When managing infections in primary care consideration must be given to address how to implement change

Introduction

This is the second of two articles in which we consider the appropriate use of antibiotics in primary care. The first article highlighted the challenge of increasing bacterial resistance and the pressing need to minimise this by prescribing appropriately. We discussed common infections in primary care and the main issues to consider when making the decision to prescribe. In this article we outline how primary care pharmacists can help prescribers to implement these changes.

Influencing patient expectation

Patients have ideas about their illness and often clear expectations of its treatment. This is certainly true of infections where there can be a strong desire for antibiotics. It is important to explore patients' views during a consultation so that these can be addressed appropriately. Patients' expectations and a doctor's judgement of that expectation can significantly influence prescribing behaviour. Cockburn and Pit[1] found that patients who expected a medication were three times more likely to receive it. When the general practitioner (GP) thought the patient expected medication the patient was 10 times more likely to receive it. Indeed GP judgment of patient expectation was the strongest predictor of medication prescription. Britten and Ukoumunne[2] found similar results in a study, which measured patients' expectation of receiving prescriptions. Interestingly, in 22% of the consultations included in the study prescriptions were not strictly indicated on medical grounds. Macfarlane and colleagues[3] investigated the influence of patients' expectations on antibiotic management of acute lower respiratory tract illness in general practice. They found that most patients thought that their symptoms were caused by an infection and that antibiotics would help. Interestingly, severity of symptoms did not correlate with wanting antibiotics. Patient pressure most commonly influenced the decision to prescribe even when the doctor thought that antibiotics were not indicated. The authors commented that the decision process for prescribing antibiotics is complex. It can often be influenced as much by the desire to reduce re-consultations as making a definite diagnosis of an infection. However, the effect of the decision to prescribe an antibiotic or not is equally complex. Often prescribing behaviour can reinforce the message that self-limiting conditions are appropriately treated with antibiotics. This engenders a cycle of repeat consultation, which will actually increase the rate of consultation in the long term.

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Managing expectations — the art of negotiation

Sometimes patients come to see a doctor believing that they require antibiotics for their infection. In the short term it could be much quicker and easier to simply write a prescription without even an examination or explanation. Indeed, in some practices antibiotics can be prescribed after a telephone consultation. However, experience and studies show that this simply reinforces erroneous beliefs and results in frequent re-attendance for inappropriate and potentially dangerous medicines.

The evidence from smoking intervention is that a single phrase from the doctor is more effective than many more prolonged interventions.[4] This can be extrapolated to the role of education about the place for antibiotics that doctors can offer in a brief exchange. This can result in fewer attendances and more confident, better informed patients who are enabled in their own decision-making. The consequence of reduced attendances allows further time for reinforcing behaviour by the prescriber to those patients who are less willing to change established patterns of uninformed behaviour. Less inappropriate prescribing will reduce costs, significantly reduce the

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risk of antibiotic resistance and lessen the incidence of iatrogenic complications (such as allergies or *C. Difficile* infection).

Delayed prescription

Sometimes it is possible to negotiate with patients and explain that an antibiotic is not appropriate for the management of their infection. However, patients can remain resolute in their expectations of an antibiotic and not to prescribe one can sometimes lead to dissatisfaction and even a complaint. There is a middle ground between these two positions. In our previous article we described a study,[5] which investigated the effect of three different approaches to managing sore throats. Patients were randomised to one of three groups as follows:

- Group 1: antibiotics were prescribed for 10 days
- Group 2: no prescription was issued
- Group 3: patients were offered a prescription for antibiotics that could be collected if symptoms did not settle after three days.

Interestingly, nearly 70% of patients in group three did not use their prescription. One of the main reasons for coming to the surgery was 'legitimisation' of illness to explain to work or school. Patients who were more satisfied got better quicker, and satisfaction related strongly to how well the doctor dealt with patients' concerns. Prescribing antibiotics for a sore throat only marginally affects the resolution of symptoms but enhances the belief in antibiotics. When the same study group were followed up one year later[6] those that were given antibiotics were more likely to re-attend than those who had not. The authors concluded that to avoid medicalising a self-limiting illness doctors should avoid antibiotics or offer a delayed prescription for most patients with a sore throat. In the *Quick reference guide for managing respiratory tract infections* there is a care pathway to guide prescribers in using a delayed prescription approach.[7] In our experience patients seem to appreciate involvement in decision-making and it can be surprising and revealing how often a patient or carer is pleased to be told that they don't need a prescription. Delayed prescriptions give added confidence to the prescriber, involve the patient in the decision-making process and can legitimise the consultation.

