

2018 Antibiotic Susceptibility Profiles Canterbury Southern Community Laboratories

Gram negative bacteria 2018 (% sensitive)	Number tested	Amoxicillin	Amoxicillin/Clavulanate	Cefaclor	Tetracycline/doxycycline	Nitrofurantoin (cystitis)	Ciprofloxacin	Trimethoprim (cystitis)	Cotrimoxazole	Fosfomycin (cystitis)	Mecillinam
<i>E. coli</i> (non-urine)	51	51%		88%			72%		67%		
<i>E. coli</i> (urine)	13162	56%		93%		99%	87%	73%			
<i>E. coli</i> ESBL (urines)*	479	R		R		95%	25%	32%		97%	94%
<i>Klebsiella</i> species	1262	R		91%			81%	80%			
<i>Klebsiella</i> species ESBL	58	R		0%			16%	17%			
<i>Proteus mirabilis</i>	605	89%		99%		R	97%	76%			
<i>Pseudomonas aeruginosa</i>	838						84%				
<i>Haemophilus influenzae</i>	1205	75%	93%		99%				71%		

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>	10570		19%	94%	86%	88%			100%		96%
<i>Staphylococcus aureus</i> MRSA	634		R	R	70%	82%			99%	80%	94%
<i>Staphylococcus lugdunensis</i>	123		60%	96%	95%	96%			99%		96%
<i>Staphylococcus saprophyticus</i>	655			99%			100%	94%		R	
<i>Streptococcus pneumoniae</i>	486		88%**		74%				78%		72%
<i>Streptococcus pyogenes</i> (Group A <i>Streptococcus</i>)	636		100%		95%	96%					
<i>Streptococcus agalactiae</i> (Group B <i>Streptococcus</i>)	135		100%		74%	80%					
<i>Enterococcus</i> spp (incl. hospital isolates)	848	98%					99%				

Notes:

- Most antibiotic susceptibilities are determined by EUCAST interpretive standards (www.eucast.org). Cefaclor susceptibility is tested by CLSI methodology
- Extended-spectrum β -lactamases (ESBL) are enzymes that hydrolyze most of the beta-lactam antibiotics, ie the penicillins and cephalosporins. 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 of uncomplicated cystitis. Serious infection and invasive disease often require treatment with a carbapenem (meropenem or ertapenem)
- 71% of *Streptococcus pneumoniae* are fully susceptible to penicillin (MIC \leq 0.06 mg/L), while 17% 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 when there is 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