as age). You need to find out about the patient's readiness to adopt the following lifestyle changes:

- a diet low in saturated fats (sometimes called a Mediterranean diet)
- regular exercise
- smoking cessation

There is much more information in the Health Promotion chapter of this book.

Starting a Statin

Depending on the cardiovascular risk, we may recommend a statin as well as modifications to lifestyle.

Having used the QRISK2 risk assessment tool, NICE advises us to offer atorvastatin 20mg daily, for the primary prevention of CVD, to people whose risk of developing CVD in the next ten years is 10% or greater. This differs from the JBS3 figure of 20%, so it is advisable to check the current performance targets in your area of the United Kingdom.

Health professionals recommend a low fat diet, while taking a statin. This helps control weight but a statin will probably be more effective than diet to control cholesterol. Some cholesterol does come from our food, but our bodies also manufacture cholesterol in the liver. Statins reduce cholesterol production by inhibiting an enzyme in the liver.

Many of your patients will already hold opinions about statins. To help them make an informed choice, NICE provides a decision-making aid[4]. Most of the document is about Numbers Needed to Treat (NNT), the percentage of patients who will benefit from the intervention. This data is clearly shown on charts of smiley/gloomy faces. It might be helpful to keep these pictorial aids in your consulting room.

Before starting a statin, ask if the patient has muscle pains. If they do, they should have a blood test for creatine kinase before starting the medicine. Creatine kinase is an enzyme released by inflamed muscle. Some patients develop muscle pains or weakness as a side-effect of statins. They too should have creatine kinase measured before deciding how to proceed.

Patients generally have the following blood tests, before a statin is prescribed:

- kidney tests (urea and electrolytes, eGFR)

- liver function tests
- lipid profile (NICE now state that fasting is unnecessary)
- HbA1c
- thyroid stimulating hormone (TSH)
- creatine kinase (only if they have unexplained muscle pain)

Statins with Other Health Issues

Specialist input may be required for any patient with total cholesterol greater than 9.0 mmol/l, a condition called **hypercholesterolaemia**.

Try not to miss cases of **familial hyperlipidaemia**, a genetic disorder likely to affect 1 in 500 of your patients[5]. You should suspect the disease if total cholesterol is above 7.5mmol/l and LDL cholesterol is above 5.0mmol/l, with a personal or family history of heart attack at a young age. Members of the family should be offered careful assessment, as they can develop atherosclerosis (hardening of the arteries) at a young age and may need intensive treatment.

A woman **planning a pregnancy** should stop her statin three months before she attempts to conceive, and should not resume the statin until she finishes **breast-feeding**.

Patients **over the age of 85** may benefit from statins but the treatment must be considered in the context of patient preference, their other medicines and their life expectancy.

For **people who already have CVD** (coronary artery disease or peripheral arterial disease) we use higher doses of statin, e.g. atorvastatin 80mg.

Patients who have suffered **angina or a heart attack** (myocardial infarction, often called STEMI or non-STEMI) are generally prescribed a

cocktail of preventive medication: a high dose statin, aspirin, an ACE inhibitor and a beta blocker (or a calcium channel blocker), easily remembered as SAAB. After a myocardial infarction, most patients are referred for a course of cardiac rehabilitation, to help them understand their condition, stop smoking and improve fitness.

Patients with **peripheral arterial disease** need intensive treatment to prevent further blockage to the arteries, with the danger of gangrene and amputation[6]. To improve blood flow to the legs, they should stop smoking and walk as much as possible. Supervised exercise classes may be available in your area. We offer these patients treatment for cholesterol and blood pressure, along with an anti-platelet agent (clopidogrel) or an anti-coagulant to improve blood flow. Patients with on-going symptoms may be offered a trial of naftidrofuryl or ramipril, to increase their walking distance.

People with **Type 1 diabetes** will usually be offered a statin by the age of 40. For patients with Type 2 diabetes, NICE now recommend we use the QRISK2 assessment tool and offer atorvastatin 20mg, if the ten year risk of developing CVD is 10% or more.

Patients with **chronic kidney disease** (CKD) should be offered a statin, as they are at high risk of cardiovascular problems. They also need tight control of blood pressure, ideally maintained below 130/80.

The link between CKD and hypertension is complicated. Kidney conditions often cause raised blood pressure, and raised blood pressure impairs kidney function. For most people with CKD the biggest health risk is not kidney failure; cardiovascular disease is a greater threat.

By the way, you can remind people with CKD that non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen and naproxen, may cause further kidney damage. They should not buy these medicines over the counter.

Follow-Up of People on Statins

The nurse should review the patient three months after starting a statin, arranging liver function tests (LFT) and a non-fasting lipid profile before the appointment. For primary prevention there is no target figure, but for secondary prevention we aim for >40% reduction in non-HDL cholesterol. If the patient is taking their tablets and does not achieve this reduction, a higher dose of statin may be needed.

Some patients will have raised levels of liver transaminase. Marked abnormality suggests that the statin is damaging the liver.

Patients on long-term statins can be reviewed annually. This is an opportunity to find out if they are taking their tablets, consider all their risk factors for CVD, check weight and blood pressure, and talk about a healthy lifestyle.

The patient should have another liver function test twelve months after starting a statin, but this need not be repeated at subsequent check-ups, unless there has been an abnormality. A blood test for non-HDL cholesterol is optional at this stage, but often motivating for the patient, if the nurse can demonstrate improvement from the pre-treatment result.

In the event of minor side-effects, consider lowering the dose or changing to a different statin. If in doubt, maybe try a drug holiday, by stopping the statin for a month and then re-starting to see what happens. Often the problem will go away.

Pause for Reflection

When discussing statins with patients, you could try using the NICE decision-making aid[4], saved to your desktop or printed with a colour printer. Is it useful? Could a similar chart be used in other clinical situations?

Search your computer system for patients diagnosed with familial hyperlipidaemia. How many are there? Do you think cases are being missed? Do the patients now have satisfactory cholesterol or are some lost to follow-up? As this is an inherited condition, you could also search by address for members of the same household and consider their cholesterol results.

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Chapter Six
Hypertension

This chapter is based on the 2011 NICE guideline on hypertension[1], available online and essential reading for every general practice nurse.

What is Blood Pressure?

As you know, blood pressure is the force exerted by blood against the walls of our arteries, measured in millimetres of mercury (mmHg). The blood pressure rises with every contraction of the heart (systolic blood pressure) and falls when the heart relaxes between pulsations (diastolic blood pressure).

Back in the 1960s, Julian and Mary Tudor Hart worked in an industrial village in South Wales. Julian was a GP and his wife Mary was a practice nurse. They meticulously measured and recorded the blood pressure of every patient, at that time a radical new idea[2]. Using this information, the practice was able to reduce premature deaths of their high risk patients by 30%.

Prolonged high blood pressure puts strain upon the heart and damages the blood vessels to various parts of the body. Treatment of hypertension is one of the great successes of modern medicine, massively reducing cases of stroke, heart attack and kidney failure.

Measuring Blood Pressure

The nurse must ensure that the equipment used to measure blood pressure is maintained and re-calibrated according to the manufacturer's recommendations. If you cannot find the manual for your machine, look online or contact the manufacturer.

You will need two different cuffs (never grubby or stained), for different sized adult arms. Large patients require a large cuff, otherwise their blood pressure reading may be falsely high.

For blood pressure measurement, the patient should sit quietly, with their arm comfortably supported. NICE advises that you begin by feeling the radial or brachial pulse.

If the pulse is irregular, an automated blood pressure monitor may not function. In these circumstances, blood pressure must be measured manually (with a stethoscope over the brachial artery), so you will need a suitable blood pressure machine (sphygmomanometer) in your surgery.

It helps to tap a rhythm with your toe inside your shoe, while checking for pulse irregularity. Fit young people may have sinus arrhythmia, where the heart rate speeds up when they breathe in. This is not a cause for concern.

If the pulse is irregular, chaotic and fast, you may have detected atrial fibrillation. If this has not been diagnosed previously, the patient should have an electrocardiogram (ECG). Treatment for atrial fibrillation may save your patient from having a stroke.

Opportunistic Health Promotion

For a good practice nurse, every consultation is an opportunity for health promotion. This is particularly important if the patient rarely attends.

You can scan each patient's records as they approach your room, to check for outstanding issues. This routine will help ensure that all your adult patients have their blood pressure checked every five years. Occasionally you could audit your consultations from the previous day, to see if you are achieving this standard.

Diagnosing Hypertension

When first considering a diagnosis of hypertension, measure the blood pressure in both arms. If the difference is more than 20mmHg on two occasions, tell the patient they should always have their blood pressure measured in the arm with the higher reading and enter this clearly in their records.

> If the blood pressure (BP) is above 140/90, what should you do? NICE advises you take a second measurement during the same consultation, then a third measurement if the first and second are markedly different. The blood pressure you enter on the patient's record is the lower of the last two measurements.

If this blood pressure is greater than 140/90, further action is required. NICE recommends we proceed to ambulatory blood pressure monitoring (ABPM). The patient wears a blood pressure monitor during their waking hours, while doing their normal activities. According to NICE, there is no need for monitoring overnight, so this is not "24 hour monitoring". You can make enquiries about how to arrange ABPM in your locality.

If ABPM is not feasible, NICE advises home blood pressure monitoring (HBPM). For each blood pressure recording, two consecutive measurements are taken, at least one minute apart, with the person seated. The patient should record their blood pressure at home, morning and evening, for a week. The nurse then ignores the readings from the first day (in case they are raised by the unfamiliar situation) and uses an average value from the remaining measurements.

To calculate the average blood pressure, add up all the systolic measurements with a calculator, then divide the total by the number of measurements. Do the same for the diastolic measurements. Calculators are available online, so you can avoid entering confidential patient data onto your phone.

You will see an occasional patient with severe hypertension (systolic>180 or diastolic>110). They should see a doctor for examination of the eyes (fundoscopy) and immediate treatment. Otherwise, the nurse can obtain further information about the patient's health pending the results of ABPM or HBPM. We want to know about their cardiovascular risk and we want to know if hypertension has damaged their kidneys, heart or eyes, known as "target organ damage".

The following tests will be helpful:

- Urine tests for kidney function - dip urine for blood and send another sample to the lab for albumin/creatinine ratio
- Blood tests for kidney function - urea and electrolytes (U&Es), creatinine, eGFR
- Other blood tests for risk assessment – HbA1c, total cholesterol, HDL cholesterol
- Arrange a 12 lead ECG (to check the heart for signs of strain)
- Advise the patient to see their optician for an annual eye test (opticians are highly trained in fundoscopy and many have a retinal camera)

There is a separate chapter in this book about the assessment of cardiovascular risk, with guidance on lipid modification.

If your patient has ABPM or HBPM and is found not to have hypertension, they can be reassured, encouraged to have a healthy lifestyle, and advised to have their blood pressure measured at least every five years, or more often in borderline cases.

Lifestyle Measures to Control Blood Pressure

Lifestyle advice is crucial and should be normally be offered in verbal and written form. There is good material about hypertension on NHS Choices `www.nhs.uk` and `www.patient.co.uk`. The home page of NHS Choices directs people to websites in other languages.

> To reduce blood pressure, NICE advises regular exercise and a healthy diet, with low salt, low caffeine and low alcohol consumption. With attention to these factors, your patient may avoid medication.

For some people, salt reduction will greatly improve their blood pressure. They should avoid salty processed foods and reduce salt in home cooking. Food may taste bland at first, but people soon get accustomed to the change.

We know that obesity and excessive alcohol consumption make hypertension considerably worse, so this is a good opportunity to check your patient's body mass index and enquire about drinking.

Sometimes an unhealthy lifestyle is a consequence of adverse life circumstances, such as excessive hours of work. Stressful events can temporarily raise the blood pressure but there is no clear evidence that chronic stress is a risk factor for hypertension.

Initiating Treatment

Who should have medication? NICE defines Stage 1 hypertension as clinic blood pressure 140/90 or greater, with subsequent averages for ABPM or HBPM 135/85 or greater. The figures are different, because people are more relaxed at home.

Any patient below 40 years should have a medical assessment if diagnosed with hypertension, to rule out unusual causes. Pregnant women require special attention.

NICE advises that we offer medication to patients under 80 years with Stage 1 hypertension, if they have any of the following complications:

- target organ damage
- kidney disease
- diabetes
- established cardiovascular disease
- a ten year cardiovascular risk of 20% or greater

NICE defines Stage 2 hypertension as clinic blood pressure 160/100 or greater, with subsequent averages for ABPM or HBPM 150/95 or greater. We offer treatment to all patients with Stage 2 hypertension, regardless of age.

Many clinical trials exclude older patients, but the HYVET study (HYpertension in the Very Elderly Trial) looked at nearly 4000 patients over the age of 80, to assess the benefits and risks of reducing blood pressure. The study was stopped early, when the researchers identified massive benefits in the treatment arm of the trial.[3]

Medication

Here is a list of medicines commonly used for blood pressure. NICE gives much more information for prescribers.

- **Angiotensin-converting enzyme inhibitors (ACE inhibitors), such as ramipril**

Unfortunately, a dry cough commonly occurs as a side-effect of the ACE inhibitors. In these circumstances, the medicine is usually replaced with an angiotensin-receptor blocker (ARB), such as losartan.

- **Calcium channel blockers, such as amlodipine**

These are recommended for patients over 55 years. They are more effective than ACE inhibitors for patients of African or Caribbean family origin. These medicines may cause fluid retention, with swollen ankles and headache.

- **Diuretics, such as indapamide**

Diuretics slightly increase urine production and can exacerbate gout or urinary incontinence.

Monitoring Treatment

For **patients under 80 years**, we aim for clinic blood pressures below 140/90. For **older patients** on treatment, our target is 150/90. We can share this information with our patients and encourage them to monitor their own blood pressure between clinic visits, perhaps self-monitoring every month. Some surgeries have a Health Monitor machine in the waiting room, a good resource for anyone to use. The results are printed on a ticket, which can be handed to the receptionist, for the attention of a clinician.

For patients with **diabetes**, lower blood pressure targets are appropriate, with clinic readings below 130/80 if the patient has kidney, eye or cerebrovascular disease. The UKPDS study[4] made a very important discovery: anti-hypertensive treatment was more beneficial than tight glycaemic control and was the only intervention which improved survival in patients with Type 2 diabetes.

If you think a patient is nervous at the surgery, they can use ABPM or HBPM to monitor their blood pressure at home. Targets for these home measurements are <135/85 for patients under 80 years and <145/85 for older people.

Elderly people are at risk of dizziness and falls if their blood pressure becomes too low, known as hypotension. If a patient complains of dizziness on standing up rapidly, you can measure the blood pressure sitting and then standing. A fall of 20mmHg is diagnostic of postural hypotension and the medication may need to be changed.

When blood pressure is well controlled, annual review is reasonable. The nurse can measure the blood pressure every year and enquire about lifestyle, symptoms and medication.

CONCORDANCE

Many patients with long term conditions, perhaps most patients, do not take their medicines as directed. Here are some strategies which may help:

- discover the patient's ideas, concerns and expectations (ICE)
- help the patient better understand their condition
- ensure the treatment is not worse than the disease
- suggest they record their medicine-taking with a diary or calendar
- set up mobile phone reminders
- see a doctor or pharmacist for a medicines review
- simplified dosing, such as once daily drugs instead of twice daily
- multi-compartment medicine boxes filled by the patient or family
- multi-compartment medicine systems filled by the pharmacist

Pause for Reflection

For HBPM, you could easily make a chart for patients to complete at home, branded with your practice logo. The document could have lifestyle advice and contact details for the British Hypertension Society, whose website has a list of validated blood pressure monitors. It would be worth speaking to your community pharmacist about the monitors kept in stock.

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Chapter Seven
Heart Failure

Terminology

"You have heart failure." What dreadful words to hear. Perhaps health professionals in the future will use the kinder term "cardiac impairment" or speak in colloquial language about "a weak heart". We are not there yet, so this chapter talks of heart failure, which is the end stage of any disease of the heart. As with any condition, we hope that every patient will leave our consulting room feeling better than when they arrived.

Most cases of heart failure are due to dysfunction of the left ventricle, the chamber of the heart which contracts to pump blood around the body. This contraction phase of the cardiac cycle is called systole. The left ventricle fails to empty sufficiently during systole and an echocardiogram will show a left ventricular systolic ejection fraction less than 55%.

It is increasingly recognised that diastolic heart failure can cause the same symptoms as left ventricular dysfunction, although an echo will show a preserved left ventricular ejection fraction. The problem is with filling of the heart rather than emptying, when the heart muscle is relaxed (diastole). We need more research to establish how best to treat diastolic heart failure.

Symptoms of Heart Failure

Any type of heart failure will make a person feel rotten. The heart fails to pump adequately, so fluid pools in the lungs and the legs. The patient feels exhausted and breathless, with heavy swollen feet and often palpitations. On lying flat in bed, even more fluid can settle in the lungs, so the person repeatedly wakes gasping for breath. With good treatment, many of these symptoms can be improved.

Clinicians often use a classification from the New York Heart Association[1] to grade the severity of symptoms in heart failure. In NYHA Stage 1, there are no symptoms during ordinary physical exercise. In NYHA Stage 4 the patient cannot carry out any physical activity without discomfort.

