

Antibiotic prescribing

New Zealanders have very high rates of antibiotic use compared to other similar countries. Most antibiotic consumption occurs in the community, so general practitioners and other primary care prescribers have a key role in reducing inappropriate antibiotic use.

Prescribing antibiotics: ensuring that antibiotics are commenced appropriately in the first place.

Clinical and non-clinical factors influence treatment decisions. The initial clinical evaluation can provide information about the probable cause of the patient's symptoms, but it is often difficult to distinguish between viral and bacterial infections. Fear of "missing" a significant bacterial infection may mean antibiotics are prescribed. This is appropriate if the risk of not doing so is high, such as for an immunosuppressed patient. In other situations clinical recommendations ensure antibiotics are appropriately prescribed, e.g. a patient at risk for rheumatic fever, or with clinical signs suggestive of meningitis.

Non-clinical factors can also complicate management decisions. Patients may expect an antibiotic will improve their symptoms and demand a prescription, or clinicians may assume patients want antibiotics. Other factors influence prescribing decisions, including the day of the week (the "Friday afternoon consultation"), important life events, and previous bad experiences affecting either the clinician or the patient.

If prescribing antibiotics, consider: is it more likely than not that the patient has a bacterial infection? Will prescribing an antibiotic result in a better clinical outcome? Will the infection resolve without treatment? Will the adverse effects of the antibiotics outweigh the benefits? Are laboratory investigations indicated? Can antibiotic treatment be delayed until infection is confirmed?

Duration of antibiotic course: stopping antibiotics upon resolution of symptoms

Antibiotics can be stopped early in some clinical scenarios, such as for patients with moderate pneumonia, sinusitis, urinary tract infections, and skin infections including cellulitis. Treatment guidelines for these conditions now recommend short courses of antibiotics, as evidence shows cure rates are similar to longer regimens. Once the patient's symptoms have resolved it is reasonable to stop antibiotic treatment in many situations, and is unlikely to lead to relapse or promote antimicrobial resistance.

Stopping antibiotics early can be inappropriate; such treating patients with more severe infections like osteomyelitis,

endocarditis and tuberculosis, and group A streptococcal (GAS) pharyngitis in patients at risk of rheumatic fever. Antibiotic courses should also be completed for treatment of bacteriuria during pregnancy, the eradication of latent tuberculosis, and when the patient is severely immunodeficient.

Alternatives to prescribing antibiotics

Good communication reduces the rates of antibiotic prescribing. Most respiratory tract infections (RTI) are viral, self-limiting, and do not require antibiotic treatment. Providing a delayed prescription ("back pocket prescription") can help reduce antibiotic use.

Key information to communicate with patients:

- Antibiotics usually do not alter the course of illness in a non-complicated RTI
- The over-prescribing of antibiotics contributes to antibiotic resistance, which means that antibiotics might not work when they are needed
- Antibiotics are associated with adverse effects, e.g. diarrhoea, nausea, and rarely allergic reactions
- Past antibiotic treatment does not necessarily mean that antibiotics are indicated on this occasion
- The expected course of the illness
- The "safety-net": advise what to do if the patient feels worse or is not getting better

Peer group discussion points:

1. How do you normally treat people presenting with symptoms of a RTI?
2. Do you think you prescribe too many antibiotics? How would you rate your patients' expectation of antibiotics? How could you re-educate your patients about appropriate antibiotic use?
3. What sort of experiences have you had prescribing antibiotics? Have you had any outstandingly good or bad experiences of either using or not using antibiotics? Do you think these experiences have shaped your prescribing habits now?
4. What do you think of the delayed prescription strategy? Is this something you have tried? What are your experiences of using this technique?
5. What do you think about stopping antibiotic courses early where appropriate? Have you tried this? Were the outcomes satisfactory?

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