Patient information leaflets

Once a patient has left the consulting room they retain a small percentage of the information given to them during the consultation. Information leaflets are a useful way of reinforcing the message that antibiotics are sometimes inappropriate. It also gives the patient something in place of a prescription. There are different leaflets available for use by prescribers. The Department of Health has produced a generic leaflet '*Get well soon without antibiotics*', which conveys the message that antibiotics are not appropriate for coughs and colds. Similar leaflets have been developed by PCTs for use by practices. There are some excellent leaflets on the Clinical Knowledge Summaries website, which can be downloaded and printed for patients during a consultation. However, many of these leaflets are quite long and patients may not always want to read a leaflet that is 4–5 pages long. We took a decision that we wanted to develop our own leaflets that contained disease-specific information on one side of an A4 sheet. This is because we felt that our patients would respond best to information that was specifically written for them by the doctors. An example of our leaflet on sore throats is illustrated in figure 1 opposite. More leaflets can be downloaded from our website www.bishopscastledoctors.co.uk/ All the leaflets have a question and answer format, which cover the following points:

- Time course
- Symptoms
- Home remedies to use
- When to come back to see health professional.

A patient information icon on the doctors' or prescribing nurses' screen allows the leaflet to be printed easily and quickly.

Influencing prescribing behaviour

Consistency of partners

It is important that all doctors and non-medical prescribers have an agreed consistent approach to prescribing antibiotics. Any differences will soon be detected by patients and those who want antibiotics are likely to see those doctors who they know will prescribe them. This undermines attempts by the other doctors to prescribe antibiotics appropriately. A useful starting point for this is to hold a meeting in which the epact data on prescribing can be discussed. It may be useful to probe further by doing an audit of antibiotic use. The audit could explore what antibiotics are used, by which doctor, when and whether first line or not. This information can then be discussed as a practice and consensus reached on prescribing policy. Further audits can provide feedback on progress against agreed guidelines. It is also important that the

prescribing habits of locums and registrars are considered and a 'prescribing pack' could be useful to support this. This could be reinforced by a tutorial for registrars when they start their placement.

Time pressure

There are considerable pressures on GPs who have to run a tight ship in the winter months when the pressure to prescribe antibiotics for infections is highest. It takes more time to offer advice than to prescribe although there are long-term benefits in doing so. Doctors are more likely to prescribe or moderate their threshold to prescribe based not only on the time of day but also the day of the week. This is probably more accentuated since the change of contract in primary care removing the continuity of responsibility through the night and at weekends. If a child is unwell in the morning or early in the week it is easy to offer to reassess the child later to review the clinical decision not to prescribe. By the end of the day or the week it is easy to use antibiotics as a safety net to alleviate the prescribers' concerns.

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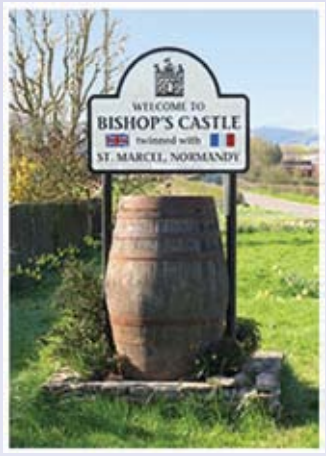
So how can doctors balance the competing pressures of time against the longer term benefits? This is always likely to be difficult but can be made easier with good organisation. Patient information leaflets must be readily available to the doctor. We store ours electronically, but a supply of printed leaflets could also be stored in the consultation room. In our experience this is not always the most practical approach because they tend to get lost. If a practice are high prescribers of antibiotics it might be expedient to select just one area to target — the most common perhaps — first rather than cover all infections.