Heart failure is a progressive disease and the patients are often frail and elderly. They have a high chance of sudden death, due to cardiac arrhythmia. Over 50% of patients with severe heart failure will die within a year.

Patients may welcome an opportunity to talk about end of life care or living with uncertainty. It may be appropriate for the nurse to ask "How are you coping emotionally?" or "What are you hoping for, over the coming months?"

Many practices will add these patients to their palliative care register. They will also discuss advance care plans and have regular meetings to consider if the needs of their palliative patients are being met.

Diagnosis of Heart Failure

Diagnosis can be tricky, as many other diseases can mimic the symptoms of heart failure. However, heart failure is unlikely if an ECG is entirely

normal. We also use a blood test called natriuretic peptide (BNP or NTproBNP). Heart failure is very unlikely if the result of this blood test is low.

Heart failure is diagnosed by history, examination and echocardiogram. We also do a full blood count to rule out anaemia, and we check cholesterol and kidney, liver and thyroid function (the latter because an overactive thyroid causes a fast heart rate and sometimes atrial fibrillation).

Management of Heart Failure

Many patients with heart failure will be under the care of a specialist nurse. A large trial in Argentina showed that a fortnightly telephone call from a trained nurse can improve patients' quality of life and reduce hospital admissions[2]. The general management principles will be outlined here, for heart failure due to left ventricular dysfunction. Much more detail can be found in the NICE guidance on chronic heart failure[3], published in 2010. An update is expected in 2017.

The nurse should encourage a healthy lifestyle, including smoking cessation and low alcohol consumption. The diet should be low in salt, because sodium causes water retention. Some cardiac patients fear exercise, so the nurse can explain that regular low intensity activity is good for the heart and for general wellbeing.

Daily home weighing is a good way to monitor fluid load and the weight should be recorded when the patient attends the surgery. Some patients learn to increase their diuretic dose in the event of weight gain, but should seek medical advice if the weight increases by more than 2 kg in two days.

Patients with heart failure usually take an ACE inhibitor, such as ramipril. These drugs widen the blood vessels, making it easier for

the heart to pump the blood around the body. Patients who have side-effects from an ACE inhibitor will be offered an angiotensin 2 receptor blocker (A2RB) instead, for example candesartan.

We also use cardioselective beta blockers (such as bisoprolol) to reduce the work of the heart, by slowing the heart rate. Cardioselective drugs act on the heart but have little effect elsewhere in the body.

Patients troubled by oedema or breathlessness are likely to be prescribed a diuretic, best taken early in the day to avoid excessive urination at night. Diuretics can cause urinary incontinence and patients may be too embarrassed to volunteer this information, unless asked.

There are many other therapeutic options for heart failure, so a patient who remains symptomatic should be referred for a specialist opinion.

Patients on cardiac medicines generally need regular blood tests for kidney function. Monitoring of can be burdensome for frail patients and should be arranged to minimise unnecessary travel. A thoughtful practice nurse will try to deal with as much as possible in each face-to-face appointment, using telephone follow-up as appropriate.

Pause for Reflection

You could ask the local Heart Failure Nurse if you could attend a clinic, as an observer. Perhaps you could review one of your patients together? Then write a reflective account about care in your practice, describing what is done well and any areas for improvement.

You could audit whether patients with heart failure are weighed when they attend surgery, using the audit template at the end of this book.

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Chapter Eight
Atrial Fibrillation

What is Atrial Fibrillation?

Atrial fibrillation (AF) is an abnormal heart rhythm which causes a rapid and irregular pulse. The diagnosis is confirmed with an electrocardiogram (ECG), which will show absent P waves (because of ineffective contractions of the atrium) and irregular QRS complexes (due to uncoordinated contractions of the ventricle).

AF is common, especially in old age, and many people have no symptoms. However, impaired cardiac function can cause dizziness, fatigue and breathlessness.

Crucially, AF is a risk factor for stroke. The atrium fails to empty properly, enabling blood clots to form in the heart. Small clots can then travel to the brain, with devastating consequences.

Detecting Atrial Fibrillation

The practice nurse has an important role in detecting atrial fibrillation and discussing stroke risk. The older the patient, the greater is the risk of stroke. A British study[1] in 2012 examined a huge general practice

database and showed that only half of the high risk patients with atrial fibrillation were receiving anti-coagulation, so there is much work to be done. Our action (or inaction) in primary care[2] can make a massive difference to a patient's health and wellbeing.

Many experts are now proposing screening for atrial fibrillation. Guidelines from the European Society for Cardiology[3] recommend opportunistic screening by pulse palpation, followed by an ECG if the pulse is irregular. It is a good habit to check the pulse of every patient over 65. A pulse oximeter will detect a fast pulse but not an irregular pulse, so it is necessary to feel the pulse with your fingers.

If your electronic blood pressure monitor cannot detect the blood pressure, your patient may have an irregular pulse. Feel the pulse and consider an ECG.

When a new diagnosis of atrial fibrillation is confirmed by ECG, the patient should have a detailed medical review. This generally includes a full blood count, kidney and thyroid function tests and an echocardiogram. Patients with symptoms may need urgent referral to cardiology for rhythm control. All patients with AF should have consideration of the risks and benefits of anti-coagulation.

Treatment for Atrial Fibrillation

There are two approaches to controlling the irregular heartbeat, called rate control and rhythm control. In rate control, we aim for a resting pulse rate below 100 beats per minute, lower if the patient has symptoms. AF can be treated with medication or with cardioversion, a hospital procedure which returns the heart rhythm to normal using an electric current or drugs.

Most people with AF will need daily medication but some people have paroxysmal atrial fibrillation, which happens only occasionally. These

individuals sometimes use a "pill in the pocket" approach, carrying beta blocker tablets to self-medicate when unwell.

The other issue in the treatment of AF is stroke prevention, using anti-coagulants. Traditionally patients were prescribed warfarin but now we have the option of Novel Oral Anti-Coagulants (NOACs). Aspirin has historically been used as an anti-coagulant but is relatively ineffective.

Scoring systems are used to identify those at risk of a stroke[4]. Some practice computer systems will calculate the score.

One scoring system is called CHADS2 and another is called CHA_2DS_2-VASc. The latter system is now recommended by NICE, as it seems to be more reliable. NICE says this[5]: "Do not offer stroke prevention therapy to people aged under 65 years with atrial fibrillation and no risk factors other than their sex (that is, very low risk of stroke equating to a CHA2DS2-VASc score of 0 for men or 1 for women)". Every case must be considered on an individual basis, but the great majority of patients with AF will be offered anti-coagulation.

Unfortunately, anti-coagulants can cause serious bleeding. For safety, patients must take their anti-coagulant exactly as directed.

The prescriber can estimate the risk of bleeding using the HAS-BLED score[6]. This scoring system includes modifiable risk factors, such as blood pressure and alcohol consumption, so it would be reasonable for a nurse to help the patient address these risk factors and then check the score every year.

Pause for Reflection

To become familiar with the scoring systems, you could search the practice computer system for three or four patients with atrial fibrillation, then calculate their scores for CHA_2DS_2-VASc and HAS-BLED.

You could conduct an audit of patients diagnosed with atrial fibrillation. How many are taking warfarin or a NOAC? If they are not anti-coagulated, has a good reason been entered on their record?

Consider whether you are doing enough to detect atrial fibrillation in the patients you see.

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Chapter Nine
Stroke and Transient Ischaemic Attack

What is a Stroke?

The ancient Greeks called a stroke "apoplexy", meaning "struck down by violence". The cause remained mysterious until the seventeenth century, when a remarkable Swiss pathologist, Jacob Wepfer, dissected the corpses of people who had died of apoplexy. Wepfer discovered a disrupted blood supply to the brain. In some cases the arteries were blocked (thrombosed); in other cases there had been massive bleeding into the brain tissue.

Nowadays we use the terms stroke or cardiovascular accident (CVA) and we know that Wepfer was correct, the cause of stroke being either thrombotic or haemorrhagic. Communications to the public often use the term "brain attack" (like heart attack) to emphasise the need for immediate action. Publicity materials[1] describe the FAST test:

- **F**acial weakness
- **A**rm weakness
- **S**peech problems
- **T**ime to call 999

Fast transfer to hospital is crucial, because rapid thrombolysis treatment ("clot-busting") can disperse a blood clot and restore the blood supply to the brain. You can make sure that reception staff know about FAST, so patients with these symptoms do not come to surgery but dial 999 instead. Posters are available from the Stroke Association.

Health professionals will be aware that the FAST symptoms do not occur in every type of stroke. For example, blockage of the posterior cerebral artery can cause difficulties with eyesight and balance. Any sudden neurological problem requires urgent medical assessment.

What is a Transient Ischaemic Attack?

A transient ischaemic attack (TIA) is often called a mini-stroke, but a TIA is a temporary problem with the circulation to the brain, lasting less than 24 hours. The usual duration is 10-15 minutes, so patients are often fully recovered by the time they seek help.

A TIA is a warning that the patient is at high risk of future stroke. Any patient still experiencing symptoms should be transferred immediately hospital. Otherwise, we use the ABCD2 score to assess the degree of risk[2] and decide future management options. Some patients with TIA will need specialist care within 24 hours, some can wait a few days longer.

Preventing Stroke

Sadly, stroke is a common cause of very serious disability. It can occur at any age, but older people are at greater risk. The effects of a stroke can be profound, for the patient and also for their family.

Many cases of stroke are secondary to atrial fibrillation, when a blood clot travels from the heart to the brain. Atrial fibrillation is under-diagnosed

and the stroke risk under-managed. We therefore encourage health professionals to arrange an ECG whenever they detect an irregular pulse. Most people with atrial fibrillation should take an anti-coagulant. For much more information, see the atrial fibrillation chapter.

Primary prevention of stroke is the same as primary prevention of other cardiovascular disease, covered in detail elsewhere in this book. To summarise, we recommend smoking cessation, regular exercise and a healthy diet, with low salt and low alcohol consumption. The practice nurse can use QRISK2 to assess cardiovascular risk, give lifestyle advice and offer treatment for raised cholesterol and hypertension.

Secondary prevention is for people who have already suffered a stroke. It includes all the above measures. If a brain scan has shown an ischaemic stroke (where the blood supply is cut off by thrombosis), the patient will be offered medication to prevent further clots. This might be an anti-platelet agent, such as clopidogrel, or an anti-coagulant. The traditional anti-coagulant is warfarin but increasingly our patients are using novel oral anti-coagulants (NOACs). None of these medicines are used after a haemorrhagic stroke, because they might cause another bleed.

Patients with ischaemic stroke will be offered a high dose statin, aiming for more than 40% reduction in non-HDL cholesterol[3]. For follow-up, NICE suggests an annual non-fasting blood test for non-HDL cholesterol. Statins are not routinely recommended after haemorrhagic stroke.

For prevention of stroke after TIA, we treat vigorously and early, with statins, anti-hypertensives and anti-platelet agents. If the patient has atrial fibrillation, this will also require consideration.

Hospital physicians may delay treating hypertension until two weeks after a stroke, because raised blood pressure at this stage can be due to stress and there is concern that reduced blood supply to the brain might be harmful during the first fortnight of the recovery phase.

Subsequently, the practice nurse should aim for tight control of blood pressure, 130/80 being an appropriate target. You may need to contact the district nurses if the patient is housebound. There is likely to be a care package in place and it helps to have a named clinician to coordinate this. Every practice needs a reliable system to ensure that their housebound patients have good access to healthcare.

Pause for Reflection

In your practice, do the receptionists know about FAST? Can you display a FAST poster in the waiting area?

A stroke may be a suitable topic for Significant Event Analysis at a practice meeting. Could anything have been done differently prior to the event? Was the blood pressure well controlled? How are things going now? Are there lessons to be learned or can the team be congratulated for their excellent care?

There is more information about Significant Event Analysis in the final chapter of this book.

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Chapter Ten
Diabetes

What is Diabetes?

Our metabolism is fuelled by glucose, which is transported from the bloodstream into the cells by insulin. Insulin is made by the pancreas, an organ located just below the liver.

Type 1 diabetes generally begins in childhood or adolescence. There is sudden failure of the pancreas to produce insulin, and the patient becomes profoundly ill over a few days. This is called diabetic ketoacidosis (DKA). It requires immediate treatment in hospital and the patient will need insulin treatment for life. The long-term management of Type 1 diabetes is beyond the scope of this introductory text.

Type 2 diabetes is much more common and is usually managed in primary care. Practice nurses get to know their patients well, so are ideally placed to provide high quality support, rather than process-driven, tick-box reviews.

Type 2 diabetes generally begins in middle age. The underlying mechanism is insulin resistance, where cells respond less efficiently to insulin. Obesity is a major cause of insulin resistance. As time passes, the ageing, fatty pancreas cannot produce enough insulin to drive glucose into the cells, so glucose levels in the blood rise.

You may hear about other types of diabetes besides Type 1 and Type 2, for instance, MODY (Maturity Onset Diabetes of the Young) and LADA (Latent Autoimmune Diabetes of Adulthood).

Presentation of Diabetes

Type 1 diabetes starts with symptoms that Diabetes UK advertised to the public in its 4Ts campaign[1]:

- **T**oilet – needing to pass large amounts of urine very often (polyuria)
- **T**hirsty – extreme thirst (polydipsia)
- **T**iredness – much more tired than usual
- **T**hinner – the person has lost weight or appears thinner

Anyone with these symptoms should have their blood glucose measured urgently. HbA1c (glycated haemoglobin) is not an appropriate test, because it can take weeks to become abnormal.

Type 2 diabetes begins much more gradually and unfortunately many patients develop complications of diabetes before diagnosis. Who gets Type 2 diabetes? These are the major risk factors:

- middle age
- obesity
- history of diabetes during pregnancy ("gestational diabetes")
- family history of diabetes
- from an ethnic group more prone to Type 2 diabetes, such as South Asians.

The patient may be diagnosed because they have a blood test for another reason. Alternatively, they may present with symptoms of diabetes, such as polyuria, thirst, fatigue, tingling in hands and feet, itch, or frequent infections.

Diagnosis of Type 2 Diabetes Using HbA1c Blood Test

> In health, HbA1c is <42mmol/mol (<6.0%).
>
> Diabetes is diagnosed[2] if HbA1c is 48mmol/mol (6.5%) or more.
>
> If the person does not have symptoms of diabetes, the HbA1c test should be repeated, before making the diagnosis.

The range 42–47 mmol/mol (6.0–6.4%) is considered to be high risk for developing diabetes. NICEgives us guidance on management and follow-up in these circumstances[3] and your practice should have a protocol in place.

In anaemia, HbA1c may be unreliable, but blood glucose can be monitored instead.

New Diagnosis of Type 2 Diabetes

First, it is necessary to explain that the patient has diabetes, and for some people that may be devastating news. Many clinicians find the SPIKES six step protocol helpful[4], when breaking bad news.

- *Setting up the interview* (alone or with a companion. Send a warning shot: "The nurse needs to talk to you about your blood test for diabetes. Will you come on your own or do you want to bring someone with you?")
- *Assessing the patient's **P**erception* (what do they know already?)

- *Obtaining the patient's **I**nvitation* (how much do they want to know?)
- *Giving **K**nowledge and information to the patient* (verbal, written, online)
- *Addressing the patient's **E**motions with **E**mpathetic response* ("how does this make you feel?...I can tell this is very difficult for you")
- *Having a **S**trategy and **S**ummarising* ("how about we do this…and then meet again")

You need to find out how much the patient already knows about diabetes (their ideas, concerns and expectations) and assess how much detail is appropriate to share. Diabetes UK is a crucial resource, for the nurse and the patient. The patient will receive consistent, reliable information if patients and their health professionals all use this site.

The Diabetes UK Careline is a very useful telephone helpline, which provides trained peer support. If the patient or carer does not speak English, they need only state their name, phone number and language. Then an interpreter will call them back.

NHS Choices is another helpful website, particularly if your patient does not speak English. The home page links to health information in various languages.

These websites explain in detail the lifestyle changes required to reduce blood glucose levels, not repeated here. You will need to keep a supply of written information for newly diagnosed patients, available from Diabetes UK.

Whenever possible, you should offer your patient a structured education programme within easy travelling distance of their home. Self-management is crucial in diabetes. Some patients do not see diabetes as a priority in their lives, especially if they are currently free of symptoms, and some take a fatalistic view, but health professionals know that good control (of HbA1c, blood pressure and cholesterol) can greatly reduce future complications.

Complications of Diabetes

As described above, diabetes can make people feel unwell. In the long-term, the disease damages blood vessels, so can cause problems throughout the body, affecting the heart, brain, kidneys, penis, eyes, nerves, feet and skin.

Most people who have diabetes will eventually die from cardiovascular disease, such as heart attack and stroke. To prevent disability and premature death from these causes, we encourage:

- smoking cessation
- physical activity
- low salt intake
- a diet low in saturated and trans fats

For control of blood glucose, we recommend:

- a diet low in carbohydrates (sugar and starch)

Of course, these lifestyle approaches are healthy for all the family. Special meals are not required.

