

Doctors: the professionals need to catch up

Since antibiotics are only available on prescription in Germany, any overuse or misuse is clearly the responsibility of the doctors who prescribe them. Every third German or so was prescribed a course of antibiotics during the past 12 months – often to combat viral infections such as bronchitis, colds, and coughs. The reasons for this become clear in an interview with a clinical practitioner, who talks about his own day-to-day experiences (see column on the right).

Even when it does make sense to prescribe an antibiotic in a given case, it is then a question of which active agent to choose, with several dozen antibiotic agents currently available. Broad-spectrum antibiotics are prescribed in many cases, although these do not always constitute first-line therapies (between them, amoxicillin, cefuroxime, and ciprofloxacin account for 34% of all prescriptions in Germany).²⁵ This approach to prescription promotes the development of resistance.

Price also appears to play a role in the choice of prescription. It is no bad thing in principle for doctors to be aware of cost implications, but this can sometimes lead to unintended consequences too. Statistics from Germany and Denmark show that any given antibiotic will be prescribed more frequently following a sharp fall in its price. After the patent protection expired for ciprofloxacin, its use doubled within seven years.²⁶

More recent active agents, which have not been on the market as long, are generally much more expensive than long-established products. They are no more effective in normal cases, but they can certainly be justified in cases involving resistance. This is why a targeted approach makes sense when selecting a suitable active agent. To facilitate this, a laboratory needs to produce an antibiogram listing the pathogens contained in a sample of, say, urine along with any instances of resistance.

Day-to-day clinical practice



Most antibiotics in Germany are prescribed by general practitioners. We talked to Dr Eckhard Schreiber-Weber, a GP from Bad Salzuflen, about why there are so many incorrect prescriptions.

Colds are mainly triggered by viruses, but doctors in Germany often prescribe antibiotics for such infections. Are they acting against their better judgement?

Schreiber-Weber: I think so. Doctors often prescribe antibiotics ‘to be on the safe side’. But this is wrong, except before surgery, and actually constitutes a case of misprescribing from a clinical perspective.

Why do doctors do this?

Schreiber-Weber: Many do not take the time to make a distinction between viral and bacterial diseases. But this needs to happen, even in November and December when the waiting rooms are full. It will often then turn out to be some form of bronchitis, which can mostly be treated without antibiotics given that 90% of cases are of viral origin.

Do some patients demand antibiotics too?

Schreiber-Weber: There are two tribes. Some are pleased if I don’t prescribe an antibiotic. Others want antibiotics if the infection is slow to clear up – they want to get back to work. This is where information becomes so important: studies show that almost every other person is unaware that antibiotics are no use against viruses.

What can be done about this?

Schreiber-Weber: Doctors must not issue prescriptions simply to keep people happy. When infections are doing the rounds, I find myself saying – several times a day – that the infection is a virus and that antibiotics are no use in this case. It's easy enough to explain.

Is there room for improvement in terms of bacterial infections too?

Schreiber-Weber: A classic example would be otitis media, which clears up on its own in 80% of cases. There is no evidence that antibiotics make any significant contribution towards reducing complications. A study by Witten-Herdecke University found that 17 children needed to be treated for just one of them to feel less pain after two days. And you also need to bear in mind that one of the 17 children will also suffer adverse effects associated with antibiotics, such as vomiting or skin rash. These figures are no secret, but almost all paediatricians and GPs still immediately prescribe antibiotics in such cases. That simple piece of advice – wait a couple of days and then see how things stand – is ignored more often than not.

What about urinary tract infections?

Schreiber-Weber: There are good guidelines for doctors to follow, but they don't stick to them. Germany's national S3 guidelines for uncomplicated urinary tract infections no longer refer to the broad-spectrum antibiotic ciprofloxacin, but recommend other antibiotics instead. In spite of this, urologists and GPs very often prescribe ciprofloxacin all the same. And while prescription rates have doubled over the past seven years, the resistance to ciprofloxacin by *E. coli*, the pathogen most commonly involved in urinary tract infections, has risen too.

Would better laboratory-based diagnostics help in terms of day-to-day clinical practice?

Schreiber-Weber: Laboratory-based diagnostics do have a role to play. Blood tests can help distinguish viruses from bacteria for things like respiratory tract infections. The most important thing for a GP, however, is to perform a thorough examination: perform auscultation, ask the patient questions, and be sure to assess



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the symptoms correctly. For example, it is no longer standard practice to take a throat swab when checking for streptococci, because not all streptococci in the throat will cause people to fall ill.

Does advertising shape prescription behaviour?

Schreiber-Weber: Yes, that's certainly the case. Broad-spectrum antibiotics, particularly the quinolones (e.g. ciprofloxacin) are advertised as panaceas. Doctors are then happy to prescribe them too. They may well enjoy a false sense of security as a result, but in practice they will often have misprescribed something.

Do doctors in Germany receive feedback on their prescription behaviour from, say, health insurance providers?

Schreiber-Weber: Pretty rarely on the whole. But health insurance providers could easily make recommendations, given that they have the data from prescriptions and know which doctor is prescribing what.

What would be your appeal to your colleagues in the medical profession?

Schreiber-Weber: To give patients more information. And to have the courage not to be pressurised into prescribing antibiotics. They also need to stick to the guidelines more closely, rather than being lulled into a false sense of security.