

World Antimicrobial Awareness Week, 18-24 November 2020



Antimicrobials: Handle with care

United to preserve antimicrobials

Dear colleagues,

It's that exciting time of year again! For World Antimicrobial Awareness Week 2020 (WAAW), the World Health Organisation has selected the slogan "Antimicrobials: Handle with care. United to preserve antimicrobials." You will notice that we now talk in terms of "antimicrobials" rather than "antibiotics" because we recognise that resistance in organisms other than bacteria (such as fungi, viruses and parasites) is important too.

Since World Antibiotic Awareness Week 2019 the world has changed dramatically and we have become distracted by a different global infectious disease threat. We had not heard of COVID-19 a year ago and 2020 has become the year the world learned about respiratory viruses other than 'flu, "PPE", polymerase chain reaction (PCR) and what scientists do in labs all day. We have also all become armchair epidemiologists and developed our own views on how the world should deal with this pandemic.

Joking aside, it is time to remind our team of 5 million to step up to another challenge and be #UnitedToPreserveAntimicrobials. The threat of drug-resistant infection has not gone away, Antimicrobial stewardship (AMS) is as important as it ever was, and we need to continue to use antimicrobials responsibly.

Here are my **“Top Ten AMS Tips”** to think about before prescribing an antimicrobial:

1. **Is an antibiotic really needed?** Is there convincing evidence of bacterial infection? Avoid “just in case” prescriptions. Is it safer to watch and wait?
2. **Shorter is better.** “5 is the new 7” - many uncomplicated infections such as cystitis and pneumonia can be effectively treated with 5 days (or fewer) of antibiotics. Avoid unnecessarily long courses of antibiotics.
3. **Narrower is better.** Use the narrowest spectrum effective agent to avoid unwanted effects on the healthy microbiome (e.g. prescribe flucloxacillin for cellulitis, not co-amoxiclav).
4. **Oral switch.** Change to orals from IVs as soon as is clinically appropriate. Saves IV lines and nursing administration time.
5. **Indication and review.** Always document why the antibiotic is being prescribed and when it should be reviewed or stopped. Helps communicate with other health care providers and avoids unnecessarily long durations.
6. **Allergy review.** Most patients who think they are allergic to penicillin are not. Take an accurate allergy history and document it. It may be safe to perform an oral amoxicillin challenge!
7. **Microbiology.** Take the right samples at the right time to help answer the question you need answering. Avoid unnecessary or poorly taken samples since we may report normal flora and you may miss the real diagnosis.
8. **Diagnostic stewardship.** See also point 7. Don’t take samples if they don’t help inform your clinical management, e.g. don’t sample urine in patients without symptoms of UTI!
9. **Dosing matters.** Did you know we report our susceptibilities based on specific dosing regimens? If you are not using optimal dosage (see table 1 below) you risk clinical failure even if we have reported the organism as “S”. “I” now means “Susceptible, increased exposure.” If you see “I” reported it is even more important to optimise dosing (e.g. amoxicillin 1g TDS not 500mg TDS, ciprofloxacin 750mg BD instead of 500mg BD).
10. **Antibiotics are not harmless.** See also point 1. Does the risk of harm outweigh the benefits? (NB, harm may be on a population level rather than an individual patient level).

Thanks for reading! Any questions, comments or queries get in touch: *Dr Juliet Elvy, Clinical Microbiologist, Medlab South, Wellington SCL.*

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Table 1. Recommended dosing for oral antibiotics in common usage. Doses differ depending on target organism and susceptibility report. Dosing guide assumes normal renal and liver function and is for adults only.

Antibiotic	Organism	Dose		Comment
		Susceptible "S"	Susceptible, increased exposure "I"	
Flucloxacillin	Staphylococci	1g TDS or QID		
Amoxicillin	<i>Streptococcus pneumoniae</i>	500-1000mg TDS	-	For cystitis only
	Urine: <i>E. coli</i> , coliform	500mg TDS	-	
	<i>Haemophilus influenzae</i>	N/A – never reported as "S"	1g TDS	
Co-amoxiclav	Urine: <i>E. coli</i> , coliform	625mg TDS	-	For cystitis only
	<i>Haemophilus influenzae</i>	N/A – never reported as "S"	1.125g TDS ¹	
Cefalexin	Staphylococci	1g TDS	-	S to flucloxacillin predicts S to cefalexin
	Urine: <i>E. coli</i> , coliform	250-1000mg BD or TDS	-	
Ciprofloxacin	<i>Pseudomonas aeruginosa</i>	N/A – never reported as "S"	750mg BD	Ciprofloxacin concentrated in urine. Restricted to resistant isolate
	Urine <i>E. coli</i> , coliform	500mg BD	500mg BD	

¹Give 625mg co-amoxiclav with additional 500mg amoxicillin as 1.125g co-amoxiclav (1g amoxicillin + 125mg clavulanate) tablets are not available in NZ.