The Key Checks for Diabetes Reviews

The annual diabetes review should include nine key checks. They are:

- blood tests for HbA1c, cholesterol and creatinine
- urinary albumin
- blood pressure, weight and smoking
- examination of the feet
- examination of the eyes

The tenth check for adults is gender-specific, as described below.

Blood and Urine Tests for Diabetes Reviews

We know that high levels of glucose, blood pressure and cholesterol are predictors of future complications, especially cardiovascular disease. There is much debate about optimal levels for these biological variables, but for practical purposes we need to agree targets, without undue influence from the pharmaceutical industry. Our over-riding concern should be health outcomes that make a real difference to our patients, not just numerical test results.

The term HbA1c refers to glycated haemoglobin. Glucose binds to haemoglobin in the red blood cells. These cells survive in the body for up to twelve weeks, so HbA1c gives an overview of blood glucose levels over the last two to three months. For most adults with diabetes[5], their HbA1c target is ≤48mmol/mol (6.5%) if taking one drug, and ≤53mmol /mol (7%) if more than one drug is prescribed.

Cholesterol must be kept low, to prevent furring and blockage of blood vessels. Most patients with diabetes over the age of 40 will be offered a statin tablet to keep cholesterol low, aiming for total cholesterol ≤4.0 mmol/l and LDL cholesterol ("bad cholesterol") ≤2.0 mmol/l. Triglycerides are another fatty substance in the blood. Sometimes fibrates are prescribed if triglycerides exceed 4.5mmol/l and glucose control is good.

> In the United States, public health campaigns encourage patients to "know your numbers". It is good practice to involve patients in decision-making about targets. Having agreed goals for HbA1c, blood pressure and cholesterol, you can write these down for the patient and make a note in the clinical record.

Microalbuminuria is an early warning sign for kidney problems, confirmed if microalbumin is present in two early morning urine samples. Microalbuminuria, albuminuria and proteinuria are evidence of kidney damage, with protein leaking through the kidneys into the urine. In these circumstances, tight blood pressure control (<130/80) will help protect the kidneys and an ACE inhibitor may slow progression to kidney failure.

Any patient with impaired kidney function should avoid non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen and naproxen, which can cause further kidney damage. You can remind them not to buy these medicines over the counter.

Blood Pressure, Weight and Smoking

Further information about weight and smoking can be found in the Health Promotion chapter of this book.

Good control of blood pressure will help protect the heart, blood vessels and kidneys.

In diabetes, NICE recommends[5] that blood pressure should be less than 140/80, or below 130/80 if the patient already has kidney, eye or cardiovascular damage.

ACE inhibitors are often used in diabetes. They block angiotensin converting enzyme, causing relaxation of the blood vessels. This lowers blood pressure, reduces workload for the heart and may also protect the kidneys and eyes. The names of ACE inhibitors usually end in -pril, for example, ramipril. ACE inhibitors are less effective in people of Afro-Caribbean ethnicity and should be avoided in women who might become pregnant.

Some patients develop a dry, tickly cough shortly after starting an ACE inhibitor. They can be switched to a similar drug, called an angiotensin 2 receptor blocker (ARB). The names usually end in -artan, for example, losartan. Be aware that if the cough continues, a doctor should consider other diagnoses, including tuberculosis and lung cancer.

Examination of the Feet

Everyone with diabetes should have an annual examination of their feet. We feel the pulses to detect impaired circulation to the feet (ischaemia) and we examine sensation to check for damaged nerves to the feet (neuropathy). If the foot is neuropathic, ischaemic or has anatomical deformity, regular podiatry review should be offered, to prevent very serious complications. No foot problem should be regarded as trivial in diabetes.

Inspection of the feet

Inspection is the first stage of any clinical examination. For adequate inspection of the feet, your patient should lie on a paper-covered couch. Observe their footwear, gait and mobility as they move towards the couch. Check the toenails look healthy and arrange help for patients who cannot cut their own toenails. Lift the feet and carefully inspect all the skin, including soles and web-spaces. You are looking for deformity, broken skin, areas of redness or infection, oedema, corns and callouses. In diabetes these problems can rapidly progress to chronic ulceration, and need attention from a podiatrist.

Inadequate blood supply can lead to gangrene and amputation. Peripheral arterial disease causes pale, cold feet with loss of hair – so hairy toes are a good sign.

Palpation of the feet to detect ischaemia

Are the feet cold? Skin temperature is easiest to feel with the back of your fingers. You can lay your fingers on the foot and then the leg to compare temperatures, all the while explaining to the patient what you are doing.

Use your three middle fingers to check pulsation in the two arteries to the foot, recording the pulsation as present or absent. These are the dorsalis pedis and posterior tibial arteries. To find the dorsalis pedis artery, first identify the tuberosity of the navicular bone. This is the most prominent bony lump on the dorsum (top) of the foot, well below the ankle and in line with the big toe. The dorsalis pedis pulse is 1 cm postero-lateral to this landmark, so feel the area 1cm backwards and outwards..

To find the posterior tibial artery, you need to identify the medial malleolus, which is the large bony lump inside the ankle. Then find the Achilles

tendon, which is above the heel. The pulse of the posterior tibial artery will be felt in the groove between these landmarks, just below the medial malleolus. You will notice that the dorsalis pedis pulse is fairly superficial, but the posterior tibial pulse is deeper within the tissues, making it harder to find if the patient has swollen feet. Push deep into the oedema and take your time.

Be careful not to confuse your own fingertip pulse with the patient's pulse. If uncertain, compare the pulse rate with the patient's radial pulse or your own carotid pulse (at the front of your neck, next to the trachea).

Examination of foot pulses is not easy, but is well explained in a paper[6] by Mowlavi *et al*. If in doubt, you should arrange further assessment, which will include palpation of the popliteal artery behind the knee and the femoral artery in the groin. All these arteries can be checked with a Doppler ultrasound device.

To further examine the blood supply to the feet, check capillary refill. Push on the skin of the big toe until blanching occurs. Then release and count the number of seconds ("one elephant, two elephants, three elephants") until the red colour returns. In a warm environment, longer than 2-3 seconds is abnormal.

Examination of the feet to detect neuropathy

You also need to check the feet for neuropathy (nerve damage). Healthy nerves give us the ability to sense touch, vibration and proprioception (awareness of where the body part is located).

To test touch sensation, use a 10g monofilament, fully opened and pressed onto the skin with enough force to make it bend. Hold for one second and then release, avoiding areas of callous. Inability to feel 10g of pressure is highly predictive of subsequent ulceration.

First demonstrate to the patient how the monofilament feels, on the upper arm or the top of the chest. Then ask them to close their eyes and say "yes" every time they feel you touch the foot. By convention, you should touch each sole in five locations. These are the pulp of the big and middle toes and under the forefoot at the first, third and fifth metatarsal heads. For more detail, NHS Highland has produced a useful guide[7].

To test vibration sensation, you need a 128Hz tuning fork. Other frequencies are for testing hearing and are not suitable for detection of neuropathy. Strike the tuning fork against the heel of your hand and demonstrate the buzzing by holding the fork against a bone on the patient's wrist. Then check vibration sense on the bony prominence at the base of each big toe. Say to the patient "Please close your eyes. Can you feel the vibration? Tell me when you stop feeling it." Also test without vibration (by grasping the vibrating prongs) to ensure the patient is giving a genuine response to vibration rather than touch or temperature.

You can test proprioception to obtain further information about the nerves to the feet. The big toe has two bones. Stabilise the bone closest to the leg (proximal phalanx) by holding it with your left hand, one finger on each side. Use your right hand to move the end of the toe (distal phalanx) up and down, while showing the patient. Be sure to hold the toe at the sides, so the patient identifies position rather than touch. Then ask the patient to close their eyes and tell you if the toe is up or down. A patient with neuropathy may have lost proprioception and be unable to tell you.

Anyone with neuropathy should be advised to inspect their feet daily, to detect damaged skin. A mirror is helpful to see the soles. Then they should feel inside the shoes for areas which are not smooth and empty out any grit. You can ask permission to do this too, before the patient gets off the couch.

When the patient gets down, this is a convenient moment to check their weight, in bare feet, with a piece of paper on the scales.

Examination of the Eyes

Diabetes can damage the blood vessels of the retina, the light-sensitive layer at the back of the eye. The vessels may leak fluid or become blocked. Sometimes, abnormal new vessels form, called proliferative retinopathy.

Everyone with diabetes should have an annual examination with a retinal camera. If problems are detected early, blindness may be prevented, by means of laser treatment to the retina and tight diabetic control in the future.

Erectile Dysfunction

As well as the nine checks we offer everyone with diabetes, there is a tenth check to consider for men. Diabetes commonly causes erectile dysfunction, by damaging the nerves and blood vessels to the penis. Your patient may avoid discussing the topic unless you ask him directly: "Some men with diabetes have difficulty with erections, so we generally enquire when we do a diabetes check. Has that been a problem for you?"

A man with erectile dysfunction should aim for good control of HbA1c and cholesterol. He should see his doctor, to rule out causes other than diabetes. Sometimes the problem is due to excessive alcohol, testosterone deficiency or the side-effects of medication, especially certain blood pressure drugs.

Various tablets are available for problematic erectile dysfunction, the best known brand being Viagra, which is prescribed generically as sildenafil. There are other tablets with names ending in –afil, effective over different time scales. Some men buy medication online, but the quality of the product may not be reliable.

If oral medication is not helpful, consider a urology referral, as various other treatments are available.

Contraception and Pregnancy

There is a tenth diabetes check for women of child-bearing age - family planning. The nurse should be alert to the dangers of medication in pregnancy. Statins, ACE inhibitors and ARBs can cause fetal malformation and should be avoided in women who are pregnant or planning a pregnancy. Also, it may be advisable to switch the woman from oral diabetes medication to insulin before she conceives.

Useful information about diabetes and contraceptive methods can be found on this website `www.fsrh.org`

If a woman with diabetes plans to stop contraception, consider a specialist review. Every woman who is planning a pregnancy should aim for optimal diabetic control. We advise all women to take folic acid before and during the first trimester to protect their baby from spina bifida. The usual pre-conception dose is 400mcg but women with diabetes should take 5mg folic acid[8]. When a diabetic woman conceives, she should be referred for specialist care as soon as possible, because very careful diabetes control will greatly improve outcomes for the mother and her baby.

First Line Treatments for Type 2 Diabetes

The first line treatment for type 2 diabetes is lifestyle: a healthy diet and regular physical activity, with a view to weight loss if overweight. If your patient is highly motivated to make changes and HbA1c is less than 59mmol/mol (7.5%), it is reasonable for them to make lifestyle changes for three months and then see the nurse for review. You need to have a system in place to make sure they are not lost to follow-up.

However, we often start metformin at diagnosis, along with lifestyle advice. Metformin works with insulin to increase transport of glucose into

the cells, so it is only effective if the pancreas is able to produce some insulin.

The starting dose[9] for metformin is 500mg daily, with breakfast, for at least a week. Then we increase the dose to 500mg twice daily, with breakfast and the evening meal, for at least a week. After that, the dose is 500mg three times a day with breakfast, lunch and the evening meal. The usual maximum dose is 1000mg twice daily with breakfast and the evening meal. Higher doses will have little effect on glucose and are likely to cause side-effects.

The side-effects of metformin are mainly gastro-intestinal, such as nausea and diarrhoea. These problems are generally transient and are minimised by gradual introduction of the drug, as described above. If the side-effects do not settle, it is worth trying a modified-release version of metformin, perhaps in divided doses, but a few patients will continue to have problems.

Metformin is unsuitable for patients who abuse alcohol, because the drug's interaction with alcohol can cause lactic acidosis (an acute life-threatening condition).

Kidney function (urea and electrolytes, eGFR) should be monitored while a patient is taking metformin, at least annually, but more often if there is concern about renal function. If the eGFR is less than 30, metformin should be stopped, to prevent the patient becoming seriously ill with lactic acidosis.

It is also worth checking B12 levels annually, as metformin sometimes reduces absorption[10] of vitamin B12. The vitamin is needed to make the myelin sheaths that cover our nerves, so it is wise to check the B12 level in diabetic patients who have neuropathy.

Make sure that you know the current DVLA regulations, so you can advise a newly diagnosed patient about driving their vehicle. As well as

DVLA requirements, the patient should notify their insurance company, otherwise insurance may be null and void.

This website gives clear advice for drivers with long-term conditions, including diabetes: `www.gov.uk/health-conditions-and-driving`

Dual Therapy for Type 2 Diabetes

Type 2 diabetes is a progressive disease, so you can explain to your patients that more treatment may be required as time goes by. For patients on metformin, NICE recommends[5] dual therapy if HbA1c rises to 58mmol/l (7.5%), adding a DPP-4 inhibitor, pioglitazone, or a suphonylurea.

This cut-off number may not be suitable for everyone. For some younger patients, it may be wise to aim lower, to prevent future diabetic complications. For frail patients with a reduced life expectancy, the risk of hypoglycaemia may outweigh the benefits of tight glycaemic control.

DPP-4 inhibitors (names ending in -gliptin)

Gliptins block the action of DPP-4, an enzyme which destroys the hormone incretin. Sometimes these medicines are called "incretin enhancers". Incretins are hormones produced by the gut when we eat, helping to control glucose levels.

Sitagliptin is a common choice with metformin, simple to take in a dose of 100mg once daily[11]. If there is renal impairment with eGFR less than 50, consider a reduced dose of sitagliptin or alternatively the patient could be switched to linagliptin, which is excreted by the liver rather than the kidney.

Gliptins may occasionally cause pancreatitis. A patient with pancreatitis has severe, persistent abdominal pain with a raised serum amylase. Gliptins may exacerbate heart failure[12], so should be used with caution in patients with cardiovascular disease. These drugs are more expensive than gliclazide but they do not cause hypos or make obesity worse.

Pioglitazone

Pioglitazone is a thiazolidinedione. It works by increasing the body's sensitivity to insulin. This medication is relatively cheap and does not cause hypos. However, it can cause fluid retention and weight gain, significant disadvantages. There are rare reports of liver toxicity so liver function should be checked before and during treatment. Pioglitazone increases the risk of heart failure, fractures and possibly bladder cancer, so it may not be appropriate for elderly patients.

Sulphonylureas (names ending in -ide)

Gliclazide is a cheap and traditional oral medication, which brings down glucose considerably. It is sometimes started at diagnosis, if the patient has high blood glucose and is feeling unwell from symptoms of diabetes. However, there is a risk of hypoglycaemic attacks, with consequent overeating and weight gain. The patient may stop exercising due to fear of hypos and there can be problems with driving. If gliclazide is prescribed, the patient must

- understand the symptoms and treatment of a hypo
- be able to monitor blood glucose
- be aware of the DVLA advice `www.gov.uk/health-conditions-and-driving`

Injectable Medication for Diabetes

Insulin

Insulin was first used in 1922, given to children who were dying of Type 1 diabetes in Toronto General Hospital. The scientists went from bed to bed, injecting the children. The results were spectacular, the first children waking from coma before the last comatose children on the ward had been treated.

In Type 2 diabetes, insulin is considered if the patient is on maximum tolerated oral therapy but control remains poor. Insulin is typically started once daily, while continuing metformin. Once daily insulin is called basal insulin, providing a background level of insulin for the continuous metabolic processes of the body. If necessary, treatment can later be intensified by adding short-acting insulin.

Insulin is given by sub-cutaneous injection, using needles as small as possible (4-6mm). You should ensure your patient understands the need to change the injection site often, to avoid lipohypertrophy (fatty lumps or craters which impair the future absorption of insulin). If you are inspecting for areas of lipohypertrophy, they are best seen with the patient standing up.

Patients on insulin must have regular blood glucose checks, with a glucometer that meets ISO standards. The hands should be washed prior to the test, to avoid contamination with sugar from the skin. We aim for levels before meals ("pre-prandial") of 4 to 7mmol/l in adults, while keeping hypoglycaemic episodes to a minimum.

Unfortunately, insulin treatment can cause weight gain and hypoglycaemic attacks. Weight gain can be avoided by controlling carbohydrates and taking sufficient exercise. For treatment of a hypo attack, the patient should always carry glucose tablets. In cases of severe hypoglycaemia, a

companion can learn to give glucose gel and glucagon injection, followed by oral glucose as soon as the patient is able to swallow.

If the patient becomes unwell for another reason ("intercurrent illness"), they should take insulin in the usual dose and check the blood glucose four times a day. If unable to eat food, the patient should take Lucozade or milk instead. If the blood glucose is more than 13mmol/l, increase the insulin by two units per day, check the urine for ketones and seek medical advice. If the patient is too ill to drink, the doctor may stop metformin (as the kidneys cannot clear it) and adjust the dose of insulin.

Further details about insulin are not included in this book, but courses are available for nurses who wish to extend their skills.

GLP-1 mimetics

Liraglutide is a GLP-1 mimetic, increasingly prescribed as an alternative to insulin. It mimics the action of glucagon-like peptide 1, a naturally occurring substance that lowers the blood sugar after meals and makes us feel full. Hence liraglutide can cause nausea (bad) and weight loss (good).

There are various medicines in this class, all injectable, with generic names ending -tide. They should not be prescribed with a DPP-4 inhibitor, as they have a similar biochemical action.

