

Looking out for drug resistant infections

It can be hard to recognise a drug resistant infection, says **Arlene Brailey**, lead for the Antibiotic Research UK Patient Support Service – but simply being alert to the possibility can make a significant difference to a patient's life, as she explains in this article

My career as a pharmacist has included previous roles in the community and hospital sectors, and also in post-qualification education.

All of these have equipped me in different ways for my current post as lead for the Antibiotic Research UK Patient Support Service (PSS). However, the one thing that slightly horrifies me is that in those earlier roles I did not recognise when patients were likely to be suffering from a drug resistant infection.

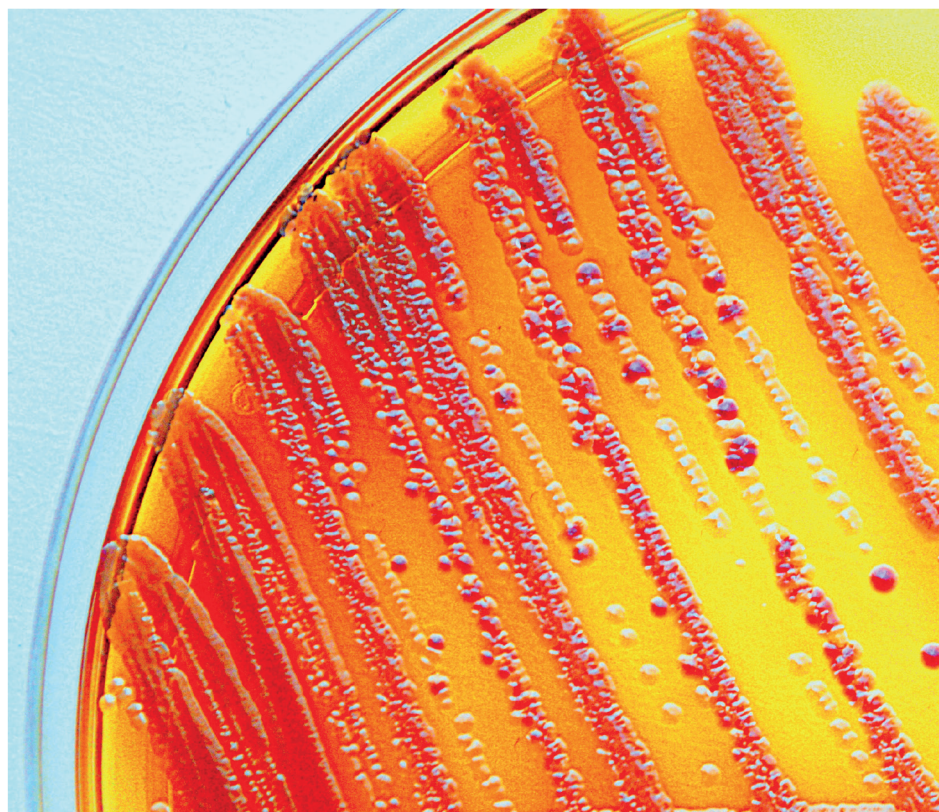
So in this article I aim to share some of my recent experiences, which may help you recognise when one of your patients is suffering from an antibiotic resistant infection. I will also suggest ways in which you can help them.

The patient with an antibiotic resistant infection could be that young woman who is on her third short course of the same antibiotic in a month. Or it could be the older man who is on his fourth different antibiotic and who has been in hospital a few times with lower respiratory tract infections (LRTI).

Faced with patients like these, what usually goes through your mind? Perhaps you are wondering if the prescriber has not yet identified the right bacteria causing the infection, resulting in the empirical antibiotics given so far having been wrong? Or perhaps you're thinking that whatever the problem is, it cannot be a bacterial infection if the antibiotics haven't worked?

Do you ever stop to wonder whether the bacteria have become resistant to most antibiotics and the patient is facing a hard time getting rid of that persistent urinary tract or LRTI? If that is the case, how can you help in this situation?

