Prescribing

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Prescribing can be a risky business. Clinical Risk Self Assessments (CRSAs) conducted by MPS in more than 100 general practices in the UK in 2011 revealed that over 87% faced risks related to prescribing.

Problems can occur if the wrong drug or dose is given to the patient, or if there is a drug interaction or contraindication that the GP was not aware of.

Studies show that in over 60% of GP consultations, the patient leaves with a prescription. It is important that these prescriptions are correct and that the patient goes on to take their medicine correctly.

In this issue of GP Registrar, we look at some of the problems that can occur, and suggest some ways of avoiding them.

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Prescribing

Prescribing is an important part of good medical practice. The GMC, in Good Medical Practice, states: “You must prescribe drugs or treatment, including repeat prescriptions, only when you have adequate knowledge of the patient’s health, and are satisfied that the drugs or treatment serve the patient’s needs.”

When writing a prescription you should:

■ Ensure the treatment is indicated.
■ Check that the intended drug is not contraindicated and that the patient has not had an adverse reaction to it previously. Ensure it will not interact with the patient’s other medication and warn about the possibility of an interaction with over-the-counter medicines.
■ Write legibly, using capital letters (if not using a computer). Use the generic not trade name.
■ Check a formulary if you are uncertain, especially for similar-sounding drugs.
■ Check you have chosen the correct drug in the correct formulation when selecting drugs from a drop-down menu.
■ Write clear, unambiguous instructions for dosage, frequency and route of administration.
■ Note the prescription and other relevant information (eg, warnings to patient) in the medical record.

■ Ensure the patient is clear on what has been prescribed and why. The principle of informed consent applies as much to the prescribing of medication as it does to the performance of a surgical procedure.
■ Keep the safety net in place (eg, monitor long-term prescribing).

Don’t rely on computers

Computers are a valuable prescribing tool. They reduce the number of medication errors by ensuring that prescriptions are legible, complete and in a standard format. However, they do not prevent all errors, and computer prescribing programmes can sometimes contribute to errors, eg, doctors may choose the wrong drug, or dose, from a drop-down list.

Research has shown that, while computer prescribing may reduce the error rate, it does not eliminate it. One study in UK primary care found that the error rate was 10.2% for handwritten prescriptions, falling to 7.9% for computerised prescriptions.

Become familiar with the drug interaction alerts on your software system. Routinely update allergy and drug information in your patient records. In this way, the system software can support you by alerting you if you are prescribing a drug that the patient has a known allergy to.

Many systems allow you to enter information that will print on the prescription, eg, take an hour before food. This is useful as it will then always print on the repeat prescription.

If you are considering purchasing a GP software system in the future, look carefully at the prescribing support offered by each system as it varies widely and can be an important aid in preventing prescribing errors.

Top ten tips for safe prescribing:

1. Be aware of human factors – we are all prone to mistakes
2. Have a robust repeat prescribing process
3. Monitor patients on toxic medications
4. Check the patient’s identity before prescribing
5. Verify it is the right drug and correct dosage
6. Consider drug interactions and contraindications
7. Administer drugs correctly
8. Advise the patient
9. Develop a clear prescription collection procedure
10. Review uncollected prescriptions before shredding.
Prescribing for different kinds of patients

Older patients
Elderly patients may be on a number of different medications for various conditions, which increases the number of potential drug interactions. The Department of Health’s Medicines and Older People (2001) states that four in five people over 75 take at least one prescribed medicine, with 36% taking four or more medicines.

What can you do to help?
- Older people often have more problems with the practical aspects of drug taking. They may need help with reminder charts, compliance aids (eg, a medication organiser) and specially written instructions.
- Try to keep their drug schedule as simple as possible. When starting a new drug, keep the dosage low at first. Be careful not to write off side-effects of medication as the effects of ageing.
- Most prescriptions for older people are repeat prescriptions, so regular review is essential. (See page 4 for more information on repeat prescribing.)
- The most important effect of age on medication is a reduction in renal clearance. Many older patients therefore excrete drugs slowly and are highly susceptible to nephrotoxic drugs. This effect may be exacerbated by an acute illness, particularly one that causes dehydration.

Children
Children have a very different response to drugs, and doses should always be calculated with care. Often, licensed indications do not cover the clinical needs of children and are not tested extensively on children. This is particularly true for drugs that are started in secondary care (see page 5).

Substance misusers
There are 204,473 adults in contact with NHS treatment services, according to the National Treatment Agency for Substance Misuse. Many practices will register substance misusers for their primary healthcare needs, but leave treatment of their addiction to the local drug dependency unit. Others may get more involved, offering prescribing services, for example. Find out what the arrangement is in your practice.