Although GLP-1 mimetics can cause nausea, vomiting and diarrhoea when first prescribed, these side-effects tend to settle with time. Liraglutide is injected once a day, by subcutaneous injection. A short needle (4-5 mm) minimises bruising. NICE recommend we stop the drug after six months, unless HbA1c is reduced by at least 11mmol/l (1%) and there is weight loss of at least 3%.

GLP-1 mimetics have some advantages over insulin. Insulin causes weight gain but GLP-1 mimetics can cause weight loss, so they may be

useful for obese patients and should be avoided in slender people. GLP-1 mimetics do not cause hypoglycaemia, which is particularly relevant for certain occupations (working at heights or with machinery, driving).

However, we have many years of data about insulin and GLP-1 mimetics are relatively new. In particular, we await data on long-term cardiovascular safety.

Over-Treatment of Diabetes

We know from the United Kingdom Prospective Diabetes Study (UKPDS) that better control of glucose and blood pressure means fewer complications[13]. However, diabetes can be over-treated, hypoglycaemia having its own risks: cognitive dysfunction, falls, coma, heart attacks and strokes. The ACCORD study was stopped early because patients with severe hypoglycaemia had greater risk of death[14].

Nurses need to be aware that there is a particular risk of over-treatment in frail patients who are approaching the end of life. For some older adults, an HbA1c target between 58mmol/mol (7.5%) and 75mmol/mol (9%) will maximise benefits and minimise harms[15], goals being agreed collaboratively with the patient and their carers. Such patients may need to be excluded from performance indicators, with a clear explanation entered on their records.

Immunisation in Diabetes

People with diabetes deal less well with infection, so we routinely offer immunisation against influenza and pneumococcus.

Pause for Reflection

To keep up with your patients, how about attending a local diabetes education session, as an observer? Then you could try modifying your own diet for a week and write a reflective account.

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Further Reading

Diabetes UK. Diabetes UK – Care. Connect. Campaign. [Online]. Available from diabetes.org.uk/ [Accessed 28th July 2015] The Diabetes UK website is very useful for patients and health professionals. It has an area specifically for health professionals www.diabetes.org.uk/professionals and links to the Diabetes UK Primary Care Network www.diabetes.org.uk/pcn Leaflets can be ordered from the Diabetes UK shop shop.diabetes.org.uk/

The Primary Care Diabetes Society is another useful resource www.pcdsociety.org

Rodgers J, Walker R. Diabetes: A Practical guide to managing your health. London: DK; 2010. 224 p. This is a detailed and informative book, intended for patients and endorsed by Diabetes UK.

Programmes of diabetes education are offered to health professionals by various institutions, including the Universities of Cardiff and Warwick. These may be suitable for distance learning.

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Chapter Eleven
Epilepsy

Diagnosis of Epilepsy

The term "epilepsy" is derived from an ancient Greek word[1], meaning "to be seized or overwhelmed by surprise". Nowadays, we understand that the brain has electrical activity at all times and a seizure occurs when there is a sudden burst of uncoordinated electrical impulses, which can be likened to an electrical storm. The words from ancient Greece convey well the unpredictability of epileptic seizures, which can make life so challenging for people with this long term condition.

Epilepsy is the commonest serious neurological problem. Around 600,000 people in the UK have a diagnosis of epilepsy, which is approximately 1 in 100 people. More than one in five people with epilepsy have intellectual disability and 32% of people with learning disability have epilepsy, second only to psychological illness as a co-morbidity. Epilepsy prevalence is 25% higher in the most socially deprived areas, compared to the least socially deprived areas.[2]

Epilepsy is not a single condition; there are more than forty different types of epilepsy. In generalised seizures, (previously called *grand mal)*, the whole brain is involved, whereas focal/partial seizures (previously classified as *petit mal*) are limited to one area of the brain.

Some people seem to have a genetic susceptibility to seizures, while others are affected by acquired disorders of the brain, such as stroke, trauma or infection. In many cases, the cause of epileptic seizures is unknown.

Anyone who has had a first seizure should be seen urgently by a specialist[3], to identify an underlying cause and arrange a comprehensive care package. It can be difficult to distinguish between epilepsy and other causes for loss of consciousness, including faints and behaviour disorders. The following features are suggestive of epileptic seizures[4]:

- A bitten tongue
- Head-turning to one side during transient loss of consciousness
- No memory of abnormal behaviour that someone else witnessed before, during or after the attack
- Unusual posturing
- Prolonged limb-jerking (note that brief seizure-like activity can often occur during uncomplicated faints)
- Déja vu before the event (feeling "I've been here before")
- Confusion following the event

The physician needs to differentiate between an epileptic seizure and a behaviour disorder, as shown in this table[5]:

Seizure	**Behaviour disturbance**
Identical behaviour on each occasion	Variation in behaviour with circumstances
No precipitant	Commonly precipitant such as demands, need to avoid a situation

Unresponsive to communication, calming	Responsive to calming, support, removal from stressor
Investigations: Analysis of behaviour, no relationship to behaviour and environment Video: Shows typical seizure features	Investigations: Analysis of behaviour, relationship found Video: Atypical picture seen

A person newly diagnosed with epilepsy will be offered information about their condition, with a discussion about employment and driving. The United Kingdom equality legislation provides protection against unlawful discrimination. People with epilepsy can apply for free prescriptions and discounts on public transport. Much more information is available from the Epilepsy Society and the local Citizens Advice Bureau.

You can read the current DVLA advice about epilepsy here:

`www.gov.uk/guidance/current-medical-guidelines-dvla-guidance-for-professionals-neurological-chapter-appendix`

Prognosis in Epilepsy

Epilepsy cannot be cured. However it is considered "resolved" for individuals who had an age-dependent epilepsy syndrome but are now past the applicable age, or those who have remained seizure free for the last ten years, with no seizure medication for the last five years[6]. For these patients, epilepsy could be coded in their medical record as a significant past problem, rather than an active problem.

Many people suffering with epilepsy could be free of seizures, if given optimal, modern treatment. Patients with symptomatic epilepsy require expert neurological surveillance, although this may be infrequent. We must not be complacent when we review such people in general practice. We need to check when the patient last saw an epilepsy specialist and read the latest correspondence.

SUDEP is Sudden Unexpected Death in Epilepsy. Fortunately, SUDEP is rare. A study in Cornwall[7] found that many of the people who died had not been followed up in primary care. It is important to chase patients who do not attend for their epilepsy reviews. If the patient is unwilling to attend surgery, consider if you can safely review them by phone.

SUDEP is more likely to occur in patients who have poor control of their epilepsy, especially if the seizures are becoming increasingly frequent. Such patients may need referral to an epilepsy specialist, who can discuss how best to keep them safe. A risk assessment can be done of their home, working, educational or leisure environment. It seems the risk of SUDEP is greater for people who misuse alcohol and people with mental health problems [8]. They may be helped by a self-monitoring app called EpSMon, which patients can download from the website `www.sudep.org` The app includes a safety checklist.

Some people can identify trigger factors for their seizures, which may include lack of sleep, fatigue, flashing lights, excessive alcohol, stress, menstruation, fever or acute illness. Common seizure triggers should be taken into account in the management and counselling of epilepsy patients, especially adolescents and patients with new-onset epilepsy.

People who have been free of seizures for years may ask you about stopping their drugs. There is a significant risk of seizure recurrence[9] if medication is stopped suddenly, so the patient should be referred back to a neurologist for a specialist opinion.

Treatment of Epilepsy

During a seizure, the person should be protected from environmental harm, such as traffic. The most important thing is to stay calm and not restrain the person. If they have collapsed onto the ground, it is helpful to cushion the head with something soft. Do not place anything inside the person's mouth, as this does not prevent tongue biting.

After the seizure, place the patient in the recovery position[10] and check their breathing is returning to normal. Remain with them until they are fully recovered. Seizures are usually short lived, but if they continue for more than 5 minutes, or the person is having repeated seizures without consciousness being regained in between, an ambulance must be called.[11]

Anti Epileptic Drugs (AEDs) require a trade off between side effects and effectiveness. The main types of side effects are shown in this table[12]:

DOSE RELATED	INDIVIDUAL	CHRONIC
Double vision	Skin rash	Weight gain
Unsteadiness/ dizziness	Blood disorder	Vitamin deficiencies
Stomach upset	Liver disorder	Changed appearance
Sleepiness	Psychosis	Acne
Headache	Depression	Mood changes
Memory problems		Osteoporosis

You can find detailed information about individual medicines at www.medicines.org.uk On this website, you can read the SPC (summary of product characteristics, intended for health professionals) and the PIL (patient information leaflet). You could try it now. For example, you could search for the side-effects of lamotrigine.

For newly diagnosed generalised tonic-clonic epilepsy, NICE recommends sodium valproate as first line treatment (but see the warnings below about women of child-bearing age). For newly diagnosed focal (localised) seizures, NICE recommends lamotrigine or controlled release carbamazepine, as first line treatment[13]. Many other drugs are available if these medicines are unsuitable. Patients with prolonged or repeated seizures (status epilepticus) may be given an emergency care plan and prescribed buccal midazolam or rectal diazepam, for use in the community.

Contraception and Epilepsy

Some AEDs are known to be enzyme inducing. Put simply, this means they speed up the breakdown of oral contraceptives by liver enzymes, reducing contraceptive efficacy. In addition, combined hormonal contraceptives can lower lamotrigine levels. An intra-uterine contraceptive is often preferable, especially for emergency contraception.

Further details about individual medicines can be found on the website of the Faculty of Reproductive and Sexual Health, www.fsrh.org

Some AEDs have an adverse effect on bone mineral density[14], as does depot contraception with medroxyprogesterone acetate. There is a risk of osteoporosis if these are used together, especially for a long time, and the nurse should bear this in mind when patients attend for depot contraceptive injections. It is of course advisable for bone health that everyone has adequate amounts of calcium and vitamin D. A DXA scan may be useful if osteoporosis is a concern.

Pregnancy and Epilepsy

If a woman with epilepsy is planning a pregnancy, she should see a specialist for a medication review, before stopping contraception. To reduce the risk of spina bifida and other neural tube defects in her baby, it is important that a woman on epilepsy medication also takes folic acid 5mg tablets, before conception and throughout the first trimester. The British National Formulary[15] recommends 5mg daily, which is a higher dose than usual.

The Department of Health has issued these warnings[16]about medicines related to valproate (sodium valproate, valproic acid [brand leader: Epilim] and valproate semisodium [brand leader: Depakote]), following completion of a Europe-wide review:

> *Children exposed in utero to valproate are at a high risk of serious developmental disorders (in up to 30–40% of cases) and/or congenital malformations (in approximately 10% of cases)*
>
> *Valproate should not be prescribed to female children, female adolescents, women of childbearing potential or pregnant women unless other treatments are ineffective or not tolerated*
>
> *You must ensure that all female patients are informed of and understand:*
>
> - *the risks associated with valproate during pregnancy*
> - *the need to use effective contraception*
> - *the need for regular review of treatment*
> - *the need to rapidly consult if she is planning a pregnancy or becomes pregnant*

Plasma levels of lamotrigine are known to fall during pregnancy. It is appropriate to obtain a base line lamotrigine level and then monitor lamotrigine levels monthly during pregnancy.

The UK Epilepsy and Pregnancy Register studies the effects of AEDs taken during pregnancy. If you have a patient who would like to register, the contact details are www.epilepsyandpregnancy.co.uk or Freephone 0800 389 1248.

Review Appointments for Epilepsy

When epilepsy has been diagnosed and the condition seems stable, patients are often discharged from secondary care.

As a practice nurse, you are likely to have a role in the long-term surveillance of people with epilepsy, offering regular, structured review appointments. Sometimes a telephone appointment will be sufficient for follow-up and more convenient for the patient. Most people with epilepsy will not require a blood test before their review.

The Epilepsy Society website[17] has a helpful Review Template, which lists topics to discuss. You could send a version of this document to your patient before their appointment.

You will need a strategy to contact people who fail to attend their review appointments. Some of them may be vulnerable patients, with issues such as learning disability or mental illness.

When you review a woman of childbearing age, be sure to consider the issues relating to contraception and pregnancy as mentioned above.

We must not overlook the needs of carers for people with epilepsy. Some patients with epilepsy have multiple co-morbidities, placing great stress upon their carers. It is often useful to add the Read code for "carer" to their medical record. Youngsters may have onerous responsibilities for parents with epilepsy. There will be organisations in your area to support carers, with special arrangements for young carers.

A practice nurse can make a real difference to a person affected by epilepsy. If problems arise, help is available from the patient's GP and the community pharmacist, also from the local hospital team. It is worth asking the hospital neurology department for the contact details of their specialist epilepsy nurse, likely to be an invaluable source of expertise and advice.

As time goes by, people with epilepsy often become "expert patients", with in-depth knowledge and personal experience of the condition. Health professionals can learn a great deal by listening to the individual stories of people who live with chronic illness.

Pause for Reflection

Search your computer system for patients with epilepsy who have not had a review in the last twelve months. Does your practice has a satisfactory protocol for follow-up in these circumstances? If not, you could discuss this safety issue with the practice team.

You could also search the computer system to find out if your practice has any females under the age of 50 with current prescriptions for valproate. Then you could audit their records to make sure they have been informed of the risks and are using a reliable method of contraception.

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Chapter Twelve
Learning Disability

Health Checks

A practice nurse can help tackle health inequality by providing proactive, focussed health care for people with learning disability. People with learning disability tend to have poor physical and mental health, with reduced life expectancy, compared to the rest of the population. Many of the early deaths are avoidable.

Learning disability (LD) is sometimes called Intellectual Disability or Learning Difficulty. Annual health checks are widely advocated, starting at age of 14, with priority being given to people with moderate or severe LD.

The best time for these check-ups might be the first appointment of the morning or afternoon, so the patient does not have to spend a long time in the waiting room. If necessary, blood tests can be arranged a fortnight earlier.

Try to allocate enough time for appointments. Having spoken to the patient and carer, it may be appropriate to book double appointments, with an alert message appearing on the receptionists' screen. Disability legislation requires us to make "reasonable adjustments" to meet the needs of our patients.

You may need to read about the patient's specific type of disability before the consultation. For example, you might need to revise the health problems associated with Down's syndrome or with Fragile X Syndrome, the latter being the commonest type of inherited intellectual disability.

Safeguarding

It hardly needs saying, that people with learning disability are vulnerable. If you have any safeguarding worries, you should speak to a senior colleague in the practice and perhaps examine the patient together. In these circumstances, it may be essential to see the person without their usual carer. It is important that you also share your concerns with the local safeguarding team, who are in a position to collate information from various sources.

Consent

As a health professional, you should consider if your patient has capacity to give consent for an examination or procedure, such as a blood test or a cervical smear. If you feel the person does not have capacity to give consent, and they have not made an advance decision or formally appointed someone to make decisions on their behalf, then you must act in the best interests of the patient. It is good practice to take into account the views of other people who know the patient well and add this information to the clinical record.

Communication

Be sure to speak directly to the patient before addressing their carer and try to concentrate your full attention on the patient throughout the consultation. Sometimes it may be worth checking whether the patient

wants their helper to remain in the room, explaining that you may need to ask about very personal matters.

Having greeted the patient and established the name and role of any companion, you can ask if there are any concerns or worries. This may be an opportunity to educate the patient or carer about any relevant health issues, bearing in mind that some paid carers have minimal health knowledge.

How does the person usually spend their day? Has there been any major change in their life recently?

Check the patient is fully immunised. Find out if the carer is coping or needs additional support.

Examination

Try to speak in plain language, perhaps using pictures. Procedures that we take for granted, such as blood pressure measurement, may be alarming for someone with a learning disability. If you need to perform an examination or procedure, first demonstrate what will happen, or show a brief video clip. You could save suitable images and video clips on your computer.

Consider if a chaperone is required. Having measured the patient's body mass index and blood pressure, you can then proceed with a Top to Toe check-up, as follows:

BMI and BLOOD PRESSURE – compare with previous readings.

BRAIN

- Mood. Is there anxiety or depression? Does the person get angry or do they hurt themselves? Do you have any suspicions of abuse? Beware of "diagnostic overshadowing" where the health worker fails to see other issues beyond the learning disability.

- Memory. People with Down's syndrome are prone to Alzheimer's disease at an unusually young age, sometimes before age 40.
- Epilepsy, which affects 50% of patients with severe LD. This book has a separate chapter on epilepsy.

SKIN, HAIR AND NAILS – Is the person clean and well groomed? Make a note of any injuries and seek an explanation. People with LD often have under-treated dermatological problems. Dry skin in common, needing frequent application of emollients. You can check sufficient quantities are prescribed and suggest the patient wears old clothes for half an hour after the treatment.

EYES – Have they seen an optician within the last two years?

EARS – Is the hearing good? In Down's syndrome, the ear canal is unusually short and prone to blockage with wax. Use the auroscope gently. To do the whisper test, stand behind the patient, block one ear with your finger and whisper a few words for the patient to repeat. Maybe whisper "fish and chips", "ice cream cone". Then test the other ear.

TEETH – Do they see a dentist regularly? Are there any difficulties with dental hygiene?

SWALLOWING – Dysphagia can be a problem for adults with LD, with serious consequences including aspiration pneumonia.

