Organism susceptibility to antibacterials: macrolides, quinolones, rifamycins

The following table provides a general guide to clinical antimicrobial susceptibilities. The table is intended to assist empirical selection of antimicrobials in the absence of laboratory confirmation of susceptibility; it is not a substitute for management advice from clinical microbiologists or infectious diseases specialists. Consider these data in conjunction with the clinical condition of the patient, site of infection, knowledge of local susceptibility patterns (which may vary) and evidence-based guidelines. Use the narrowest spectrum antibiotic that is effective to limit the development of antimicrobial resistance. When in doubt seek specialist advice.

The designation of susceptibility used in the table is 75% (an organism is deemed susceptible if at least 3 out of 4 cultures tested are susceptible to that antibiotic).

Organism	Macrolides				Quinolones			Rifamycins	
	azithromycin	clarithromycin	erythromycin	roxithromycin	ciprofloxacin	moxifloxacin	norfloxacin[1]	rifampicin	rifabutin
Gram-negative									
Acinetobacter spp.									
Aeromonas spp.									
Burkholderia cepacia									
Burkholderia pseudomallei									
Campylobacter jejuni and *coli*				2		2	2		
Citrobacter freundii									
Enterobacter spp.									
Escherichia coli									
Haemophilus influenzae									
Klebsiella spp.									
Moraxella catarrhalis									
Morganella spp.									
Neisseria gonorrhoeae					3	3			
Neisseria meningitidis								4	
Pasteurella multocida									
Proteus mirabilis									
Proteus vulgaris									
Providencia spp.									
Pseudomonas aeruginosa									
Salmonella spp.					3	3	3		
Serratia spp.									
Shigella spp.									
Stenotrophomonas maltophilia									
Yersinia spp.									

1 urinary or GI isolates only
2 likely susceptible but currently validated laboratory breakpoints not available
3 use only if susceptibility confirmed
4 used for prophylaxis only
5 limited clinical data
6 active in vitro, resistance may develop during treatment
7 can be used for UTI if susceptible
8 in combination with other agents

Legend

	susceptible
v	variable
	resistant
	no data available or antibacterial not recommended

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Organism	Macrolides				Quinolones			Rifamycins	
	azithromycin	clarithromycin	erythromycin	roxithromycin	ciprofloxacin	moxifloxacin	norfloxacin[1]	rifampicin	rifabutin
Gram-positive									
Corynebacterium jeikeium									
Enterococcus faecalis					1	5			
Enterococcus faecium					1	5	v		
Listeria spp.									
Staphylococcus aureus					6,7	6	6		
Staphylococcus aureus (MRSA)					6,7	6	6		
Staphylococcus epidermidis		v	v						
Staphylococcus lugdunensis									
Staphylococcus saprophyticus									
Streptococcus - group A, B, C, G									
Streptococcus anginosus									
Streptococcus pneumoniae									
Viridans streptococcus group									
Anaerobes									
Actinomyces									
Bacteroides fragilis group									
Clostridioides difficile									
Clostridium perfringens									
Cutibacterium (Propionibacterium) acnes									
Fusobacteria spp.									
Peptostreptococcus spp.									
Prevotella melaninogenica									
Miscellaneous									
Chlamydophila, *Chlamydia* spp.									
Legionella spp.								8	8
Mycobacterium avium complex								8	8
Mycobacterium tuberculosis								8	8
Mycoplasma pneumoniae									
Nocardia spp.					v	v			

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