It is unlikely that you will be involved in prescribing to substance misusers but, if you are seeing them for other reasons, that will not stop them asking. They will be familiar with the system, can have a highly plausible reason why a prescription is needed, and be very persistent.

There should be firm boundaries for these patients – they will probably be under an agreed contract for their treatment – so understanding the procedure in the practice will help you to deal with them.

Prescribing diamorphine, dipipanone and cocaine for addicts can only be done with a special licence. These and other Schedule 2 drugs must be prescribed on a particular form (which one depends on which country you are in – check the BNF for details). For more information see the National Treatment Agency for Substance Misuse website. www.nta.nhs.uk

Patients with chronic conditions
Patients with chronic conditions are likely to be on long-term medication, and this is a common cause of problems.

Ensuring that these patients are adequately monitored and their prescriptions regularly reviewed is important. It is not uncommon for patients to decide to give themselves a “drug holiday” or start an alternative therapy without telling their GP.

A study has shown that patients with a chronic condition who are just starting on a medication have poor compliance. After ten days, 30% of patients were not taking their medication correctly. After four weeks this figure had fallen slightly to 25%. Of these, most were not complying intentionally. The study suggests that patients starting on long-term treatment need more support to encourage them to take their drugs.1

Treating yourself, family and friends
The GMC’s guidance on doctors treating themselves or those close to them is clear: “Wherever possible, you should avoid providing medical care to anyone with whom you have a close personal relationship.” This includes prescribing drugs to family members. You should not treat yourself.

References
Repeat prescribing

Repeat prescribing allows patients to collect supplies of long-term medication without having to see a doctor and can save a GP time.

Your practice should have a repeat prescribing protocol in place, and you should familiarise yourself with the details. All staff should be trained to use the protocol, which should be dated and regularly reviewed.

Signing repeat prescriptions

GPs in a practice will normally take turns to sign repeat prescriptions and you may be asked to do this. Prescriptions should be generated in a quiet location where full concentration can be devoted to the task – signing prescriptions in a busy reception area is not ideal. The first time you do this it will take time, but remember that the legal responsibility for prescribing lies with the doctor who signs the prescription. This responsibility is the same whether it is a first or repeat prescription.

If you are uncertain about a particular prescription, do not feel pressurised into signing it simply because there are a pile of requests waiting. Have confidence in what you know, and what you don’t know. The notes should be available for you to refer to.

If you are unsure, you should:

- Check the details of the drug if you are unfamiliar with it.
- Check the patient’s medical record and contact them if necessary.
- Discuss it with your trainer.
- Pass the prescription back to the partner who knows the patient best.
- Decline to sign it until the patient has made an appointment.
- One recurring problem with repeat prescribing is that the initial error is repeated, and compounded. As a fresh pair of eyes you are in a good position to spot potential problems that more senior colleagues may have skipped.

Suitable drugs for repeat prescribing

A traffic light system is a good way of monitoring which drugs are suitable for a repeat prescribing approach. The system provides guidance to prescribers on prescribing responsibilities for selected medications. Each drug is classified under a category, for example, Red, Amber or Green. The category it is placed in determines the circumstances in which it is recommended to be prescribed and any guidance/rationale which needs to be taken into consideration.

Types of drugs in a traffic light system include:

- Drugs that require minimum levels of monitoring (eg, antihistamines)
- Drugs that are commonly prescribed on repeat but require careful monitoring (eg, thyroxine, statins, inhalers, insulin, etc)
- Drugs that are not (usually) suitable for repeat prescribing (eg, hypnotics, antidepressants)

For more information see the National Prescribing Centre’s Dispensing with Repeats: A Practical Guide to Repeat Dispensing, 2nd edition (2008) www.npc.co.uk

Risky practices

MPS’s CRSA data for 2011 found that 48% of practices visited did not have a robust repeat prescribing policy in place – paving the way for prescribing risks.

What are the risks?

- Adding medication – Ideally, best practice indicates that medication added to the prescription list should be done by the GP. If medication is added to the computer by administration staff, it must be closely checked by the doctor afterwards.
- Over and underuse – Underuse should be monitored at the review date and whenever repeat medication is issued. For over-use, only the average use is important.
- Hospital discharge – Possibility of errors due to difficulty reading medication changes on discharge summaries.
- Changes not updated – Repeat prescriptions should not be altered by hand. Instead cancel the last issue, make the necessary changes on the computer and print out the correct prescription. You should insert a reason for stopping the medication.
- New patients – New patient medication lists are passed to the prescription clerk who adds the medications to the computer. A prescription may be generated for a new patient without the patient having seen the doctor for a review of their medication.
- Monitoring of medication – The practice might not have a safe audit system to ensure that all patients taking toxic medications have received the appropriate monitoring.