THYROID – People with LD are at risk of hypothyroidism. If there are symptoms such as fatigue, weight gain, newly dry skin or feeling cold, arrange a blood test for TSH.

BREASTS – Have female patients over 50 attended for mammography? If they find a breast lump, do they know what to do?

HEART – People with Down's syndrome often have congenital heart disease. If this is the case, read the last clinic letter and check the follow-up arrangements.

LUNGS – Check smoking status (risks for health and fire safety). Adults with LD are at risk of death from respiratory problems. You can also check alcohol consumption, although alcohol abuse is uncommon in people with LD.

ABDOMEN – People with LD often have problems with long-term constipation. Use plain language to ask. Encourage water, fruit and vegetables and an active lifestyle. Over the age of 60, check uptake for the bowel screening programme. Bowel screening may be appropriate at a younger age, if there is a family history of bowel cancer. If altered bowel habit is a new symptom, arrange a medical check to rule out cancer.

CONTINENCE – any problems? Use everyday words, as used in childhood.

SEXUAL HEALTH – has the person received any sex education or do they require it? Might they have a sexual partner? Do they need contraception? Are they at risk of sexual exploitation? For smear tests, consider if the benefits will outweigh the difficulties and document your reasoning.

FEET AND MOBILITY – Is foot care adequate or do they need a podiatrist? Are they getting enough exercise? You could remind the patient and carer of NHS advice – in summary, thirty minutes of activity at least five days a week.

CARERS – finally, are the carers coping or do they need additional support? Do family members with significant caring responsibilities have the Read code for "carer" on their medical record?

Teamwork

Continuity of care is important within a large team. A nurse who sees the patient regularly is likely to notice changes in their behaviour or appearance. If necessary, you can involve the GP, social services or the multi-disciplinary Community Team for People with LD.

The practice nurse has a very important role in Learning Disability, to support families and to ensure that vulnerable people receive high quality health care from someone they know and trust.

Pause for Reflection

How many minutes do you need for an LD check-up? You could time yourself and speak to the practice team if you need additional time to be allocated for these appointments.

Can you work faster by devising a questionnaire to send to the patient and their carer before the appointment? The document could include standard health advice.

Resources

Royal College of General Practitioners. A Step by Step Guide for GP Practices: Annual Health Checks for People with a Learning Disability [Internet]. 2010 [cited 2015 Nov 25]. Available from: www.rcgp.org.uk/learningdisabilities/

Public Health Wales
www.1000livesplus.wales.nhs.uk/ld-healthcheck/

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Easyhealth.org.uk [Internet]. [cited 2015 Nov 25]. Available from: www.easyhealth.org.uk/listing/exercise-(leaflets) Hundreds of health leaflets for people with learning disability, in accessible form (pictures and easy words)

Mencap.org.uk [Internet]. [cited 2015 Nov 25]. Available from: www.mencap.org.uk The Mencap website has sections for people with a learning disability and for families. It also has advice for professionals about good practice.

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Chapter Thirteen
Hypothyroidism

The Role of the Practice Nurse

Hypothyroidism is one of the commonest long term health conditions,so the practice nurse may be given responsibility for annual review of people with this chronic disorder. The patient needs a blood test for thyroid stimulating hormone (TSH) a week before their appointment.

A telephone conversation or email may be sufficient to follow up a normal result. If TSH is abnormal, you should see the patient to discuss the situation, check their pulse and weight and ensure they are taking their levothyroxine tablets as prescribed. Dose adjustment and additional monitoring may be needed.

Thyroid Physiology – The Basics

The thyroid gland is located at the front of the neck. In health, it secretes sufficient thyroxine (T4) hormone to keep the body's metabolism ticking over at the correct rate.

The thyroid gland is controlled by thyroid stimulating hormone (TSH), produced by the pituitary gland at the base of the brain. If the body has

insufficient thyroxine, the pituitary secretes larger amounts of TSH, to stimulate the thyroid gland. In the opposite situation (too much thyroxine), TSH production is suppressed.

> If the body has insufficient thyroxine, the pituitary secretes more TSH

Hyperthyroidism

In hyperthyroidism, too much thyroxine is produced and bodily processes speed up. TSH levels drop towards zero.

The patient can feel very unwell, with some or most of the following symptoms: agitation, anxiety, tremor, weight loss, heat intolerance, frequent bowel movements, increased pulse rate and palpitations.

There is also a risk of atrial fibrillation (fast, irregular pulse). If you suspect atrial fibrillation, you should arrange an ECG. Sometimes the eyes bulge (called exophthalmos), requiring early referral to an ophthalmologist. The thyroid can become obviously enlarged, called a goitre.

Hyperthyroidism will be managed by an endocrinology team. The treatment options are:

- tablets (carbimazole and propylthiouracil are anti-thyroid drugs, propranolol helps anxiety and tachycardia)
- radioactive iodine therapy, to destroy cells in the thyroid gland
- thyroid surgery to remove all or part of the gland (total or partial thyroidectomy).

Smokers with hyperthyroidism should be offered a smoking cessation programme, as smoking exacerbates the disease

Many patients with hyperthyroidism will develop hypothyroidism as a consequence of their treatment, and will then require long-term surveillance in general practice.

Hypothyroidism

In hypothyroidism, the thyroid is underactive. The commonest cause is autoimmune thyroid disease, where the body's immune system attacks healthy cells. Hypothyroidism is much more common than hyperthyroidism.

Serum thyroxine is low in untreated hypothyroidism, but we more often measure TSH, which will be raised, as the pituitary gland tries to stimulate the underactive thyroid.

The onset of hypothyroidism is gradual and the diagnosis is easily missed, because the vague and non-specific symptoms, which often occur in the absence of any disease. These include lethargy, weight gain, constipation, cold intolerance, dry skin and thinning of the hair.

Other signs and symptoms may occur, including muscle stiffness and cramps, carpel tunnel syndrome, amenorrhoea or menorrhagia, slowing of intellectual activities, reduced appetite, deep hoarseness of voice, decreased visual acuity and obstructive sleep apnoea.

Severe hypothyroidism is known as myxoedema. It affects the skin and its underlying tissues, causing thickening of facial features and a doughy appearance of the skin.

The United Kingdom has a national screening programme to test babies for hypothyroidism very soon after birth. Congenital hypothyroidism can cause severe intellectual disability, if untreated. Affected children will be monitored by a paediatrician, but the practice nurse can ensure follow-up is on-going.

Treatment of Hypothyroidism

Hypothyroidism is treated with levothyroxine, a form of thyroxine. Treatment is normally required for life. In England, patients with hypothyroidism can submit a form requesting exemption from prescription charges. This applies to all their medicines.

It is very important that the patient understands hypothyroidism, so they are motivated to take the medication correctly. NHS Choices `www.nhs.uk` has a good explanation, with links to websites in other languages from the bottom of the home page. Leaflets can also be downloaded from the website of the British Thyroid Foundation, `www.btf-thyroid.org/information/leaflets`

After starting treatment, TSH should be measured every 4-6 weeks, until stable. When stable, TSH can be checked six monthly in the first year. If it remains stable, annual checks are generally appropriate.

For most people[2], TSH should be between 0.4 and 2.5mU/L, figures worth remembering.

> For most people[2], TSH should be between 0.4 and 2.5mU/L

In over-treatment of hypothyroidism (over-suppression), TSH falls below 0.1 mU/L, putting the patient at risk of atrial fibrillation and osteoporosis[3]. In these circumstances, the dose of levothyroxine should be reduced, especially if the patient is elderly.

In under-treatment, TSH is greater than 2.5mU/L. You should check the patient is taking their levothyroxine tablets and discuss with a prescriber

whether the dose should be increased. More frequent monitoring will be required until TSH is within the normal range.

As with any long term condition, the aim of treatment is to make the patient feel better, while minimising risk.

Levothyroxine Before, During and After Pregnancy

Women of childbearing age should have a dose of levothyroxine which reduces the risk of miscarriage and protects the brain of a developing fetus. If possible, this should be discussed before conception. You can explain to the woman that she will need more frequent blood tests during pregnancy. A statement from the British Thyroid Association[1] says this:

> *"The serum TSH reference range in pregnancy is 0·4–2·5 mU/l in the first trimester and 0·4–3·0 mU/l in the second and third trimesters or should be based on the trimester-specific reference range for the population if available. These reference ranges should be achieved where possible with appropriate doses of L-T4 preconception and most importantly in the first trimester."*

Women can breastfeed while taking levothyroxine. Their TSH should be measured a few weeks after childbirth.

Pause for Reflection

To better understand TSH results, you could select a patient who has been taking levothyroxine for a long time. Then review their TSH results back to the year of diagnosis.

Find a patient who does not always take their levothyroxine exactly as prescribed. Work out the reason. What can you do to help?

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Chapter Fourteen
Osteoarthritis

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The editor was Diana Hutchinson.

Why is Osteoarthritis Important?

Osteoarthritis (OA) is the most common cause of joint pain in older adults and is one of the top ten causes of years lived with disability. Despite this, evidence suggests that there is a gap between the care recommended and that which people receive[1].

Many patients live with joint pain which is never diagnosed as OA and they never consult a health professional about the pain. There is a perception that OA is a 'natural' part of ageing, with limited interventions available[2]. However, a typical general practice with 10,000 patients will have 720 people consult with OA in a year[3].

OA is just one of the many long term conditions (LTCs) which can affect people, but it is often not recognised as an LTC by the patient or their medical team. OA should be managed alongside co-existing LTCs such as diabetes.

Who Gets Osteoarthritis?

OA is a process of joint damage, due to mechanical forces such as trauma or weight-bearing. We know for example that footballers who have damaged their cruciate ligaments or articular cartilage may develop premature OA of the knee.

Specific jobs are associated with the development of OA. Jobs requiring repetitive pincer movements of the thumb and index finger are linked with OA of the base of the thumb (carpometacarpal joint). Farming, which involves a lot of squatting and heavy lifting, can cause OA of the knee and hip.

Being overweight is a major factor in the development of OA. Obesity increases the mechanical load on joints and also increases the risk of OA progression.

What Happens in an Osteoarthritic Joint?

In the early stages, any joint damage can repair itself. Small fissures in the joint cartilage can heal. Joint swelling will resolve if the joint is temporarily off-loaded.

The cartilage eventually becomes very thin and areas of cartilage loss occur, exposing the underlying bone. Inflammatory mediators are released within the joint when damage occurs, and these cause further damage by acting on the cartilage and bone to form bony cysts. The bony cysts get bigger and then the bone below the joint surface collapses.

At this stage, some bony re-modelling takes place. Growths of osteophytes (spurs of bone) develop, as part of this remodelling process.

History, Examination and Investigations

OA generally affects people aged over 45 years. The joints most commonly affected by OA are the knees, hips and small hand joints. Affected joints will be painful, stiff and possibly swollen. The chronic pain associated with the condition can cause problems with poor sleep, fatigue and low mood.

It is worth asking about the duration of morning stiffness. If this lasts more than thirty minutes, the joint problem might not be OA.

Osteophytes may be seen and felt under the skin surface. They cause knobbly lumps on the fingers, called Heberden's nodes and Bouchard's nodes. Osteophytes on the knee joint make the joint larger and more irregular in shape.

OA can usually be diagnosed from the history and examination, so an X-ray may not be needed. Typical X-ray appearances are joint space narrowing, bony cysts and osteophytes, plus bony sclerosis (thickening) where healing and remodelling has occurred.

Management of Osteoarthritis

NICE has recommended[4] that all patients with OA should be offered three "core" interventions, when they first present in primary care.

REMEMBER THESE CORE INTERVENTIONS…

- education and access to information
- advice on local muscle strengthening exercise and general aerobic fitness
- and, if appropriate, advice on losing weight

Education and self-management

Many patients do not consult about joint pain because they fear that healthcare providers will regard OA as part of the normal ageing process, which one has to accept, without treatment.

The term "wear and tear" can have negative connotations for a patient, suggesting that nothing can be done. We need use the word "osteoarthritis", and explain the diagnosis. OA is not inevitably progressive, so the description "wear and repair" may be more helpful.

Arthritis Research UK can supply helpful leaflets. Keele University has produced a patient handbook, which was written by patients and contains many tips and advice for the newly diagnosed. Copies of the handbook can be obtained from Nicki Evans, email n.evans@keele.ac.uk

Diet and exercise

We know that OA affects the whole joint, not only the joint surfaces but also the ligaments around the joint, the lining of the joint (synovium) and the muscles stabilising and controlling movement around the joint.

Once the muscles become weakened by disuse (during painful flares), the stability around the joint is reduced and further joint surface damage can occur due to minor instability. Improving muscle strength around the joint will improve the function of the joint as a whole.

Patients can be advised to join a gym or undertake exercise themselves. The Keep Moving booklet from Arthritis Research UK contains many useful exercises to strengthen muscles. These can be done at home, without the need for expensive gym equipment.

Aerobic fitness is also important. Thirty minutes of brisk exercise, five times per week is recommended. Suitable activities increase the heart

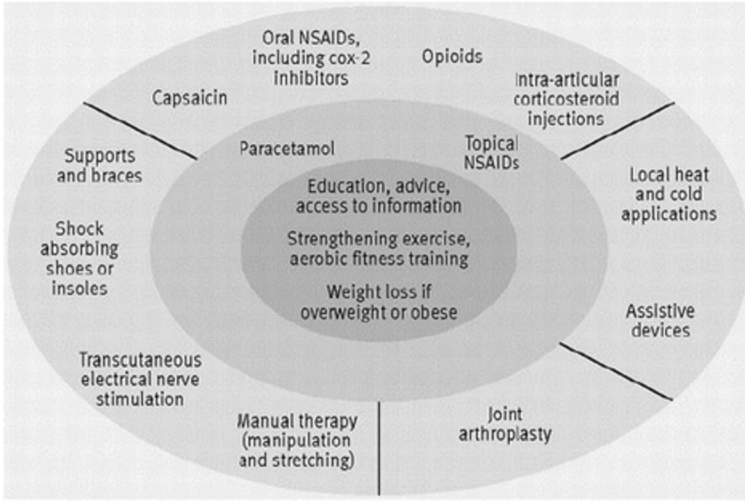
rate and can be done regularly, for example swimming, cycling or dancing.

Patients can be sign-posted to obesity management services or offered basic advice about diet and weight loss, as described in the Health Promotion chapter of this book.

Pharmacological management

Once the core interventions have been employed, NICE advises us to discuss analgesia, in the form of oral paracetamol and topical non-steroidal anti-inflammatory drugs (NSAIDs).

Ibuprofen or diclofenac are commonly used NSAIDs, applied over the affected joint. They can be purchased over-the-counter (in small quantities) or obtained on prescription. If this medication is not sufficient, other treatments are available, as shown in this image from Conaghan et al[5]:



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Referral

It may be appropriate to involve other members of the healthcare team:

- GP for diagnosis or prescribing
- physiotherapist (especially for isometric exercises for the less mobile)
- occupational therapist, for assistive devices such as walking sticks and tap turners
- podiatrist, if there is foot pain or deformity
- clinical psychologist, if low mood
- social worker or Citizens Advice Bureau regarding benefits and housing
- orthopaedic surgeon

NICE suggests we refer for consideration of joint surgery, before there is prolonged and established functional limitation and severe pain. Some areas use the Oxford knee and hip score as part of the referral process for joint replacement and it is worth being familiar with these.

`www.orthopaedicscore.com/scorepages/oxford_knee_score.html`

`www.orthopaedicscore.com/scorepages/oxford_hip_score.html`

Follow-up and review

NICE recommends regular reviews for everyone with symptomatic osteoarthritis. Assessment of function is particularly important. A team at Keele University has devised a computerised template to assist with follow-up consultations[6].

Pause for Reflection

Are you well prepared to provide holistic care, next time you see a patient diagnosed with osteoarthritis?

Do you have the knowledge and resources to encourage the three core interventions recommended by NICE?

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Chapter Fifteen
Osteoporosis

Osteoporosis literally means "porous bone". The bones become fragile, so fracture can occur when normal stress is applied to the abnormal bone.

Quite a few patients confuse osteoporosis (a condition of the bones) with osteoarthrosis (a condition affecting the joints). Your patient needs to understand that osteoporosis does not hurt; the condition does not cause any symptoms at all, unless a bone breaks.

Of course, broken bones are a serious problem. Wedge fractures of the vertebrae can cause curvature of the spine and often severe pain. A broken hip (fractured neck of femur) can be life-changing and life-threatening.

Who Should be Assessed for Fracture Risk?

Osteoporosis is more common in elderly females. It is a likely diagnosis in anyone who has suffered a fragility fracture, which is defined as a fracture of the wrist, hip or vertebral body, sustained during normal activities, such as a fall from standing height.

Your practice should have a system to assess patients for osteoporosis, if they have attended hospital with any of these fractures. If you think

some patients might have been overlooked, you could search the practice computer system for these fractures, using the relevant Read codes, and then invite the patients for assessment.

