

2018 Antibiotic Susceptibility Profiles SDHB Otago/Southland Community isolates

Gram negative bacteria 2018 (% sensitive)	Number tested	Amoxicillin	Amoxicillin/Clavulanate	Amoxicillin/Clavulanate (cystitis only)	Cefalexin (cystitis)	Tetracycline/doxycycline	Nitrofurantoin (cystitis)	Ciprofloxacin*	Trimethoprim (cystitis)	Cotrimoxazole*	Fosfomycin (cystitis)
<i>E. coli</i> (all)	7267	58%	78%	91%	95%		99%		75%		
<i>E. coli</i> (urine)	7170	58%	78%	91%	95%		99%		75%		
<i>E. coli</i> ESBL (urines)*	194	R		73%	R		97%	35%	27%	29%	98%
<i>Proteus mirabilis</i>	266	92%	99%	99%	92%		R	98%	79%		
<i>Salmonella</i> spp	106	91%						87%		98%	
<i>Pseudomonas aeruginosa</i>	410							88%			
<i>Haemophilus influenzae</i>	420	68%	81%			99%		99%		73%	

Gram positive bacteria 2018 (% sensitive)	Number tested	Amoxicillin	Penicillin G (sensitive and intermediate)	Flucloxacillin	Erythromycin	Clindamycin	Nitrofurantoin (cystitis only)	Trimethoprim (cystitis only)	Cotrimoxazole	Fusidic acid	Tetracycline/Doxycycline
<i>Staphylococcus aureus</i>	4262		8%	93%	88%	89%			98%	88%	97%
<i>Staphylococcus aureus</i> MRSA	250		R	R	77%	84%			95%	81%	95%
<i>Staphylococcus lugdunensis</i>	132		56%	100%	97%	97%			99%		100%
<i>Staphylococcus saprophyticus</i>	321						100%	92%		R	
<i>Streptococcus pneumoniae</i>	181		90%**		78%	84%			74%		79%
<i>Enterococcus</i> spp (incl. hospital isolates)	335	98%					100%				

Notes*:

- Extended-spectrum β -lactamases (ESBL) are plasmid-encoded enzymes which hydrolyze most of the beta-lactam antibiotics, ie the penicillins and cephalosporins. These organism are usually susceptible to meropenem, pivmecillinam and fosfomycin. In addition, these isolates are usually resistant to multiple other classes of antibiotics, including to cotrimoxazole, fluoroquinolones, and aminoglycosides
- The most common infection produced by ESBL-producing organisms is cystitis, but antibiotic treatment options are very limited. Nitrofurantoin or fosfomycin may be options for treatment. Serious infection and invasive disease often require treatment with a carbapenem (meropenem or ertapenem)
- **Ciprofloxacin** and **cotrimoxazole** susceptibility results are not available for community *Escherichia coli* from urines, as these are only tested on multi-resistant isolates or when pyelonephritis is suspected. However, for hospital urinary isolates (which are all tested), 90% are susceptible to ciprofloxacin, and 78% to cotrimoxazole

Note**:

- 81% of *Streptococcus pneumoniae* are fully susceptible to penicillin (MIC \leq 0.06 mg/L), while 10% have reduced susceptibility to penicillin (MIC 0.12 – 2.0 mg/L)
- Uncomplicated pneumonia due to *Streptococcus pneumoniae* may usually be treated with high-dose oral amoxicillin (adult dose 1g tds), even if reduced susceptibility to penicillin. More severe pneumonia (CURB-65 score \geq 2) may require IV antibiotics. Please refer to the comments on the laboratory report for dosage indications, or contact a Clinical Microbiologist