How can you reduce the risks?

- Repeat prescribing protocol – Vital so that all GPs can follow the same guidance.
- Don’t override review dates – Do not allow the computer to be overidden. A medication review in general should be updated every six months by a doctor or nurse.
- Check repeat prescriptions as you sign them.

Casebook

One prescription after another

Sixty-year-old Mrs F visited her GP, Dr L, complaining of tiredness and weight gain. Dr L requested some thyroid function tests and diagnosed hypothyroidism. Mrs F was prescribed thyroxine.

The next time Dr L saw Mrs F she was feeling much better. Her latest blood test showed that she was euthyroid, and Dr L advised her to continue taking the same dose of thyroxine.

Over the next ten years, Mrs F regularly visited her GP practice to discuss her asthma and osteoarthritis. She requested thyroxine on repeat prescription, along with her other medications. Her prescriptions were signed by a variety of doctors from the practice. Mrs F didn’t ask any further questions about her thyroid condition and none of the doctors discussed her treatment.

A decade after being diagnosed with hypothyroidism Mrs F had a CVA, which led to paralysis. Thyroid function tests showed that she had sub-clinical hyperthyroidism.

Expert opinion suggested that Mrs F’s stroke could have been the result of arrhythmias induced by excessive thyroxine therapy, and was critical of the GP’s lack of monitoring.

Regular blood tests would have indicated the need to reduce Mrs F’s dose of thyroxine. The case was settled for a substantial amount.
Working with colleagues

Secondary care
Transferring a patient between primary and secondary care can sometimes lead to problems. Typically, this might involve a patient going to see a consultant and being prescribed a specialised drug, and then coming to the GP for repeat prescriptions of the drug.

Successfully managing this transition relies on good communication and clear lines of responsibility. In particular, the doctor who signs the prescription has legal responsibility for prescribing. You should be sure that the treatment is appropriate, in the best interests of the patient, that the benefits outweigh the risks, that any necessary monitoring is in place and that you and your patient understand the possible side effects. If you feel unhappy about prescribing a particular drug, then don’t prescribe it.

Discuss the matter with the consultant, more senior colleagues and your trainer.

One way forward is to develop a shared care protocol. Under this, a GP would normally be invited to participate in a shared care scheme. If the GP does not wish to participate, clinical responsibility for the patient for the diagnosed condition would stay with the specialist.

If the GP decides to participate in a shared care scheme, clear responsibilities are set out for the specialist, the GP and the patient. For the GP, this might include ensuring that systems are in place for the prescribing and possibly administering of any medication, any monitoring that is required, and where to report adverse events or go for advice.

Primary care trusts
Most PCTs will have a prescribing adviser or pharmacist, who is likely to be involved with both the clinical and financial sides of prescribing. There may be local formularies, guidelines and protocols.

They can be a useful source of information and advice – for example, if you face a problem with shared care (when a specialist drug prescribed by a hospital consultant has to be continued in the community).

Nurses
A nurse may ask you to write a prescription for a patient at a time when you are working under difficult or pressured circumstances. You should make sure that you check the prescription carefully. As you are responsible for the prescription, put yourself in a position to judge whether it is clinically necessary, and record details of the prescription and any consultation in the patient’s notes.

Pharmacist
Local pharmacists can be a valuable resource. If they ring up querying a prescription, check the prescription carefully. Pharmacists can help in a number of other ways. These include:

- Helping patients understand how to take their medication.
- Medication reviews for patients with long-term conditions.
- Filling dosette boxes for patients on multiple medications.

Uncollected prescriptions
Prescriptions that have not been collected should be returned to the GP for review before they are destroyed, to help monitor patient compliance. Your practice might have a system to review these, eg, indicating on a patient’s records that they have not collected their prescriptions.

GP prescribing – a good standard but improvement possible
A major study of GP prescribing has found that while the vast majority of prescriptions written by family doctors are appropriate and effectively monitored, around 1 in 20 contain an error.

Researchers looking at a sample of GP practices in England found that where there were errors, most were classed as mild or moderate, but around 1 in every 550 prescription items was judged to contain a serious error. The most common errors were missing information on dosage, prescribing an incorrect dosage, and failing to ensure that patients got necessary monitoring through blood tests.

The research was commissioned by the General Medical Council (GMC).