Here are some situations which increase the risk of osteoporosis:

- Age (women over 65 and men over 75)
- A parent who had a fragility fracture
- Smoking (about 1 in 8 hip fractures can be attributed to smoking[1])
- Alcohol intake above recommended healthy levels
- Body mass index <20
- Rheumatoid arthritis
- Immobility, e.g. wheelchair user
- Hormonal conditions, e.g. prolonged amenorrhoea or early menopause
- Gastrointestinal diseases which cause malabsorption
- Steroids. If a patient frequently takes steroid tablets, consider a DEXA scan if under 65 years, or a bisphosphonate for patients over 65 years or with a previous fragility fracture. Think - could the steroid doses be safely reduced? (If so, the dose should be reduced very gradually, with medical supervision). The practice nurse could also consider if patients on high dose steroid inhalers could be stepped down, if asymptomatic.

How to Assess Fracture Risk

In 2012, the NICE guideline[2] recommended two risk prediction tools, which estimate the ten year probability of an osteoporotic fracture. These are FRAX, to be found at `www.shef.ac.uk/FRAX` and QFRACTURE at www.qfracture.org

In 2015, the SIGN guideline[3] explained why QFRACTURE was SIGN's preferred method to calculate fracture risk, with a fracture risk threshold of 10% indicating the need for a DEXA scan. To become familiar with the QFRACTURE calculator, you can go to the QFRACTURE website and entering data for a dummy patient.

If a patient is assessed as low risk for osteoporosis, no action is required, except perhaps follow-up in a couple of years. Patients assessed as intermediate risk should be referred for measurement of bone mineral density (BMD). Those assessed as high risk are likely to be offered bone protection treatment.

FRAX is more explicit than QFRACTURE regarding when to start treatment. This prescribing decision will usually be made by a GP or a specialist, taking into account all risk factors and the BMD, if available.

SIGN tells us: "BMD should normally be measured before starting osteoporosis treatment, but patients with vertebral fractures can be commenced on treatment without BMD measurement if impractical to obtain".

Routine x-ray examination will show fractures but is not suitable for BMD measurement. For this, we offer a DEXA scan (dual-energy X-ray absorptiometry) of hip and lumbar spine.

The DEXA report will give a T-score, which compares the BMD of the patient with the BMD of an average young adult. Osteoporosis is defined as BMD>2.5 standard deviations below the young person's BMD (T score worse than -2.5).

Osteopenia is diagnosed if the T-score is between -1 and -2.5. The bone density is slightly reduced but the patient does not have osteoporosis. These patients can be reassured but could consider life-style changes and a repeat DEXA scan in a couple of years.

The Z score compares the BMD of the subject to someone of the same age, and should not be used to diagnose osteoporosis.

Treatment of Osteoporosis

As always, consider non-pharmacological approaches as well as medication. Activity is particularly important in osteoporosis. To strengthen the bones, we recommend weight-bearing activity, such as walking, gardening or dancing. You can read more about this recommendation in the final chapter of this book.

Swimming is non-weight bearing, so less beneficial for the bones, but any form of exercise will strengthen muscles and reduce the risk of falls. If a patient with osteoporosis has frequent falls, they may benefit from referral to a Falls Clinic, for a multi-disciplinary assessment[4] of their medical status and home environment.

A practice nurse can also take the opportunity to talk about smoking and excessive alcohol, both damaging for bones as well as for general health.

Women who have had an early menopause will probably benefit from hormone replacement therapy or tibolone to protect their bones, until the usual age for the menopause, which is about 51. After this age, the benefits of hormone replacement therapy are less clear.

Bisphosphonates are the first line drug therapy for osteoporosis[5], usually alendronic acid tablets. To reduce the risk of oesophageal irritation, these should be swallowed with plenty of water, an hour before breakfast or any other medication. The patients are advised to sit upright or stand for the next thirty minutes[6]. An injection of zolendronic acid or denosumab is sometimes recommended for high risk patients unable to take oral medicines.

These medicines bind to bone, where they influence calcium metabolism. Recommendations suggest that bisphosphonate prescriptions should be reviewed at five years, as there is limited evidence of long-term efficacy[7]. There are also some concerns about atypical femoral fractures with long-term use[8].

Osteonecrosis of the jaw is a rare complication of bisphosphonates. Patients can be advised to have a dental check before starting the medication.

For strong bones, the patient needs sufficient calcium in their diet. This is generally obtained from dairy foods, low fat dairy products being a healthier choice. Calcium tablets have fallen out of favour, due to a possible association with heart disease.

Vitamin D is also necessary for healthy bones. It is often prescribed for patients with dark skin and patients who are housebound, because these people may not obtain sufficient vitamin D from sunlight. Elderly patients in nursing homes are at high risk of osteoporosis, as they live mostly indoors, may eat very little and are relatively immobile.

Pause for Reflection

Thinking about prevention of osteoporosis, does your practice have a robust system to identify patients who have had fragility fractures? Might anyone have been overlooked?

You could find out about your local falls clinic, so you can discuss the service with frail patients. What happens at the clinic? Would it be useful for you to attend a session as an observer?

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Chapter Sixteen
Dementia

All the world's a stage,
And all the men and women merely players;
They have their exits and their entrances,
And one man in his time plays many parts,
His acts being seven ages…

…Last scene of all,
That ends this strange eventful history,
Is second childishness and mere oblivion,
Sans teeth, sans eyes, sans taste, sans everything.

Shakespeare wrote these words[1] in 1599 but four centuries were to pass before a German psychiatrist, Dr Aloysius Alzheimer, described in great detail the decline of his patient, Auguste Deter[2]. After the death of Mrs Deter, Dr Alzheimer dissected her brain. He identified the microscopic plaques and tangles which are characteristic of a specific type of dementia, now called Alzheimer's disease.

The excellent Oxford Handbook of General Practice describes dementia[3] as "generalised impairment of intellect, memory and personality, with no impairment of consciousness". Its prevalence increases with age, affecting of 20% of people over 80 years. As our population ages, we will have many more patients living with dementia.

In the majority of cases, dementia is due to Alzheimer's disease, where the patient suffers gradual loss of brain function. Mean life expectancy following a diagnosis of Alzheimer's disease is about six years, although there is considerable variation.

Another common type of dementia is multi-infarct dementia, where the illness progresses in step-wise fashion, as the brain is damaged by multiple small strokes.

A third type of dementia is Lewy body dementia, named after the microscopic Lewy bodies seen in the brain on post-mortem examination. The characteristics of Lewy body dementia are fluctuating cognition (not seen in other forms of dementia), visual hallucinations and signs of Parkinsonism, generally requiring specialist treatment.

People with learning disabilities, particularly Down's syndrome, are at increased risk of dementia. Sometimes they develop dementia at an unusually young age.

As well as impairment of short-term memory, patients with dementia may have the following problems:

- Dyspraxia – difficulty with manual tasks, such as using tools or dressing
- Dyscalculia – cannot do simple arithmetic
- Anomia – inability to name objects
- Agnosia – inability to recognise people or objects
- Aphasia (in late disease) – cannot speak

As the disease progresses, conversation becomes difficult, helpful advice to friends being "do not ask questions and do not contradict".

What is the role of the practice nurse in dementia? The nurse can make important contributions in prevention, case-finding and management of this long term condition.

Prevention of Multi-Infarct Dementia

Multi-infarct dementia is due to small strokes. Please see the Stroke and TIA chapter of this book, for detailed information about modifiable risk factors.

Case-Finding in Dementia

There is no expert consensus to support population screening for dementia. However, early diagnosis can have benefits, enabling us to rule out treatable diseases which sometimes mimic dementia, such as depression, hypothyroidism and subdural haematoma[4].

People diagnosed with early dementia will receive an explanation for their difficulties and a care package can be planned. The SIGN guidelines[4] remind us "Healthcare professionals should be aware that many people with dementia can understand their diagnosis, receive information and be involved in decision making".

From a legal point of view, we can recommend the patient speaks to a solicitor while still relatively well, to appoint a trusted person (often a relative) to act as an attorney. An attorney can deal with Health and Welfare and/or Property and Finances. The solicitor prepares a Lasting Power of Attorney (LPA), which indicates the scope of the attorney's authority to act for the affected individual, including important decisions about life-sustaining treatments.

If the patient lacks capacity to make a decision, we are expected to act in their best interests, following the principles of the Mental Capacity Act 2005. The law expects us to make all practical attempts to support the patient's decision-making and take into account the views of relatives and other people who know them well[5].

Case-finding is relevant for road safety and the DVLA should be notified of the diagnosis. In early dementia, a driving licence is sometimes issued, subject to annual review[6].

As a practice nurse, you can ask yourself if you are case-finding sufficiently often. Case-finding is particularly important for dementia patients who live alone. There are some patients who do not wish to have the diagnosis confirmed but will still need assistance.

People with dementia often lack insight. Their symptoms are more likely to be reported by a relative, or you may notice cognitive difficulties during a consultation about another matter. Perhaps the person repeatedly misses appointments or seems not to understand simple advice.

Patients who themselves complain of memory loss are unlikely to have dementia, although they may have anxiety or mild cognitive impairment due to old age. Memory problems should never attributed to ageing, without further consideration.

A nurse who suspects memory loss can use a quick and easy assessment tool called GPCOG. You could find an online GPCOG calculator now[7] and run through the test yourself. Patients with low scores require further action, which may include referral to a memory clinic. Before referral, blood tests should be done for FBC, U&E, LFT, calcium, HbA1c, TSH, vitamin B_{12} and folic acid. The memory clinic will then arrange a holistic needs assessment.

Pharmacological Management of Dementia

There are medicines for dementia but management is largely psycho-social. Medication may be offered in the early stages of Alzheimer's disease, but not all patients respond and no drug stops progression of the disease. For patients with multi-infarct dementia, drugs may be prescribed for secondary prevention, as in other forms of stroke.

Patients can become agitated and sometimes aggressive. Unfortunately, sedatives may be harmful in dementia. Major tranquillisers have caused strokes and we know that night sedation can lead to impaired function next day, with falls and increased confusion. Instead of these medicines, caregivers can learn strategies to calm the patient[8], an easier task in a familiar environment where the carer and patient know each other well.

Anyone who has observed a drug round in a care home will know how hard it can be to persuade dementia patients to swallow their medication. Conscientious staff spend much time encouraging reluctant patients to take their medicines. Sometimes these have little benefit, an example being statins in the late stages of Alzheimer's disease.

A good case can be made for de-prescribing in the frail elderly, in view of their limited life expectancy. Most of their medicines should be for current symptoms.

Psycho-Social Management of Dementia

Everyone with dementia should have care arrangements in place, with regular reviews to identify problems. Home visits may be necessary, especially for patients who fail to attend appointments.

The practice nurse is part of a team who assist patients with dementia, including professional carers and informal carers (family and friends). Many older people will confide in their practice nurse and give them information they would not take to a doctor, alerting you to difficulties before a crisis develops.

Reception staff can help with a reminder call to the patient on the morning of their appointment and you can provide clear and simple written notes about advice you have given. Good support may help your patient to continue living independently.

The practice nurse or district nurse might have a checklist for the following: comfort, weight and nutrition, pressure areas, toe-nails, hygiene, continence, falls prevention, fire safety and home security. If you have any worries about neglect or abuse, you should advise the carers that you are going to ask Social Services for help.

As Shakespeare reminds us, dementia patients may have problems with their teeth and their eyes[1]. You can remind carers of the need for check-ups by an optician and a dentist, at home if necessary. People with dementia lose interest in food and may be unable to feed themselves, so are at risk of malnutrition. Alzheimer's disease causes altered colour perception[9] and affected patients tend to eat more if their food is colourful. Their meals should be small, frequent and high in calories, with feeding help provided as necessary.

In spite of its name, the Alzheimer's Society is for people affected by all types of dementia. The Society's website has an "A-Z of Dementia", located at the bottom of the home page. This substantial resource[10] can help carers cope with the challenges of daily living, one example being practical tips for washing and bathing a confused person.

In the United Kingdom, two thirds of people with dementia live at home[11]. The patients gradually withdraw, an experience for families which has been called "a living bereavement". As dementia progresses, the patient may become immobile and require heavy lifting, but carers themselves are often elderly.

People with dementia often sleep in the day and feel restless at night. Family members are likely to be deprived of sleep (Shakespeare's *"balm of hurt minds")*[12] and they may buckle under the strain of the whole situation.

The practice nurse should find out about local organisations which offer practical and psychological support to carers. Their staff may provide financial advice, teach coping strategies, take patients to memory clubs,

supply special equipment and provide night sitters. Effective teamwork will ensure that nobody has to manage dementia on their own.

With sufficient support for the patient and their family, the diagnosis need not be a catastrophe. People with dementia can have a good quality of life.

Pause for Reflection

You could audit your patients with dementia and arrange a medication review for anyone taking more than four drugs, with the help of a pharmacist or GP. To meet performance targets, these patients can have an exclusion Read code on their medical record, with an explanation such as "no evidence base due to age and co-morbidities".

Is your practice dementia-friendly? Search for the term online and consider what the team do well and what could be improved.

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Chapter Seventeen
Mental Health

"*The hardest prison to escape is your mind.*"

Anon.

This chapter has six themes:

1. Recognising mental ill-health in people with long term physical conditions
2. Improving the physical health of people with severe mental illness
3. Identifying relapse
4. Assessment of risk
5. Recovery from mental illness
6. Psychological therapies

The chapter finishes with a list of leaflets you can modify for your own patients. There is a separate chapter on dementia.

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Recognising Mental Ill-Health in People with LTCs

A long term physical condition (LTC) can have far-reaching social and emotional implications, affecting independence and relationships, employment and leisure, finances and status.

Many people with long term conditions will develop anxiety, as they face uncertainty and change. There is also a high risk of depression in patients with LTCs, conditions which may themselves cause fatigue, sadness and grief. Some people have strong coping mechanisms but others will develop depression. It is important to recognise depression, as treatment can help considerably.

Here are some factors which make people vulnerable to depression:

- A parent who had depression
- An unhappy childhood
- An inflexible personality
- Social isolation
- Adverse social conditions (worries about money, work, relationships, housing)

A nurse with a warm, non-judgemental attitude can support patients suffering with LTCs and may be able to detect hidden depression. If you have good communication skills, you give your patient permission to talk freely. There is much more information about patient-centred consulting in Chapter 1.

A nurse reviewing a long term condition might say "Could I please ask you some specific questions, in case you might be suffering from depression?"

We then use the two Whooley[1] questions, a blunt tool screening tool for depression but better than ignoring mental distress. The questions are as follows:

- *"During the past month, have you often been bothered by feeling down, depressed, or hopeless?"*
- *"During the past month, have you often been bothered by little interest or pleasure in doing things?"*

If a patient answers "yes" to either of the above questions, the "help" question can be asked, as proposed by Arroll and colleagues[2]:

- *"Is this something with which you would like help?"*

The authors suggest three possible responses:

- "*no*"
- *"yes, but not today"*,
- *"yes"*.

Our management is then determined by a holistic assessment of the circumstances.

Similarly, the nurse can use two questions to screen for anxiety, recommended by Kroenke and co-workers[3]:

- *"How often over the last two weeks have you been bothered by feeling nervous, anxious or on edge?*
- *How often over the last two weeks have you been unable to stop or control worrying?"*

Patients who may have anxiety or depression need further assessment by a trained clinician, including consideration of risk (see below). If the diagnosis is confirmed, the patient can be offered psychological therapy ("talking therapy") and/or medication.

Improving the Physical Health of People with Severe Mental Illness

The shocking association between severe mental illness (SMI) and preventable physical diseases must be a priority for all health workers.

People with a severe mental illness (mainly schizophrenia or bipolar disorder) have a life expectancy many years less than other people of the same age. The majority of the early deaths are not due to suicide but are caused by common physical health problems, such as cardiovascular disease and cancer.

People with SMI are much more likely to smoke. They often have poor diet and minimal exercise, associated with lack of motivation, self-neglect, poverty and other social difficulties.

Symptoms of SMI include poor motivation and difficulty with organising and planning. Additionally the medication used to treat the condition may cause sedation. This means that some patients will find it difficult to attend clinic appointments.

The primary care team can help by making appointments for patients (rather than asking them to ring and make one), scheduling appointments for later in the day and sending telephone reminders. We can take a proactive approach to follow-up, calling vulnerable patients if they have missed an appointment.

In common with people with other long term conditions, those with severe mental illness may not adhere to their medication schedule. The reasons include poor insight into their condition (so they don't think they need treatment) and forgetting medication, due to their illness or to avoid the side effects. Unfortunately, many anti-psychotic medicines cause weight gain, with the associated risk of diabetes.

What can a practice nurse do? The Lester Resource[4] recommends nurse-led interventions from the time of diagnosis, with the motto "Don't just screen – intervene". Be aware that cardiovascular risk assessment tools (such as QRISK2) may give false reassurance when a patient has severe mental illness. Statins, anti-hypertensives and metformin may be advisable at a younger age than usual.

As soon as SMI is diagnosed, the practice nurse can target cardiovascular risk factors intensively, especially weight gain and smoking. However, you will need to proceed in small steps, one goal at a time, to avoid bombarding the patient with information.

You can encourage exercise (especially walking) and healthy eating. Find out about low cost facilities in your area. For example, does the local leisure centre offer concessionary rates? Where can the cheapest fruit and vegetables be obtained? Ask your patients.

