



2015 Infection Control March newsletter # 2

Antimicrobial misuse - role of staff and patients in reducing this

1. National Guidelines

There are national therapeutic guidelines for antibiotic prescribing based on symptoms and laboratory cultures - ensure all GPs access this, especially the latest version 15, 2014. These advise on the most appropriate antibiotic in the presence of specified indicators.

2. Facts about misuse.

In a survey done two years ago at John Hunter Hospital at Newcastle, it was found that 70% of antibiotics were not used correctly. This included incorrect dosage/frequency, inappropriate antibiotic for the causative bacteria and lack of symptoms/lab to warrant an antimicrobial being prescribed.

3. Pressure from patients

It is already difficult enough to persuade patients that they or their children most likely have a self limiting viral infection for which antibiotics will not provide any benefit let alone go on to explain that in fact, taking antibiotics causes its own problems when taken unnecessarily. Perhaps use some of the information from this newsletter to make your own hand out and include the pledge below in 8.

4. How resistance occurs

Bacteria may possess mechanisms that facilitate resistance. This may come about by a mutation (while common, most are lethal to the bacteria), passing of resistant genes among bacteria/uptake of free DNA and by infection by phages which are bacterial viruses. Resistance to antivirals also occurs.

5. Why resistance occurs

It is irrefutable that where antibiotic usage is present and constant, selective pressure brings about a dominance of resistant strains e.g. in aged care. Incorrect dosage and non compliance compound this so that resistant strains simply outcompete sensitive strains and become the dominant strain. This may cause difficulties for treatment should this strain cause infection.

6. The original intent of use of antibiotics

When the first antibiotics, the sulfonamides and penicillins were developed, they were used to save lives from pneumonia, osteomyelitis, meningitis and septicaemia. Now, they are often expected for less serious bacterial infections or even where a bacterial infection is not confirmed. There are currently patients in hospital with untreatable infections due to resistant bacteria.

7. Why we need antimicrobial stewardship - educating ourselves first

What about we healthcare staff and our own attitude to antibiotics? How many times do we hear ourselves justifying use by saying "It's Friday so a script now will save me coming back on the weekend in case it does not get better" or "I find antibiotic X is good for that"?

8. Developing a culture of antimicrobial stewardship among your patients

Ask your patients to take the pledge

- a. I will not expect antibiotics for colds and flu as they have no effect on the viruses that cause these infections*
- b. If antibiotics are prescribed, I will take them as directed*
- c. I will practise good hygiene practices and etiquette such as coughing/sneezing into my elbow, washing hands after each visit to the toilet and flushing the toilet with the lid down*