Professor Sir Peter Rubin, Chair of the GMC, said: “GPs are typically very busy, so we have to ensure they can give prescribing the priority it needs. Using effective computer systems to ensure potential errors are flagged and patients are monitored correctly is a very important way to minimise errors. Doctors and patients could also benefit from greater involvement from pharmacists in supporting prescribing and monitoring.”

Professor Tony Avery of the University of Nottingham’s medical school, who led the research, said: “Prescribing is a skill, and it is one that all doctors should take time to develop and keep up-to-date.”

Common problems

Controlled drugs
Some prescription medicines contain drugs that are controlled under the Misuse of Drugs legislation, eg, benzodiazepine, morphine and pethidine. Legal controls apply to prevent them causing harm or being obtained illegally, and cover how they are stored and prescribed. There are five schedules that classify all controlled medicines and drugs, from Schedule 1 to Schedule 5. Doctors can prescribe all controlled medicines to treat illness or injury. However, doctors must hold a licence from the Home Office to prescribe some controlled medicines to treat addiction, but it is common to treat addicts with temazepam (Schedule 3), other benzodiazepines (Schedule 4) and methadone.

Problem drugs
While care needs to be taken when prescribing any medication, certain drugs crop up regularly in the GP complaints and claims that MPS sees.

- **Steroids** – the most commonly occurring drug in an analysis of GP claims. Problems occur with both oral and topical steroids. Long-term prescribing, and problems with steroid injections, eg, atrophy at the injection site, are the main reasons.

- **Antibiotics** – prescribing penicillin or septin to someone with a known allergy is a common reason for a claim. Problems with prescribing antibiotics, including interactions with other drugs (like warfarin or oral contraceptives) and not prescribing antibiotics, can also lead to complaints and claims.

- **Warfarin** – problems with prescribing and monitoring warfarin are common. Interactions with other drugs can be a cause of problems.

- **Lithium** – a drug with a narrow therapeutic range, which should not be prescribed unless facilities for monitoring serum lithium levels are available.

- **Diazepam** – problems with long-term prescribing.

What is the patient taking?
Watch out for what else the patient is taking. Interactions with medicines are not just limited to prescription-only medicines. While relevant, remember to ask about other aspects of the patient’s lifestyle that may have an effect. This might include:

- Over-the-counter drugs, particularly aspirin and other NSAIDs.

- Use of alcohol and recreational drugs.

- Use of herbal medicines, particularly those that have a known interaction, such as St John’s Wort. Patients with chronic conditions may well try different remedies while on their existing medication.

- Food supplements and diet. For example, cranberry juice is reputed to be beneficial for prostatic infections and UTIs, but interacts with warfarin.

Patients who won’t attend for review
Sometimes, a patient may be on a certain drug on repeat prescription, but will not attend for review or tests, eg, a patient may be taking warfarin to protect a heart valve, but won’t attend for INR blood tests. This makes it difficult to prescribe safely, but stopping the treatment also has consequences. It may be appropriate to provide the patient with a short supply of medication in order to tide them over until they come into the surgery for a review, stressing the importance of this for their long-term health management.

Numbers and units
- Decimal points can be easily missed, so do not use them unnecessarily, eg, 5mg not 5.0mg. You can use a decimal where you need to express a range, but always use a zero in front of a decimal eg, 0.5 (not .5) to 1g.

- Use milligrams, not a decimal of grams, eg, 500mg not 0.5g.

- Use micrograms, not a decimal of milligrams, eg, 500 micrograms not .5mg.

- Micrograms and nanograms should not be abbreviated.

- Do not use cubic centimetre, cm³ or cc. Use ml instead.

- Directions should be written in full in English. Some Latin abbreviations are acceptable (these are detailed in the BNF). When calculating a dose, ask a colleague to check your calculation, if possible.

Handwritten prescriptions
Although most prescriptions will be printed by the computer, you will still need to handwrite prescriptions, eg, when on a home visit, or out of hours. A handwritten prescription should:

- Be written legibly in ink.
- Be signed and dated.
- Include the full name and address of the patient, and preferably the age and date of birth (these must be included for children under 12).
- Have the name of the drug written in block capitals (do not abbreviate).
- Give clear instructions for the dosage, frequency and method of administration.

Adverse drug reactions can cause fatal outcomes
Statistics recorded by the Medicines and Healthcare products Regulatory Agency (MHRA) between January 2000 and November 2011 show that substances used to treat rheumatoid arthritis, eye diseases and blood clotting are among those with the highest number of reported ‘suspected’ adverse reactions in the UK involving a ‘fatal outcome’. A range of medicines were linked to 274,123 suspected adverse reactions reports received by the MHRA – 12,020 deaths linked to these adverse reactions were recorded in the same period.