We often hear that people smoke to calm their nerves. People who are addicted to tobacco will experience nicotine withdrawal symptoms if they cannot smoke, a feeling very similar to an anxiety attack. A cigarette (or nicotine replacement therapy) will immediately ease these cravings, but is not a genuine or safe treatment for anxiety. Anxious people will have fewer mood swings if they quit smoking – also more money and better health.

Tobacco increases the metabolism of various psychiatric medicines, so a patient who stops smoking should be carefully monitored. They may need a smaller dose in future. When complete cessation seems impossible, reduced smoking may be a realistic goal.

Patients with mental health problems are at risk from excess alcohol and illicit drugs. It is good practice to enquire, regardless of age or social circumstances, and easy to say "We always check…are you using any street drugs?"

As always, the practice nurse should keep an eye on the blood pressure and check that female patients are having regular smear tests.

If a patient has had SMI, you can offer a weight check every time they attend. Weight loss often occurs in self-neglect, profound depression or mania. If weight is rising while a patient is taking anti-psychotic drugs, it may be worthwhile phoning the mental health team to enquire if the medication should be changed.

Lithium is sometimes prescribed as a mood stabiliser, for bipolar disorder or treatment-resistant depression. Lithium has many benefits but needs good kidney function to prevent toxic accumulation of the drug in the body. Long term use of lithium can cause thyroid problems.

Serum lithium levels should be monitored and kept within the therapeutic range, as described in the British National Formulary[5]. The blood sample should be taken twelve hours after the last dose of lithium. Kidney function and thyroid stimulating hormone (TSH) should also be checked.

Identifying Relapse

Patients with SMI should be taught to recognise their symptoms of relapse and the action they should take if becoming more unwell. This information is generally included in their written care plan. The practice nurse can reinforce the message by asking about their warning signs for relapse. Carers should also have this information.

Psychosis is a disorder of perception and thinking, where the patient may not attribute their symptoms to a mental disorder. When a person with SMI suffers a relapse, they are commonly scared and suspicious. The symptoms can be subtle or they can be very obvious and disturbing to onlookers. A practice nurse can be well placed to help, having established

rapport with the service user over months or years. The nurse may notice a change in the person's emotional state and will know their previous ideas about the illness. There is likely to be mutual respect, enabling the nurse to calm the situation, ensure the patient's immediate safety and arrange early intervention.

A mental state examination is about your objective observations of the patient, rather than their subjective descriptions of their feelings. It includes the following:

- ***Appearance*** *– observe cleanliness, clothing, posture and gait*
- ***Behaviour*** *– cooperative or aggressive, calm or agitated*
- ***Speech*** *– speech might be coherent and logical, or perhaps gabbled or loud*
- ***Observed Mood*** *– does the patient appear to you low in mood, apathetic or irritable? Do they seem optimistic or pessimistic?*
- ***Thought*** *– preoccupations, ideas and beliefs*
- ***Perception*** *– hallucinations (which may be auditory, visual, smell, taste, touch)*
- ***Intellect*** *– is the patient orientated in time, place and person? e.g. do they know their current location? Are they functioning intellectually at a level you would expect from their history?*
- ***Insight*** *– how does the patient explain or attribute their symptoms?*

In the early stages of psychosis, quite sophisticated interview techniques may be needed to detect thought disorder, delusions and hallucinations. Here are some questions used by psychiatrists:

- *Do you manage to get out most days?* (Apathy is a common symptom of psychosis)
- *Any special worries? Or distressing thoughts? Do you have any beliefs which other people find unusual or strange?*

- *Do you feel people are looking at you/ talking about you?*
- *Do people know your thoughts? Are your thoughts coming faster?*
- *Have you seen or heard things you cannot account for?*
- *Have you heard voices? (voices discussing/arguing?) Do you receive messages or signals?*

In relapse of bipolar disorder, extremes of mood can occur. A person with mania will be hyperactive, with elevated mood and lots of energy. In depression, there is low mood, lack of energy, loss of interest and poor concentration. Sleep disturbance is a cardinal feature of both conditions.

The two most common reasons for relapse of bipolar disorder are failure to take medicines as prescribed and stressful life events. More frequent follow-up is advisable if these situations seem likely. During a relapse, the patient may lack insight but friends and family will notice changed behaviour. You may also notice a difference, if you know the patient well.

Assessment of Risk

Assessment of risk is a necessary part of a psychiatric review, but is a matter of judgement rather than an exact science. We can share our concerns with the patient and the wider healthcare team, as we decide how best to proceed. If children are at risk, you should explain to your patient that you are going to contact Social Services, so that every possible help can be offered to the family.

Vulnerable people are at risk of exploitation by others. Your patient may be at risk from substance abuse, self-neglect, violence, self-harm or suicide. A few patients with mental illness pose a risk to other people, examples being dangerous driving or neglect of their children. Patients with jealous delusions are a particular concern, their partners being at high risk of violence.

Risks of harm are greater if the patient has difficult social circumstances, making them feel isolated or hopeless. Sadly, some of our patients will have faced decades of adversity.

Here are examples of questions we use to assess the risk of suicide, asked in step-wise fashion:

How do you see the future?

Have you ever had thoughts that you cannot go on, that you would like to end it all?

Have you harmed yourself?

Have you made plans to take your own life?

In a similar way, you can ask about aggression in a stepwise manner, enquiring first about irritability and anger, then police intervention, fights and violence.

Recovery from Severe Mental Illness

Psychiatrists across the English-speaking world are increasingly recognising the concept of recovery from SMI. Anthony[6] defined recovery as follows:

"…a way of living a satisfying, hopeful and contributing life. Recovery involves the development of new meaning and purpose in one's life as one grows beyond the catastrophic effects of psychiatric disability."

Patients with SMI often have complex needs, requiring on-going input from a multi-disciplinary mental health care team. Practice nurses have an important role in the follow-up of such patients, after they have been discharged from secondary care.

A practice nurse is a very suitable person to offer the recovery approach. General practice is a relatively non-stigmatising environment, where we know our families and can offer continuity of care, using respectful, patient-centred consultation techniques. Together, we work towards improvement and recovery. In primary care, we can take a holistic approach, emphasising physical wellbeing as well as mental health.

The nurse should have some knowledge of psychiatric drugs and their side-effects (see the British National Formulary[2]) but can confidently work with patients to increase their coping skills, reduce dependency and avoid over-medicalisation. It can be useful to find out the person's mental health needs, which are more important (and individual) than a diagnostic label.

Psychological Therapies

In a strengths-based approach, we ask the patient what is troubling them the most, then move rapidly to discover what helps them cope. This information is synthesised to help the patient develop a management plan. Empathic statements show you have heard and encourage disclosure, for example, "That situation sounds really difficult".

Another approach is to start a conversation which invites change. You could say "What might happen if…" or "Supposing…" Always remember to be non-directive, because a patient's response must be based on personal experience and values.

Some patients make arrangements to see a counsellor, which can be useful if there is a specific problem. In a nutshell, a trained counsellor will encourage the client to define their problem and then work with them to set short and long term goals.

Of all the psychological (talking) therapies, cognitive behavioural therapy (CBT) has the best evidence base. In CBT, the therapist works with

the client to identify cognitive problems ("twisted thinking"). These are distorted views of reality, often imprinted at a very young age.

Consider a small child who is ignored and neglected by her family. Years later, suffering depression and low self-esteem, she waves to a friend across the street. The friend is distracted by a window display, so does not respond. The depressed woman feels even worse, thinking she is rejected and worthless.

This distorted thinking leads to changed behaviour. The woman may misinterpret various social situations, stop going out and avoid new friendships. She might perhaps seek solace in alcohol or over-eating. A therapist can help clients unravel these connections and see the world in a more positive light.

Psychological therapies are best started early and we encourage people to self-refer. You need to have leaflets readily available, describing the services in your area. Then you can support your patients through their process of recovery.

Pause for Reflection

You could make some leaflets for your patients and colleagues, as described below.

There is a quote at the beginning of this chapter, "*The hardest prison to escape is your mind.*". Is this true or false? Can you justify your answer, using anonymised case histories of memorable patients?

Suggested Leaflets

Leaflet No. 1 – Psychological Therapy

Self-referral procedures for psychological therapy available in your locality.

Leaflet No. 2 – Emergency Contacts

Momentary thoughts about death are common when a person has depression, but if you have active plans for suicide or self-harm, please contact one of the following immediately:

Contact details for your surgery. Tell the receptionist you need urgent medical help.

Contact details for your local crisis team.

Contact details for the nearest Accident and Emergency department

Contact details for the Samaritans

The Samaritans provide confidential emotional support 24/7 to people experiencing despair, distress or suicidal feelings. You can talk to the Samaritans about anything that is troubling you and you do not have to give your name.

As your health improves, try writing down small, achievable goals, in four categories:

1. establishing daily routines
2. increasing pleasurable activities
3. dealing with necessary issues
4. being physically active

Leaflet No. 3 – Self-Help Resources for Good Mental Health

www.patient.co.uk You can search this website for topics such as depression, anxiety, obsessive compulsive disorder, phobias, anger, panic, bulimia, insomnia and alcohol.

www.livinglifetothefull.com This is a free online course, using cognitive behavioural therapy.

"The Good Sleep Guide" by Colin Espie – a leaflet available online, describing natural ways to help with sleep. Remember, sleeping tablets are best avoided.

Self-help books: available from libraries and bookshops or from www.amazon.co.uk

There are many useful books in the "Overcoming…" series, including "Overcoming Low Self-Esteem", "Overcoming Sexual Problems", "Overcoming Traumatic Stress", "Overcoming Chronic Pain". To view the catalogue online, visit www.overcoming.co.uk

"Manage Your Mind: The Mental Health Fitness Guide", a book by Gillian Butler and Tony Hope

"Living with Depression: How to Cope When Your Partner is Depressed", a book for partners by Caroline Carr.

"Mindfulness: a practical guide to finding peace in a frantic world", a course by Professor Mark Williams and Danny Penman. A chapter a week for eight weeks. The Headspace app is another popular method for learning about mindfulness.

Leaflet No. 4 – Local Organisations

This leaflet is a resource for the practice team, a list of contact details for local organisations which promote psycho-social wellbeing. Here are some suggestions to get you started.

Adult mental health referrals

Age UK

Alcohol services

Alzheimer's Society

Anger Management - if no local service, search for anger on `www.patient.co.uk`

Books – ask if your local library has self-help resources

Carers' support

Child and Adolescent Mental Health Services (CAMHS)

Citizens' Advice Bureau

Cruse bereavement care

Domestic violence `www.nationaldomesticviolencehelpline.org.uk` *and local services, posters for the waiting room*

Drugs – `www.talktofrank.com` *and local arrangements for drug users*

Eating disorders service

Foodbank

Gambling `www.gamcare.org.uk`

Homelessness

Mind

Peri-natal mental health service

Pet bereavement www.bluecross.org.uk

Rape and sexual abuse – support for victims, whether recent or long ago

Refugee services

Relate (relationship counselling)

Victim support (for victims of crime)

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Chapter Eighteen
Professionalism and Trust

"There is nothing so contagious as enthusiasm."

Samuel Taylor Coleridge

This chapter makes no attempt to define the professional duties of a nurse, nor is it comprehensive. Rather, it is a hotchpotch of suggestions to help the practice nurse apply professional values, when managing long term conditions in a primary care setting.

The Practice Nurse in a Business Environment

In 1948, Aneurin Bevan succeeded in his radical plan to nationalise British hospitals. After a long battle, he persuaded hospital consultants to work as salaried employees of the new National Health Service. The arrangements for general practitioners were different; their practices would continue as independent businesses, under private ownership. This explains the great variation between practices, which exists to this day.

Nowadays, a nurse moving into general practice may be employed by the NHS or by a large commercial organisation. However, most practice

nurses are employed by GPs. These doctors own their practices, sometimes alone but more often in partnership. A few skilled and experienced nurses negotiate to invest in the business, becoming self-employed partners, but such a position is still unusual.

The new practice nurse may need a cultural mind-shift, to adapt to a business model where patient care is important but so too is profitability. An efficiently run, high achieving practice will provide a substantial income for its owners, who can then offer good pay and conditions to recruit and retain their staff. Patients benefit too, because well-motivated staff are likely to provide good care.

Here are some ideas for increasing your income, as you gain experience in primary care, so you can make your career more rewarding, in every sense of the word.

- Ask for performance-related pay, perhaps by requesting a bonus at the end of the financial year. Are you worth it? Explain how and don't be shy.
- To increase your income further, diversify and make yourself indispensable to the practice. Offer to review housebound patients in their homes, code correspondence, draft responses to patient feedback, generate insurance reports, process pathology results.
- Charge overtime rates when you work beyond your normal hours. With external log-on, you may be able to deal with administrative tasks from home.
- Work locum sessions elsewhere, to learn from other teams. Locum rates are likely to be higher than regular pay and there may be tax advantages if you are classed as self-employed for your locum work.
- The management of long term conditions is commonly nurse-led. Learn more about a topic that interests you and develop your leadership skills. You will find plenty of advice online and in business books.

- Become involved in teaching, mentoring and clinical supervision. All nurses have a responsibility to pass on their knowledge, and do this every day with patients and the wider healthcare team. Can you offer student nurses some experience of general practice? Practice nurses sometimes work in isolation and teaching activities can offer great benefits to the nurse, the practice and patients. As you gain experience, you could work towards a university diploma in healthcare education, perhaps by distance learning.
- Get into research. You could start by recruiting patients to clinical trials. Speak to an academic at your local university or contact the Primary Care Research Network for your region.
- Consider committee work. Some NHS roles are well remunerated and fees are always negotiable.

Many aspects of your working life will be open to negotiation. You should be paid for all hours worked, not just for patient contact time. Can any of your work be delegated?

If you are a woman, you may need to sharpen your negotiating skills, to get your fair share of the practice profits. A study[1] in the Harvard Business Review is called "Nice Girls Don't Ask". The author found that women, on average, request increased pay 85% less often than men and they ask for 30% less income than men.

To request a pay rise, you will probably need to set up a meeting. You could provide a single page summary of your request, with bullet points stating your case. Be honest and direct about why you want to meet, not apologetic. This gives your line manager time to prepare. When you meet, you can provide written evidence of your achievements and show that you have acted on any previous feedback.

If your employer does not agree to your request, ask what steps you can take to get a "yes" next time and when you can revisit the conversation.

The Royal College of Nursing provides excellent advice[2] in their document "Nurses employed by GPs: RCN guidance on good employment practice".

Performance Targets

The Quality and Outcomes Framework (QOF) was introduced in 2004, as a "pay for performance" programme in general practice. Sadly, it sometimes incentivised processes ("box ticking") rather than real health outcomes which make a difference to patients[3]. QOF did reduce inequalities in care, but also distracted clinicians, inhibited personal care for the individual patient and complicated the management of our patients who live with multiple conditions[4].

The thoughtful practice nurse will need strategies to deal with imposed challenges. Here are some suggestions for staying positive while dealing with unwanted external demands.

- Make the care of the patient your first concern[5].
- Treat each patient as an individual.
- As stated by the Nursing and Midwifery Council[6]"work within the limits of your competence". Do not agree to tasks beyond your role, experience or training. You can be assertive, quote NMC guidance and request further training.
- Look at your patient more than you look at the computer[7]. Enter free text after the patient leaves the room.
- Work on your computer skills and take up opportunities for IT training, wherever you can find them. Learn to type without looking at the keyboard[8]. Move the computer screen so your patient can see it (unless it shows confidential references to third parties).

- Justify your decisions and actions, with confidence. We are allowed to exclude patients from performance indicators, if we give a good reason. Search for Read codes beginning "excluded from …" and type an explanation in free text.
- If a national policy seems wrong, campaign for change – send emails and tweets, join a committee, build on your existing expertise.
- Establish and maintain good relationships within the practice team and your local healthcare community – we are all in this together. Part-time nurses will need good handover arrangements and will benefit professionally if they can attend practice meetings. If meetings are missed, it may be helpful to read the minutes.

Recall and Review for Long Term Conditions

This book concentrates on long term conditions included in QOF at the time of writing, but there are many other important long term conditions, examples being psoriasis, inflammatory bowel disease and cerebral palsy. Every practice needs a plan to follow-up patients with chronic illness, with a clinician who has the relevant skills. This can usually be done on an annual basis. Shortly after the check-up, a prescriber should review the medication, re-authorise any repeat prescriptions and re-set the medication review date.

For any long term condition, regular recall is preferable to an *ad hoc* review whenever the patient feels like attending. This latter approach leads to crisis management rather than proactive care, and may cause high demand for urgent appointments. There is also a risk that asymptomatic conditions, such as hypertension, will be neglected.

A good recall system depends upon reliable Read coding of active problems in the patient's record. Every practice must have a system to ensure that diagnoses made elsewhere are not overlooked. Some practices use

a filing clerk to read incoming mail, electronically highlighting any diagnoses and ensuring they are coded in the medical record. The clerk can also highlight actions requested and make necessary arrangements, such as contacting the patient. Afterwards, the letter is forwarded to the clinician responsible for the patient, to quickly check the correspondence has been actioned appropriately.

A robust plan should be in place for coding the records of new patients, especially new immigrants who do not have an existing NHS record.