Hearing about Rachael, a young woman who contacted me for help and advice, might help illustrate areas where you could advise on appropriate antibiotic use or prompt a



conversation about antibiotic resistance after several unsuccessful antibiotic courses (see case study below).

How can you support patients with resistant infections?

You can help patients by:

- Talking about reducing antimicrobial resistance when dispensing their antibiotic prescriptions (e.g. reasons for completing the course, not

sharing antibiotics, not flushing away unused medicines)

- Using the TARGET resources to guide your conversation about antibiotics, particularly the guide for community pharmacy:
 - rcgp.org.uk/clinical-and-research/resources/toolkits/amr/target-antibiotics-toolkit/leaflets-to-share-with-patients.aspx
 - rcgp.org.uk/clinical-and-research/resources/toolkits/amr/target-antibiotics-toolkit



More on antibiotic resistance
Search on the PM website

CASE STUDY 1

Rachael was 17 years old and over the preceding two years had received antibiotics four times for urinary tract infections (UTIs). The symptoms of the infection had caused her embarrassment at school, rushing to the toilet constantly, in severe pain, and feeling generally unwell and unable to concentrate.

When the next UTI flared up, Rachael self-treated with natural products, having decided that antibiotics weren't eradicating the UTI as it kept coming back. She didn't tell anyone about this decision – not even her family. Unfortunately, Rachael didn't know that she carried a resistant bacterium called ESBL E Coli, which spread rapidly and caused severe UTI symptoms.

Rachael's GP was called and sent away a urine sample, which showed sensitivity to cephalexin. However, this didn't work and the next day Rachael was admitted to A&E seriously ill with sepsis, requiring intravenous colistin to overcome the life-threatening infection.

She recovered slowly over the next year but experienced many post-sepsis symptoms. "I believed I had always used antibiotics correctly, so wouldn't have been at risk of antibiotic resistance," says Rachael. "But I realised to my horror that an infection caused by drug resistant bacteria can happen to anybody. Even me!"



PRACTICE

World Antimicrobial Awareness Week, November 18-24



CASE STUDY 2

Helen first developed a serious urinary tract infection in 2013, which resulted in her taking four different antibiotics before the infection was eradicated. This was made more difficult by a penicillin allergy label on her notes from childhood. The third antibiotic prescribed was ciprofloxacin, which caused severe tendonitis, nausea, heart palpitations and stomach cramps.

Helen encountered drug resistance again in 2018 when pregnant and testing positive for Group B Streptococcus. She was offered prophylactic intravenous antibiotics during labour as these bacteria can cause illness in a newborn. Her penicillin allergic status left few options, so a different antibiotic was given and thankfully the baby was born healthy.

When the baby was six weeks old, Helen developed mastitis – an infection of the breast tissue resulting in pain, swelling, warmth and redness with flu-type symptoms, extreme shivering and fever. Despite being prescribed an oral antibiotic Helen was getting worse, and in so much pain across her chest and down her arm that she could barely hold her baby. Her GP sent her to A&E for IV fluids and IV antibiotics straight away as she had developed sepsis from the infection, which by then had formed a huge abscess.

“I am so grateful for antibiotics – they probably saved my life, just as they save millions of lives every day,” says Helen. “However, we must remember that they do come with risks, particularly when they are ceasing to be effective.”

You can hear Helen tell her own story at <https://youtube/Nd53xd6acmQ>.

- Signpost patients and the general public to a short online introductory course on antibiotic resistance to learn more (e.g. catalogue.manchester.ac.uk/browse/i3hs/open-courses/courses/antibiotics-and-you-an-introduction-to-antibiotic-resistant-infections)
- Signpost patients to the Antibiotic Research UK website for additional information on bacteria, infections and drug resistance (antibioticresearch.org.uk/about-antibiotic-resistance/bacterial-infections)
- Use these resources for training your pharmacy staff to help reduce antibiotic resistance through patient advice and to recognise when patients have possible signs of drug resistant infections (e.g. prescribed multiple antibiotics in a short timescale)
- Discuss penicillin de-labelling with those who believe they have a penicillin allergy but are unsure if still true
- Signpost patients to the Antibiotic Research UK Patient Support Service when patients have concerns about drug resistant infection or want more information about specific bacteria (antibioticresearch.org.uk/find-support)
- Display posters and stock patient leaflets on antibiotic resistance for patients to take away
- Plan a pharmacy campaign for World Antimicrobial Awareness Week (November 18-24).

