



General guidelines for antibiotic prescription

Ministry of Health and Quality of Life

12/30/2016

General Guidelines for Antibiotic Prescription

Purpose

These guidelines are for health professionals who prescribe antibiotics and are intended to provide guidance in the proper and judicious use of antibiotic therapy and to ensure that antimicrobials are used effectively to treat infections and minimise the spread of resistant organisms.

A Public Health Issue

Antibiotic resistance is a growing public health concern worldwide. When a person is infected with an antibiotic-resistant bacterium, not only is treatment of that patient more difficult, but the antibiotic-resistant bacterium may spread to other people.

The current worldwide increase in antimicrobial resistance and, simultaneously, the downward trend in the development of new antibiotics have serious public health and economic implications. The increased antimicrobial resistance is a result of many factors, but the foremost cause is the overall volume of antibiotic consumption, particularly for indications that do not require such therapy.

When antibiotics do **not** work, the results can be amongst others:

- ✓ longer and more complicated illnesses;
- ✓ more doctor visits;
- ✓ the use of stronger and more expensive drugs; and
- ✓ more deaths caused by bacterial infections.

Antibiotics are meant to be used against bacterial infections. Although antibiotics kill bacteria, they are not effective against viruses. Therefore, they will not be effective against viral infections such as colds, most coughs, many types of sore throat and influenza.

Using antibiotics against viral infections will **not**

- ✓ cure the infection;
- ✓ keep other individuals from catching the virus; and
- ✓ help a person feel better.

It may however cause unnecessary, harmful side effects and contribute to the development of antibiotic-resistant bacteria.

Prescribing Strategies

There are 3 antibiotic prescribing strategies:

A. NO ANTIBIOTIC PRESCRIPTION, AS CAUSATIVE ORGANISMS MOST LIKELY VIRAL

The doctor shall advise the patient that antibiotics do not significantly reduce the duration of symptoms of self-limiting respiratory tract infections and that they may cause adverse effects and lead to antibiotic resistance.

B. DELAYED ANTIBIOTIC PRESCRIPTION.

In some cases antibiotics may be prescribed at a later date if symptoms are not starting to settle in accordance with the expected course of the illness or if a significant worsening of the symptoms occurs. This patient must be given reassurance that antibiotics are not needed immediately because they are likely to make little difference to symptoms and may have side effects.

C. IMMEDIATE ANTIBIOTICS PRESCRIPTION.

- Antibiotics may be prescribed immediately if a patient is systemically unwell because of suspected bacterial infection or at high risk of complications because of pre-existing comorbidity such as cardiac, renal or liver disease or in immunosuppressed patients

- Similarly, if a patient is over 80 years and has one of the following: a history of hospitalization in past year, oral steroids, diabetes or congestive heart failure or if the patient is 65 years with 2 of these conditions, antibiotics may be prescribed immediately.

FOR ALL ANTIBIOTIC STRATEGIES, PATIENTS SHOULD BE GIVEN ADVICE ABOUT THE USUAL NATURAL HISTORY OF THE ILLNESS.

- Set realistic expectations for symptom duration, including the average total duration of symptoms: 1 week for acute sore throat, 1½ weeks for common cold, 2½ weeks for acute rhino sinusitis and 3 weeks for acute cough/bronchitis.

ADVICE SHOULD BE GIVEN ABOUT MANAGING SYMPTOMS INCLUDING DISCOMFORT CAUSED BY FEVER (*particularly analgesics and antipyretics*)

- Consider the use of rapid test in cases of doubt, such as C-Reactive Protein (CRP).

ADVICE GIVEN TO PATIENTS

- Take antibiotics exactly as the doctor prescribes.
- Do not skip doses.
- Complete the prescribed course of treatment, even when you start feeling better.
- Only take antibiotics prescribed for you;
- Do not share or use leftover antibiotics.
- Antibiotics treat specific types of infections. Taking the wrong medicine may delay correct treatment and allow bacteria to multiply.
- Do not save antibiotics for the next illness.
- Do not ask for antibiotics when your doctor thinks you do not need them.
- Remember antibiotics have side effects.

FOR MEDICAL PRACTITIONERS

- Prescribe an antibiotic only when there is likely to be a clear clinical benefit.
- Consider a 'No' or 'Delayed', antibiotic strategy for acute self-limiting upper respiratory tract infections, and mild UTI symptoms.
- Use simple antibiotics if possible.
- Avoid broad spectrum antibiotics (e.g.co-amoxiclav, quinolones and cephalosporins) when narrow spectrum antibiotics remain effective, as they increase risk of Clostridium difficile, MRSA and resistant UTIs.
- Do not use vancomycin to treat methicillin sensitive staphylococcus.
- Lower threshold for antibiotics in immune-compromised or those with multiple morbidities; consider culture and seek advice.
- When prescribing antimicrobials, prescribers should prescribe the shortest effective course and the most appropriate dose;
- Follow proper route of administration. Oral route will suffice in most cases;
- Use IV administration only to patients who are severely ill and unable to tolerate oral treatment, or where oral therapy will not provide adequate coverage; penetration.
- Consider Change from iv to oral after 48 to 72 hours;
- Review microbiology results and de-escalate to pathogen directed narrow spectrum treatment where appropriate; and
- Stop antibiotics if there is no evidence of infection.

For patients in hospital who have suspected infections, take microbiological samples before prescribing an antimicrobial and review the prescription when the results are available.

For patients in primary care who have recurrent or persistent infections, consider taking microbiological samples when prescribing an antimicrobial and review the prescription when the results are available.

For patients who have non-severe infections, consider taking microbiological samples before making a decision about prescribing an antimicrobial, providing it is safe to withhold treatment until the results are available.

Prescribers should take time to discuss with the patient and/or their family members or carers (as appropriate):

- The likely nature of the condition.
- Why prescribing an antimicrobial may not be the best option?
- Alternative options to prescribing an antimicrobial.
- Their views on antimicrobials, taking into account their priorities or concerns for their current illness and whether they want or expect an antimicrobial.
- The benefits and harms of immediate antimicrobial prescribing.
- What they should do if their condition deteriorates or they have problems as a result of treatment?

Patients and health care professionals alike can play an important role in combating antibiotic resistance. Demand from patients for antibiotics should not be entertained by any health care professional.

One reason why guidelines are ineffective is that target clinicians are often not aware of their existence. Dissemination then is the process of bringing guidelines to the attention of their intended users with the aim of increasing awareness and influencing knowledge, attitudes and behaviour.

Attention is drawn to the fact that this document is to be used as guidelines only. However in all cases of departure which occurs, prescribers should, as far as possible specify the reason(s) thereof, why such departure was necessary.

This will enable the use of new data, as they become available, so that guidelines are updated accordingly.

MONITORING MECHANISM

A mechanism will be set up, comprising the Pharmacy section at the level of the Headquarters of the Ministry of Health and Quality of Life. It will work very closely with Infection Control Committees at the level of the five Regional Hospitals and with Consultants in different disciplines, in order to ensure effective implementation of these guidelines and close monitoring of antibiotic prescription.

December 2016.