ANTIBIOTIC SUSCEPTIBILITY PROFILES

(Compiled January 2018, based on 2017 annual data)

pathlab

Rotorua

	Staphylococcus aureus	*Streptococcus pyogenes* (Gp A Haemolytic Strep.)	*Streptococcus pneumoniae*	*Moraxella catarrhalis*	*Haemophilus influenzae*	*Pseudomonas aeruginosa*	URINE					
							E.coli	*Klebsiella* species	*Proteus mirabilis*	*Enterobacter / Serratia* spp.	*Enterococcus* species	*Staphylococcus saprophyticus*
Number of Isolates	2585		114		354	157	1084	148	85	56		136
PENICILLIN		S	98[d]	R	R	R						
FLUCLOXACILLIN	87	S		R	R	R						
AMOXYCILLIN		S	98[e]	R	73	R	52	R	93	R	S	V[g]
AMOX / CLAV	87[a]	S	98[e]	S	91	R	86	90	100	R	S	S[g]
CEPHALEXIN	87[a]	S		S		R	95	94	99	R	R	S[g]
COTRIMOXAZOLE	99		93	S	78	R	78[h]	83[h]	85[h]	86[h]	R	95[h]
ERYTHROMYCIN	85	S[c]	94		R[f]	R						
CLINDAMYCIN	85[b]	S[c]	94[b]			R						
TETRACYCLINE			94	S	98	R						
GENTAMICIN						94	S	S	S	S		
CIPROFLOXACIN						82	96	94	100	93		
NITROFURANTOIN						R	98	86	R	*[i]	S	95
TRIMETHOPRIM						R	78	83	85	86	R	95

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 87% susceptible, n= 2585)
S = Not specifically tested, but known to be ordinarily susceptible.
R = Organism resistant or antibiotic inappropriate V = Variable susceptibility.

a. *S. aureus* susceptible to flucloxacillin can be considered susceptible to amoxycillin-clavulanate and cefaclor. Methicillin resistant *Staphylococcus aureus* (i.e. MRSA) are resistant to all beta-lactam antibiotics (penicillins, cephalosporins, carbapenems).
b. Clindamycin susceptibility is extrapolated from the erythromycin result.
c. *Streptococcus pyogenes* are universally susceptible to penicillin but resistance to erythromycin/clindamycin is seen, (in an estimated 5% of isolates).
d. *S. pneumoniae* susceptible to penicillin can be considered susceptible to amoxycillin, amoxycillin-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 2017 our *S. pneumoniae* isolates demonstrated the following pattern of susceptibility to penicillin: 91% = Susceptible, 7% = Intermediate, 3% = Resistant. However, of the resistant strains only a few had a penicillin MIC > 4mg/L, and penicillins (amoxycillin) are effective against strains with MIC <= 4mg/L, unless they are causing meningitis.
e. Amoxycillin and amoxycillin-clavulanate susceptibility is extrapolated from the penicillin result.
f. Erythromycin is not recommended for treatment of infections thought to be due to *H. influenzae*.
g. *S. saprophyticus* causing urinary tract infections will usually respond to amoxycillin-clavulanate and cephalosporins. (Up to 50% of isolates are resistant to amoxycillin).
h. Cotrimoxazole susceptibility is extrapolated from the trimethoprim result.
i. Please note: *Serratia* spp. are intrinsically resistant. *Enterobacter* spp. Was 61% susceptible in 2017.

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 pnuemoniae*
  - *Haemophilus influenzae*
  - *Moraxella catarrhalis*
- Community Acquired Pneumonia
  - *Streptococcus pnuemoniae*
  - *Haemophilus influenzae*
  - *Mycoplasma pnuemoniae*
  - *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*