ANTRUK's Patient Support Service

There are a number of ways in which our patient support team meets the individual needs of enquirers. The most important assets we have are time and a skilled listening ear. This involves active listening, showing empathy and reflecting back what we hear. This is what health professionals usually cannot offer beyond 8-10 minute appointments, whether doctor, nurse or, indeed, community pharmacist.

These patients need time to ask for simplified explanations about resistance and more detailed information about specific bacteria, and to begin to express their deeper fears about what a drug resistant infection might mean for them.

A recurring and striking theme is the isolation that these patients/enquirers feel. They sense that friends, family and even their clinicians do not

How does the ANTRUK's Patient Support Service offer help and support?

- One-to-one confidential calls, emails or texts
- Listening to the patient and providing empathy
- Facilitated group support on virtual platforms
- Signposting to information – bespoke info on website and patient leaflets
- ASK ANTRUK – for patients and public to ask any question about antimicrobial resistance
- Sharing patients' voices to help raise awareness of the personal suffering caused by drug resistant infections

“Patients find themselves on short rescue courses of antibiotics time after time with no resolution of the infection”



Patients need supportive conversations about their antibiotic use

understand or, worse, don't believe them when they feel unwell as a consequence of an infection despite taking antibiotics.

In some cases, for example with UTIs, the tests return from the microbiology lab indicating no bacteria found. Patients report this is often conveyed to them as 'no microbiological growth means no infection', whereas they are feeling the full range of symptoms – chills and fevers, pain, fatigue, brain fog, and severe pain and urinary frequency. This leaves patients feeling even more isolated and desperate, unsure what to do next.

More commonly, patients find themselves on short rescue courses of antibiotics time after time with no resolution of the original infection. Many of the conversations with the support service help to distil the information into digestible chunks and help patients to prepare what questions they want to ask their doctor or specialist next time.

The outcome of these supportive conversations can sometimes result in the patient wishing to share their experience. Patients often find it cathartic to write about their experience and to share this with others on a similar journey for mutual support. They also hope to improve awareness amongst clinicians, drug researchers, health policymakers and the general public regarding the human personal suffering that accompanies resistant infections.

What do patients want to ask about?

Patients want to ask about all kinds of things but predominantly it is either about drug resistant UTIs or requesting information related to a particular antibiotic.

Sometimes they have specific questions about antibiotic treatment. Often it is a family member who is asking, because they have become concerned that the antibiotics don't seem to be clearing their relative's infection.

Mostly, the patient wants to talk about their lived experience of drug resistant infection, to check if it sounds like a drug resistant problem, and to obtain reliable, trustworthy information. These patients use the internet to find information themselves, but quickly become overwhelmed or frightened because it is hard to work out what online information to trust.

How can community pharmacists help the public understand why antibiotic resistance matters?

We need to educate patients to understand that drug resistant infections:

- Are increasing and a global concern happening now, not a problem of the future
- Can affect anybody (perhaps using the analogy of how Covid-19 had the ability to infect anybody and affect them in unpredictable ways)
- Can be reduced by each one of us personally taking action (e.g. by not asking for antibiotics when suffering viral infections)
- Are directly connected to the number of antibiotic courses taken as the risk of developing drug resistance increases with each additional antibiotic course.

Antibiotic Research UK Patient Support Service

Patient support line: 07367 784114

patient.support@antibioticresearch.org.uk

antibioticresearch.org.uk/find-support

Antibiotic Research UK is the world's first charity created to tackle antibiotic resistance through research, public engagement and patient support. Its vision is a world free from deaths caused by drug-resistant infections. Its aim is to develop new antibiotic treatments, engage with the public and healthcare professionals, and to support people with antibiotic resistant infections.