

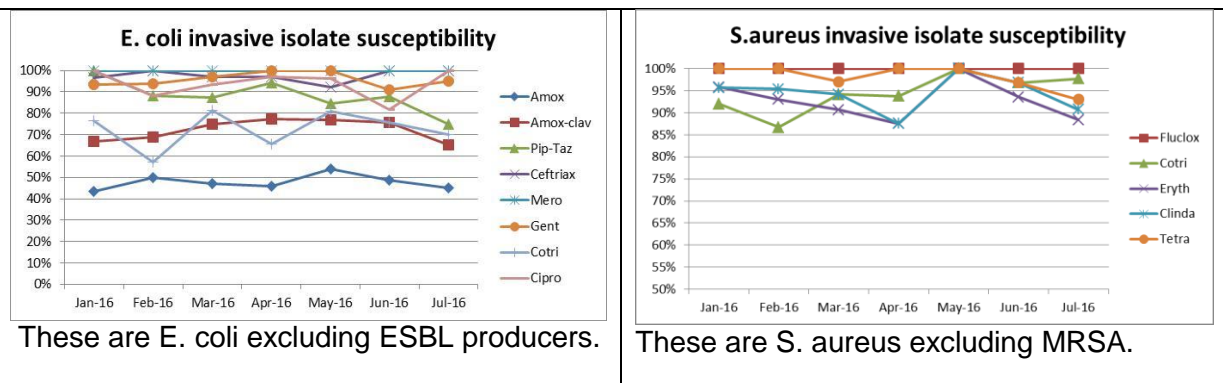
This is a brief overview of selected markers of antimicrobial resistance in Waikato hospitals. Specimens: blood cultures, tissue specimens and aspirates – the “sterile site” specimens.

Requests for information to add to this report are welcome. We have a lot more data available and if readers are interested in a specific question, quite likely we can shed some light on it.

Monthly dashboard

Alert Organisms	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
nmMRSA		4	2	3	2	5	5
mMRSA			2		1	1	
ESBL E. coli		1	2	1	2	2	2
ESBL K. pneumoniae	1		1		1		
CPE							
VRE							
Mero R Ps. Aeruginosa		1	1		1		

- nmMRSA is *S. aureus* resistant to flucloxacillin. MRSA Isolates resistant to just topical agents, mupirocin and fusidic acid are also included.
- mMRSA (Multiresistant MRSA) are isolates resistant to flucloxacillin and one other systemic agent on the Vitek 2 panel (cotrimoxazole, erythromycin, clindamycin, tetracycline vancomycin, daptomycin, linezolid).
- ESBL is extended spectrum beta lactamase producing. These are typically resistant to several other classes of antibiotic, so are multidrug resistant (MDRO)
- CPE is carbapenem resistant enterobacteriaceae
- VRE is vancomycin resistant enterobacteriaceae
- Meropenem resistant P. aeruginosa are not clonal but may evolve during the course of an infection in one patient. A variety of mechanisms may be present.



Focus on Streptococci.

Susceptibility derived from Vitek 2 panel. Not all these antibiotics are suitable for clinical use. 6 months' isolates, Jan to June 2016.

		Percent Susceptibility											
		n	Pen	Amox	Cefotax	Ceftriax	Clinda	Erythro	Levoflox	Linez	Tetra	Trim-Sulfa	Vancomycin
Group A Strep		40	100%	100%	100%	100%	98%	97%	100%	100%	90%	98%	100%
Group C & G		21	100%	100%	100%	100%	90%	90%	100%	100%	67%	100%	100%
Group B Strep		21	100%	100%	100%	100%	76%	71%	100%	100%	19%	95%	100%
Viridans group	susceptible	31	63%	73%	83%	97%	97%	76%	100%	100%	87%	0%	100%
	intermediate		31%	17%	13%		3%				3%		

	n	Pen	Amox	Ctxm	Ctxn	Clind	Eryth	Cipro	Linezolid	Tetra	Trim-Sulfa	Vanc	Teic	Dapt	Gent synergy
Enterococcus faecalis	44	93%	100%				14%	93%	98%	39%		100%	100%	100%	71%
Enterococcus faecium	20	10%	15%				0%	5%	100%	25%		100%	100%		55%

	Clinical Applications	Antimicrobial Use
Group A Strep	Cellulitis, Necrotising Fasciitis, Sore Throat and Rheumatic Fever prevention.	Clindamycin, erythromycin and cotrimoxazole are satisfactory alternatives in penicillin allergy.
Group C & G	Cellulitis and Necrotising Fasciitis	Very similar to Group A Strep disease and susceptibility.
Group B Strep	Soft Tissue Infection and Neonatal sepsis	Clindamycin is recommended as prophylaxis in labour for penicillin allergic women but susceptibility is only 76%.
Viridans group	These isolates were mostly from intraabdominal abscess or blood cultures of neutropenic patients.	Reduced penicillin susceptibility is common. For endocarditis treatment, refer to the Minimum Inhibitory Concentration.
Enterococci	Soft tissue infections and urinary tract infection.	Cephalosporins, erythromycin and cotrimoxazole are considered ineffective. Ciprofloxacin is shown here but not recommended. E. faecium is much more resistant to penicillins than E. faecalis.