According to the figures, Clozapine – used to treat patients suffering from schizophrenia – was linked to the deaths of 1,912 patients in that period.

Other drugs most commonly involved in fatal reports included:

- Ranibizumab (used to treat age-related macular degeneration)
- Infliximab and Adalimumab (used to treat auto-immune disorders)
- Warfarin
- Paracetamol

MHRA, December 2011
Prescribing issues

On and off label prescribing
The MHRA permits the manufacturer and/or distributor of a medicine to market and promote a product within the terms of a Marketing Authorisation (MA). This is based on the quality, safety and efficacy of the product. A doctor’s prescribing is not limited to indications covered by the MA and you can prescribe any medicine that you judge to be in the best interests of your patient. You may be asked to justify your choice of treatment. Any prescription that is not within the strict terms of the MA is termed “off-label” prescribing. This covers products that have an MA for other indications, or no MA at all, eg, many drugs prescribed for children are given “off-label”.

If you prescribe “off-label”, whilst the manufacturer retains strict product liability, ie, that the product is “fit for purpose”, you are responsible for both negligent and non-negligent harm to the patient. Before prescribing “off-label”, you should:
- Ensure you are prescribing the most suitable drug for your patient, and that there is no reasonable alternative that has an MA.
- Satisfy yourself that there is a sufficient evidence base or experience of using the medicine to demonstrate its safety and efficacy.
- Understand the known attributes of the drug and your responsibility for monitoring and follow up.
- Record your decision in the patient’s notes.

In addition, patients may request a continuation of treatment that has been suggested or initially prescribed abroad, which are either not licensed in the UK, or are licensed for different purposes, eg, a drug licensed as an anticonvulsant in the UK but used, at a high level, as an antidepressant in the US. A GP would be able to prescribe off licence, if he or she wished, but would need to stay within his or her knowledge and understanding of the drug and its effects and side effects.

Reporting adverse drug reactions
Adverse drug reactions (ADRs) are harmful or unwanted reactions that occur after administration of a drug or drugs. Such a reaction may be a known effect of the drug, or may have been previously unrecognised. ADRs can occur during initial drug trials, but some very rare ADRs may only become apparent when large numbers of patients take drugs for a prolonged period of time. This makes the reporting of suspected ADRs via the Yellow Card system all the more important.

Ideally, all ADRs should be considered for reporting, as this provides a body of data that may result in the discovery of potentially serious reactions. Even if there is uncertainty, the possibility of an ADR should be reported. Reporting ADRs is easy, and takes a few minutes to complete. If done via www.yellowcard.gov.uk an email acknowledging receipt of the ADR report is sent (something for the ePortfolio perhaps).

Once reported, ADR data is collated and any new and significant ADRs are identified and cascaded to healthcare professionals via the Drug Safety Update, “Dear Health Professional” letters or by new additions to the Summary of Product Characteristics.

Reporting of ADRs plays a pivotal role in the post-marketing surveillance of medicines, helping to identify potential sources of harm and contribute to patient safety.

You should report:
- Serious adverse reactions to established medicines and vaccines (including herbal or over the counter medicines).
- All adverse reactions to new medicines (shown with a in the BNF).
- All adverse reactions in children to established medicines and vaccines.

Sample AKT questions from

1. A patient attends surgery after an outpatient appointment. He has been prescribed a drug that you are unfamiliar with. On checking the BNF, you note that the drug has the following symbol next to it: ☐

What does this symbol mean?

A – This drug is unlicensed and should not be routinely prescribed.
B – This drug should only be commenced in secondary care.
C – This drug requires early monitoring with blood tests.
D – This drug is a controlled drug.
E – Any adverse reaction to this drug (even minor reactions) should be reported using the Yellow Card Scheme.

For the answers to the above and for more sample AKT questions see the GP Registrar section of the MPS website: www.mps.org.uk/gpregistrar.

The two sample AKT questions above have been provided by Dr Mahibur Rahman. Dr Rahman is the medical director of Emedica and works as a portfolio GP in the West Midlands. He is the course director for the Emedica AKT and CSA Preparation courses, and has helped hundreds of GP trainees achieve success in their MRCGP AKT and CSA examinations. MPS members can get a £20 discount off the Emedica MRCGP courses. Details of the courses are available at www.emedica.co.uk.
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Putting members first

We are committed to helping members avoid problems and provide the best care for patients.
We hope you find this publication useful and would welcome your feedback.
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What our members say about our service:

96% of members said they would be likely or very likely to recommend MPS to their colleagues.