Patient complaints

There should be well-publicised and easy processes in place to enable complaints to be made and it may seem surprising that there are very few complaints to surgeries. There are certainly 'arms length moans', which don't actually get to be voiced or expressed in the surgery. Most complaints are about attitudes and processes rather than the clinical content of a consultation. A 'successful' consultation should include time for complete history taking, examination, and exploration of health beliefs and expectations. There should also be time allowed for accurate and complete record-keeping. This enables a formulated and negotiated decision-making process to take place, which may or not involve issuing a prescription for antibiotics. A significant part of this will involve education of the patient, carer and even the prescriber!

Treatment for sore throat



Sore throats are very common. They can be caused by either bacteria or viruses. Most sore throats are not serious and will go after 3–7 days without medical treatment.

What are the symptoms?

There are a number of symptoms which include;

- ☐ Painful feeling at back of throat
- ☐ Tenderness in glands in neck
- ☐ Discomfort on swallowing
- ☐ High temperature
- ☐ Aching
- ☐ Headache
- ☐ Tiredness

When should I come and see the doctor?

You will need to come and see the doctor if your symptoms have not improved after two weeks. If your immunity is lowered you will also need to see the doctor.

When should I seek urgent medical advice?

You will need to get urgent medical advice if;

- ☐ You have a persistent fever (temperature above 38°C)
- ☐ Have difficulty breathing
- ☐ Have difficulty swallowing saliva or fluids

What causes a sore throat?

A sore throat can be a symptom of the common cold, flu or glandular fever.
You can also get infection and inflammation at the back of your throat or in your tonsils. Sometimes bacteria can cause an infection of the throat – a "strep throat".

Do I need antibiotics?

The use of antibiotics is not recommended for sore throats because;

- ☐ Most sore throats are caused by viruses
- ☐ Even if a sore throat is caused by bacteria you will not get better any quicker and may experience side effects.
- ☐ Over-using antibiotics to treat minor ailments makes them less effective for life-threatening conditions

What treatment should I take?

Sore throats are not usually serious and will pass in a week. Paracetamol or ibuprofen will help to ease the pain and reduce any fever. Adults may find that sucking lozenges can provide additional relief. Also, it is important to keep drinking plenty of fluids.

Figure 1. Illustration of a leaflet prepared by the doctors at Bishops Castle Medical Practice for patients with a sore throat.

One of the main reasons for coming to the surgery was 'legitimisation' of illness to explain to work or school.

There may still be complaints, but if all of the above points are included it will be so much easier to defend and explain these cases where a mistake has been made. By the very nature of General Practice there inevitably will be occasions when the prescriber does get it wrong.

Bad experiences with complications

The decision to prescribe is also influenced by the prescribers past 'bad' experiences (we don't always remember the good ones) and the very real concern some clinicians have for their own safety. Threats of violence are increasing; these may simply be verbal, but can sometimes lead to physical threats and actual violence. Most consultations are conducted in a private room where the prescriber is on their own — sometimes with little or no recourse to help.

The actual incidence of clinical complications with infections are, thankfully, very rare. Despite this they always remain disproportionately at the front of prescribers' minds. Most of these would be classified as minor and non life-threatening. Indeed the major complications are caused by prescribing inappropriately rather than omitting to prescribe. The nature of general practice allows clinical review to change a decision to prescribe in the event of a deterioration of the patient.

Collaboration with other health professionals

A consistent approach to prescribing antibiotics should be discussed with all members of the team so they can give a consistent message. Reception staff are the first point of contact for patients and so increasing their knowledge of the appropriate place of antibiotics is important. Likewise triage nurses need to be involved in discussions and give the same information when assessing patients. The role of district nurses should also be considered and agreement reached with regard to when samples are sent for culture. This is particularly important when considering wound management. The community pharmacist is often the first port of call for patients when they have an infection. It is important that they also give consistent advice and issue the same information leaflets.

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Conclusion

The influences of prescribing behaviour for antibiotics can be complex and multifactoral. Changing this behaviour needs to be carefully planned and supported. A starting point is to have a practice meeting where prescribing patterns are reviewed and the need for change identified. Prescribers need to discuss their concerns about not prescribing antibiotics and consensus reached on where this is appropriate. The wider health care team can usefully be involved in supporting this decision. The provision of appropriate patient information leaflets and delayed prescribing can be useful approaches to support the decision not to prescribe inappropriately. ✣

Declarations of interest

The authors have no interests to declare.

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