

ANTIBIOTIC SUSCEPTIBILITY PROFILES

(Compiled January 2019, based on 2018 annual data)

	<i>Staphylococcus aureus</i>	<i>Streptococcus pyogenes</i> (Gp A Haemolytic Strep.)	<i>Streptococcus pneumoniae</i>	<i>Moraxella catarrhalis</i>	<i>Haemophilus influenzae</i>	<i>Pseudomonas aeruginosa</i>	URINE					
							<i>E. coli</i>	<i>Klebsiella</i> species	<i>Proteus mirabilis</i>	<i>Enterobacter / Serratia</i> spp.	<i>Enterococcus</i> species	<i>Staphylococcus saprophyticus</i>
Number of Isolates	13982		598		1706	1636	9522	1275	548	406		818
PENICILLIN		S	97 _d	R	R	R						
FLUCLOXACILLIN	88	S		R	R	R						
AMOXYCILLIN		S	97 _e	R	77	R	54	R	91	R	S	V _g
AMOX / CLAV	88 _a	S	97 _e	S	93	R	89	91	99	R	S	S _g
CEPHALEXIN	88 _a	S		S		R	94	94	99	R	R	S _g
COTRIMOXAZOLE	99		74	S	79	R	75 _h	86 _h	83 _h	91 _h	R	93 _h
ERYTHROMYCIN	88	S _c	84		R _f	R						
CLINDAMYCIN	88 _b	S _c	84 _b			R						
TETRACYCLINE			84	S	99	R						
GENTAMICIN						96	S	S	S	S		
CIPROFLOXACIN						95	94	95	99	97		
NITROFURANTOIN						R	99	88	R	* _i	S	100
TRIMETHOPRIM						R	75	86	83	91	R	93

The percentage of organisms susceptible to an antibiotic is recorded (with the sample size in the first row of the table).

(e.g. *Staphylococcus aureus* vs. flucloxacillin 88% susceptible, n = 13982)

S = Not specifically tested but known to be ordinarily susceptible.

R = Organism resistant or antibiotic inappropriate V = Variable susceptibility.

- S. aureus* susceptible to flucloxacillin can be considered susceptible to amoxicillin-clavulanate and cefaclor. Methicillin resistant *Staphylococcus aureus* (i.e. MRSA) are resistant to all beta-lactam antibiotics (penicillins, cephalosporins, carbapenems).
- Clindamycin susceptibility is extrapolated from the erythromycin result.
- Streptococcus pyogenes* are universally susceptible to penicillin but resistance to erythromycin/clindamycin is seen, (in an estimated 5% of isolates).
- S. pneumoniae* susceptible to penicillin can be considered susceptible to amoxicillin, amoxicillin-clavulanate, cefaclor, cefuroxime, cefotaxime, ceftriaxone, cefpodoxime, imipenem and meropenem. Confirmation of penicillin resistance (reduced susceptibility) in *S. pneumoniae* requires MIC testing. (Please note this figure includes both penicillin susceptible and intermediately susceptible isolates). *S. pneumoniae* isolates intermediately susceptible to penicillin are resistant to cefaclor. In 2018 our *S. pneumoniae* isolates demonstrated the following pattern of susceptibility to penicillin: 64% = Susceptible, 33% = Intermediate, 3% = Resistant. However, of the resistant strains only a few had a penicillin MIC > 4mg/L, and penicillins (amoxicillin) are effective against strains with MIC <= 4mg/L, unless they are causing meningitis.
- Amoxicillin and amoxicillin-clavulanate susceptibility is extrapolated from the penicillin result.
- Erythromycin is not recommended for treatment of infections thought to be due to *H. influenzae*.
- S. saprophyticus* causing urinary tract infections will usually respond to amoxicillin-clavulanate and cephalosporins. (Up to 50% of isolates are resistant to amoxicillin).
- Cotrimoxazole susceptibility is extrapolated from the trimethoprim result.
- Please note: *Serratia* spp. are intrinsically resistant. *Enterobacter* spp. was 76% susceptible in 2018.

MOST LIKELY BACTERIAL PATHOGENS IN COMMON CONDITIONS

1. RESPIRATORY INFECTIONS

- Pharyngitis - *Streptococcus pyogenes* (Gp A Haemolytic Strep.)
- Otitis Media/Sinusitis
 - *Streptococcus pneumoniae*
 - *Haemophilus influenzae*
 - *Moraxella catarrhalis*
- Acute exacerbation of Chronic Bronchitis
 - *Streptococcus pneumoniae*
 - *Haemophilus influenzae*
 - *Moraxella catarrhalis*
- Community Acquired Pneumonia
 - *Streptococcus pneumoniae*
 - *Haemophilus influenzae*
 - *Mycoplasma pneumoniae*
 - *Chlamydia pneumoniae*
 - *Staphylococcus aureus*
 - (*Legionella* sp)

2. URINARY TRACT INFECTION

- *E. coli*
- *Proteus mirabilis*
- Other Coliforms (e.g. *Klebsiella*, *Enterobacter*).
- *Enterococcus* sp.
- *Staphylococcus saprophyticus*.

3. IMPETIGO / CELLULITIS

- *Staphylococcus aureus*
- *Streptococcus pyogenes*