Here is a system to arrange annual reviews for long term conditions. Some of the preparatory work is done by clerical staff rather than nurses, following the principle that we should delegate tasks whenever appropriate.

Every year, the patients are sent a letter, in the month following their birthday, inviting them for a health review. As they become aware of the diary system, the patients may save non-urgent queries until their scheduled review, rather than making an additional appointment.

There are different arrangements for patients with a birthday in February. They are seen in January, to give the practice free time in March for catch-up appointments before the end of the financial year. People with complex health needs or multiple long-term conditions can be given longer appointments, by arrangement with your team.

The practice will need a procedure each month to follow up patients who did not attend for their check-up. These people are at high risk of neglecting their health.

To facilitate medication reviews, you can recommend the patient sees their pharmacist for a medicines check-up, shortly after seeing the nurse. A prescriber can then check and re-authorise repeat prescriptions for the next twelve months, with guidance from the nurse about any medication

problems. Nobody should re-authorise medication unless they have appropriate training.

For a specimen letter to invite a patient for review, please see the appendix at the end of this chapter.

Equality and Diversity

As health workers, we should of course do our best to promote equality, without prejudice or discrimination. You could consider if your practice team are providing accessible and effective care for long term conditions, in the following situations:

- reduced mental capacity
- house-bound
- mental illness
- young person without support
- disability
- caring responsibility
- working far from home
- communication difficulty
- literacy problems
- cultural differences, e.g. new immigrant
- poverty
- ex-prisoner
- sex worker
- substance abuse
- person reluctant to disclose their address

- homelessness
- mobile populations such as Gypsies and Travellers

We are required to work within the law. For example, under the Disability Discrimination Act, your practice will need an arrangement to translate information leaflets into Braille[9], when needed. Your local council may have a translation facility.

Digital communication (email or text messages) may improve access for certain marginalised patients[10], as long as confidentiality can be maintained. Approved standard messages may be best, for medico-legal reasons. Patients should be made aware that it is rarely appropriate to discuss emergency issues by email. Your email signature and out of office reply should include guidance about emergency care[11].

People who are vulnerable or stigmatised often live in deprived areas, where housing is cheaper. Practices with high levels of socio-economic deprivation will have higher consultation rates and their patients will have more chronic illnesses. Unfortunately funding does not sufficiently address this situation[12], and we have to meet the challenges as best we can.

Confidentiality

A hospital ward is a relatively public environment, where only curtains may protect a patient's privacy. In general practice, every consultation takes place behind a closed door. As people get to know and trust you, they will sometimes disclose extraordinarily personal information. Working in a small community, every practice nurse must be hyper-aware of the need for confidentiality.

That invaluable document, the Code of the Nursing and Midwifery Council, states[6] that "you owe a duty of confidentiality to all those who

are receiving care" and it goes on to explain the special circumstances when you are permitted to share information, for patient safety or public protection.

Continuing Professional Development

A nurse interested in people will find that general practice is never, ever boring. Because you will encounter new situations every day, it is worth keeping a Learning Diary, to guide future study and provide evidence of reflection for revalidation purposes. One example is given below and other templates are available from the Nursing and Midwifery Council.

PATIENT	EDUCATIONAL NEED	OUTCOME
4008	Balanitis xerotica obliterans – what is it?	The only clinical indication for adult circumcision!
1205	Patient DNA'd hospital investigations	Discussed with Janice, she'll call him to find out what's going on.
2487	SAAB after infarcts – uh???	Statin, Aspirin, ACEi, Beta blocker
3790	Revise sickle cell trait, before his appointment on Wednesday	"Oxford Handbook of General Practice"
	How to make extra rows in a table like this?	Click to right of last row, then hit ENTER

To make a similar table, open a Word document, click on Tables, and then make a new table with three columns and six rows. Click and drag on a vertical line to move the line sideways. You can save the table as an icon on your desktop, hidden to maintain confidentiality, but ready for use after a tricky consultation.

Evidence Based Practice (or The Truth And How To Search For It)

Can patients trust your advice? For instance, the osteoporosis chapter of this book has a statement: "we recommend weight bearing activity". For some patients, this recommendation will cause tedium, inconvenience and expense. To quote Richard Asher[13],"Just as we swallow food because we like it, not because of its nutritional content, so do we swallow ideas because we like them, not because of their rational content". Did you spot that the chapter gave no reference for the statement? It could perhaps be a myth, otherwise known as "received wisdom" or "expert opinion".

Whose opinion? For help, we might turn to a guideline for this condition, perhaps the SIGN Osteoporosis Guideline. SIGN merely says this[14]:

Section 6.2.2 Dynamic weight-bearing exercise with low force is performed in a standing position such as walking and tai chi. Studies of this type of exercise showed no effect on fractures.

Too often with guidelines, their credibility can be undermined by conflicts of interest. Big Pharma has a pernicious influence on guideline development across the world.

The Register of Interests for the SIGN Osteoporosis Guideline[15] states that two contributors have received payments from pharmaceutical companies that develop drugs for osteoporosis. These payments could be

trivial or could be many thousands of pounds. We do not know, but we have to decide if the guidance is sound.

A systematic review of the literature can take years, but there is a practical way to get information quickly, by typing key words into the astounding scientific search engines which are available online. This enables a nurse to search for answers in the consulting room, for the questions which arise during every working day. PubMed and Google Scholar are both hugely powerful. You could search for them now and try them out.

In science, focussing a question is an art. Your key words for a search may include:

1. The problem or the type of patient (perhaps osteoporosis or post-menopausal women)
2. The intervention (in this case, weight bearing exercise)
3. The comparator (sometimes omitted from the search, here could be usual activity)
4. The outcome (fracture is a real outcome which matters to patients, so would be better than Bone Mineral Density)

You can try searching for these key words about osteoporosis, but you will probably find no clear evidence.

Here are some more searches to try, so you can compare PubMed and Google Scholar:

- Asthma, school nurses
- Hypertension, older
- Population, screening, type 2 diabetes

Our strongest evidence comes from randomised controlled trials, arguably the greatest advance in the history of medicine. A comparator makes for a better research study and is essential for a randomised controlled trial (RCT).

In an RCT, the patients are randomly allocated to one of the treatments (interventions) being compared. The patients and researchers should be "blinded", when feasible, which means they are unaware who is in the treatment groups. The more patients, the better the trial. For relevance to your work, the subjects of the trial should resemble your patients as much as possible. So a study from Britain may be more useful for a British nurse than research undertaken in a very different country.

Academic search engines supply peer-reviewed evidence, so are much more reliable than Wikipedia, which can be edited by anyone. Good search engines usually take you to several references, which may include RCTs. Systematic reviews are also noteworthy, because they synthesise the results of several research studies.

Often you can view an abstract (summary) online but the full article will be behind a pay wall. People who work in the NHS (including practice nurses) are eligible for an OpenAthens account, giving free access to numerous online journals. To register, contact your OpenAthens administrator or follow the links from the NICE website[16].

As you read the comments of experts, you will gradually develop your own skills in critical appraisal. To make some sense of statistics, I recommend The Keep it Simple Guide to Evidence-Based Medicine, available for download from NB Medical Education[17]. This organisation runs superb update courses on chronic disease management and recent developments in primary care.

Where would we be without statistics? For a start, we would be unaware of the link between tobacco and lung cancer[18]. But of course, statistics are often used to confuse and deceive. Here are some potential pitfalls:

- Graphs – or just pretty pictures? Ensure you understand the labelling of the horizontal and vertical axes, to decide if a change is meaningful.
- Absolute risk reduction (ARR) can sound impressive but is often misleading. The figure you need to see is Relative Risk Reduction (RRR). Take this example: "The good news is that our new wonder drug will halve your risk." (The bad news is that your risk will be marginally reduced, from two in a million to one in a million.)
- Numbers Needed to Treat (NNT) may not be stated (but are easy to calculate, NNT = 1/ARR). Consider the ADVANCE trial, about blood pressure control in Type 2 diabetes. It does give NNT, telling us we need to treat 200 people for five years to prevent one adverse event.[19] This is very useful information to help a patient decide whether to take a medicine.

Be especially cautious when evidence is presented by a person with a commercial interest. It is very easy to say "Sorry, I don't see reps". You can emancipate yourself from drug reps: bring your own lunch, join healthyskepticism.org and raise awareness. You could buy a biro and some post-it notes, and make your consulting room an advert-free zone. A patient is unlikely to trust a drug named on your pen and may think less of you, if you display pharmaceutical adverts in your room.

Consider why industry funds educational events and think about payments to presenters and authors, which can be substantial. We need transparency, without being anti-business. You could encourage speakers to declare any financial interests at the beginning of their presentation. By the way, the author of this book receives no payments from the pharmaceutical industry.

Thinking more positively, Dave Sackett ("the father of evidence based medicine") pointed out that in the clinical hierarchy, evidence will trump eminence. Evidence can persuade people to sit up and listen. Evidence empowers us to help our patients.

Audit

Florence Nightingale was the founder of professional nursing and a pioneer of audit. Back in the nineteenth century, she carefully and systematically collected data from patients' records. Working in the midst of the Crimean War, she carefully evaluated this information to improve care for the future.

Reflection can be defined as a process where people actively consider their performance, to identify strengths and weaknesses. Audit and Significant Event Analysis are both opportunities to write reflective accounts, for revalidation purposes and to improve patient care.

Audit is not research, but it is often based on research findings. An audit topic can be clinical or administrative. For instance, you could audit your time-keeping, with a criterion that patients should not be kept waiting longer than ten minutes after their appointment time, setting a standard of 80%. If you do not meet the standard, a solution might be an empty catch-up slot, mid-session. A standard of 100% would be unrealistic for punctuality, but might be appropriate for an important safety issue, such as having adrenalin available whenever you give a vaccine.

You will find an audit template in the appendix at the end of this chapter, to adapt for a topic of your choice.

Significant Event Analysis

In Significant Event Analysis, the primary health care team make an opportunity to discuss something important that has happened in the practice. Any member of the team can suggest a topic. This could be a successful experience (such as "a good death") or a problem (such as an emergency admission for asthma or a complaint). Ground rules are set

at the beginning of the discussion: the meeting is about learning rather than blame, any criticism must be constructive, and the conversation is strictly private. The team's learning needs are minuted, sometimes with an agreement about future audit.

If you are worried about something which has gone wrong, it might be helpful to reflect upon the details of what happened. Johns' Model for Structured Reflection was devised by Johns for nurse practitioners[20] in the early stages of their learning, to help them focus on a problem without judging themselves too harshly.

Making Decisions

The most difficult decisions in general practice tend to be dilemmas. These situations often appear on the agenda for practice meetings, the team asking "should we do X or should we do Y?" You can bring wisdom to the discussion if you have a method for analysing the dilemma.

First, it helps to identify the dilemma and devise for yourself a list of all the possible options, always remembering the possibility of compromise. For each option, you can then think about the pros and cons for every stakeholder (patient, nurse, healthcare team, wider society).

If you are faced with an ethical problem, you can analyse the dilemma using the ethical framework proposed by the philosophers, Beauchamp and Childress [21]. They recommend you consider the problem in terms of four ethical principles, which are:

- beneficence (doing good),
- non-maleficence (avoiding harm)
- justice (fairness)
- autonomy(self-determination, which requires mental capacity)

If still uncertain, you can read about the problem or ask an expert.

Here are some dilemmas, for you to practise your decision-making skills:

- During a consultation, a patient makes a racist remark about your colleague. What should you do?
- Should healthcare be rationed? (for example, very expensive drugs)
- A GP in the practice appears to know very little about the modern management of diabetes. Would you do anything?
- Your patient's severe asthma attack does not improve with nebulised salbutamol, but he refuses hospital admission. What should the team do?

Making Changes

Professionalism is about maintaining high standards, but also about leadership: defining best practice in accordance with good evidence and then introducing changes. Above all, you should bear in mind the remark made by Sir Winston Churchill, a great leader, who advised "going from failure to failure without losing enthusiasm".

Here are some thoughts about how to make changes in your practice. If a newcomer, you may wish to wait a while and then sell your idea sensitively, to avoid implied criticism.

First you could share the idea at a practice meeting, and talk about the costs and benefits for everyone who will be involved. If you can quote evidence to support your suggestion, so much the better.

Then you could offer to write and circulate a brief proposal, listing practical changes, training requirements and start dates. The proposal might include a SWOT analysis (strengths, weaknesses, opportunities,

threats). If work is to be delegated, be sure to ask the views of the person who will do the job, and make sure they will have appropriate training and support.

A formal business proposal could include:

- Title and description of your proposal
- Executive summary, in a few sentences
- Business objectives
- Resources, including all key personnel
- Risks

Work closely with the practice manager and check you have a mandate to proceed. You will need to seek feedback, review progress, praise success and, as always in general practice, solve problems as a team.

Pause for Reflection

Many of the topics in this chapter fit well with revalidation requirements, linking to the themes "practice effectively" and "preserve safety". You could write a reflective account of any event that made you think. Some people find it easier to use a reflective template. If a situation was complicated or made you feel uncertain, then it will probably be a good topic for reflection.

What went well and what could have been done differently? How did you feel? What are the opinions of other people? And finally, how will you learn from this event, now and in the future?

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Appendix

Specimen Letter for Recall And Review

Dear MR PATIENT,

Our records show that you have recently had a birthday (or for February birthdays – Our records show that you will soon have a birthday), so we are writing to invite you for a health review. This is an opportunity to monitor any long term conditions and check your medication requirements. We would like you please

- *to give us an update on your health,*
- *ask any questions*
- *talk to us about your health goals.*

On this occasion, no blood or urine test is required. Please attend in 1-2 weeks.

OR (STAFF MEMBER EDITS LETTER AS APPROPRIATE)

Please will you have a blood test (form and instructions enclosed) and attend 1-2 weeks later.

AND/OR

Please will you have a urine test (form and instructions enclosed) and attend 1-2 weeks later.

You can book your appointment online or with our reception team,

- *requesting a review appointment*
- *with NAME AND JOB TITLE OF PATIENT'S USUAL NURSE*
- *lasting XXXXXXXXX minutes.*

For patients who cannot attend during normal working hours, we offer special arrangements. In these circumstances, please book a telephone appointment with the nurse, so we can discuss what is needed.

We hope to see you soon, so we can safely prescribe any medication you might require in the future.

Yours sincerely,

NAME AND JOB TITLE OF STAFF MEMBER

for NAME OF SURGERY

Suggested Layout for Audits in General Practice

AUDIT QUESTION

e.g. For adult patients on high dose inhaled steroids, where no symptoms have been described in the last twelve months, have we attempted to step down their dose?

REASON FOR CHOICE OF AUDIT

This will often be a significant event. For inhaled steroids, this might be a side-effect or high prescribing costs.

BACKGROUND INFORMATION

This justifies your choice of criterion, usually by referring to scientific literature. In our example, you could refer to the advice on chronic asthma in the British National Formulary.

CRITERION OR CRITERIA CHOSEN

This generally includes the word "should". For example, "For patients on high dose inhaled steroids, we should review treatment every three months."

STANDARD OR STANDARDS CHOSEN

Standard setting usually requires discussion with colleagues. Standards are often set between 70% and 100%. They relate to the importance of the criterion and its feasibility.

PREPARATION AND PLANNING

Descriptions of preparation and planning normally highlight the teamwork required, for instance the role of administrative staff in the practice, who may help with computer searches.

DATA COLLECTION ONE

Must be compared with the standard you have previously set.

PROPOSED CHANGES

Describe the changes required and how you will implement them.

DATA COLLECTION TWO

Repeat the audit after a few months and compare the results with the first data collection and the standard. You could perhaps use Microsoft Word or Excel to present the data as a histogram or a pie chart. Have you achieved the standard?

CONCLUSIONS

Include successes, difficulties and lessons learnt. Are you arranging a team meeting? Any plans for future work?

APPENDICES

e.g. a patient information leaflet used in your audit or a reminder you laminated for all the clinicians.

REFERENCES

Normally presented in Vancouver style. You could download Zotero to automatically convert references to your preferred style.

Contributing Editors for This Chapter

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Eileen is Chair of the Welsh Practice Nurse Association and a co-opted member of the Royal College of General Practitioners' Wales Council.

Last Words

"Be kind, for everyone you meet is fighting a losing battle."

Attributed to Plato, and many others.


TARGETS
OUTCOMES
INDEFINABLES

Médecins Sans Frontières

This book is a money-making venture. I previously raised money for Médecins sans Frontières (MSF) by sponsored cycling and now I have turned to sponsored writing. Please will you sponsor my year as an author, by following this link `www.msf.org.uk/make-a-donation`

Every donation will help, however small. In addition, any author's profits will be sent to MSF.

The doctors and nurses who work for MSF show extraordinary courage, delivering emergency care to people affected by conflict, epidemics and disasters. Thank you very much for supporting them and their patients.

If you have time for a speedy good deed, please go to `www.amazon.co.uk`, leave a favourable review and buy copies for your colleagues and friends. Then we can make even more money for MSF.

For detailed feedback on the text, you are very welcome to contact me. Updates will be posted on the website, as the information in this book becomes out-dated. Anyone interested in producing a future version (as a book, a series, a website or an e-learning package) should please get in touch.

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