

## Antibiotics: what patients don't know

Antibiotics are among the most frequently prescribed and precious medicines we have. They cure infections if used correctly but overuse, underuse and usage errors pose risks to patients and the community. Risks include excess side effects, uncured or recurrent infection and worst of all, the development of super-bugs; bacteria no longer susceptible to our antibiotic arsenal. It stands to reason that patients should be given all the information and reassurance they need to take their prescribed antibiotic correctly. We set out to discover what patients don't know about antibiotics. Patients' information gaps and concerns were revealed in our review of over 8000 antibiotic questions asked of an Australian medicines call centre. The results were recently published in *Family Practice*.

Inadequate information and a second opinion were the most common motivations for Australians to call National Prescribing Service *Medicines Line* with antibiotic questions over an 8-year period. Common antibiotics asked about were amoxicillin, cefalexin, metronidazole, doxycycline and roxithromycin, all of which are frequently prescribed in general practice and hospitals in Australia. Some 'red flag' antibiotics prompted more calls out of proportion to their prescription rate in the Australian community. Ciprofloxacin and metronidazole drew 18 and 12.9 questions per 100 000 prescriptions respectively, while prescription frontrunner amoxicillin attracted just 3.9 calls per 100 000 scripts. It turns out certain antibiotics are more troublesome and confusing for patients than others.

We found some patient age groups had special antibiotic information needs, of which doctors and pharmacists should be aware. For children under five, the most common antibiotic concern was breastfeeding. Mothers asked how breastfeed while on an antibiotic, if the antibiotic passed through breast milk and if it was safe for the baby. A major antibiotic for these callers was metronidazole, which has previously been subject to conflicting information about breastfeeding safety. These findings indicate patients need clearer communication about antibiotics and breastfeeding safety.

For children aged 5-14, the most common question was about how to give the antibiotic correctly; this includes the amount, timing of doses and storage. Looking in detail at the specific questions parents had, there was concern about if the prescribed dose was correct, if dose timings outside those recommended were acceptable, and how to trouble-shoot doses during school-time and missed or vomited doses. It appears from these questions that more comprehensive, practical and situation-specific antibiotic administration advice may be useful to parents.

For adolescents and young adults aged 15-24, the most common question type was interactions with other medicines. Almost 70% of these callers stated they had been given inadequate information about interactions between their antibiotic and other drugs. Interactions of concerns included contraceptives, painkillers, antidepressants and recreational drugs including alcohol. Clearly young adults desire thorough counseling about medicines interactions in order to assist

their correct usage of antibiotics.

For older Australians aged over 55, the most common questions were about the role of the medicine, with enquiries such as the antibiotic's name and indication (what the medicine is for), how well the antibiotic works and how long it takes to work. Since many older people are on a large number of medications, prescription of additional short-term medicines such as antibiotics requires careful medicines education to avoid confusion.

Making sure antibiotics are not squandered requires every piece of the puzzle to be in place – from doctors prescribing the antibiotics judiciously, to patients taking the right doses for the right duration. This research sheds light on the breadth and depth of real patients' antibiotic knowledge gaps and concerns. It can assist doctors and pharmacists to target medication information to what patients don't know.

***Kate Hawke***

*School of Medicine, The University of Queensland, Brisbane*

## **Publication**

[What do consumers want to know about antibiotics? Analysis of a medicines call centre database.](#)

Hawke KL, McGuire TM, Ranmuthugala G, van Driel ML

*Fam Pract. 2016 Feb*