

This is a brief overview of selected markers of antimicrobial resistance in Waikato hospitals.

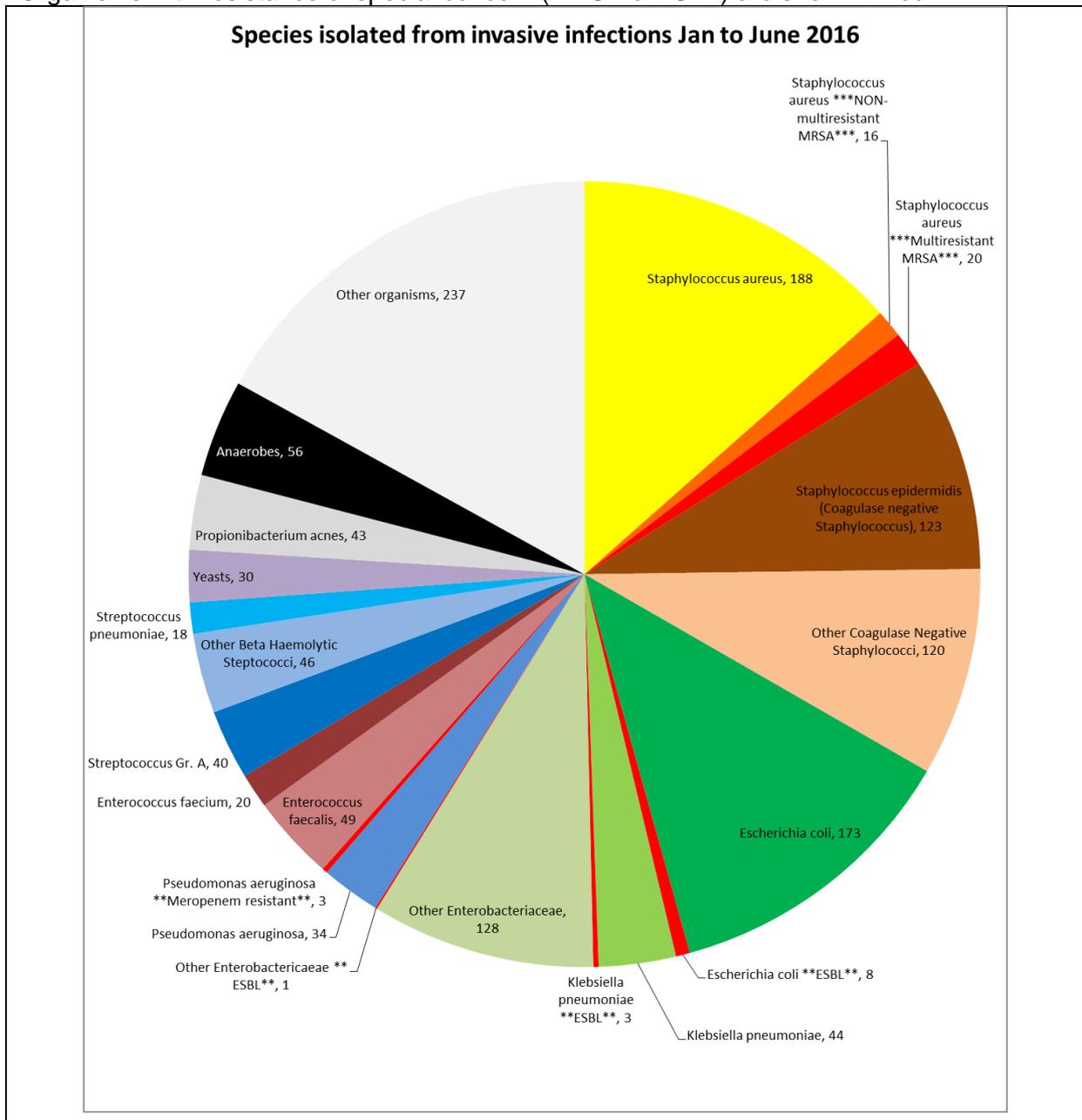
We look at organisms grown from blood cultures, tissue specimens and aspirates – the “sterile site” specimens.

Initially, we will report susceptibility results for just the two most common organisms, E. coli and Staphylococcus aureus, updating each month.

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.

**Overview of organisms grown during the past 6 months.**

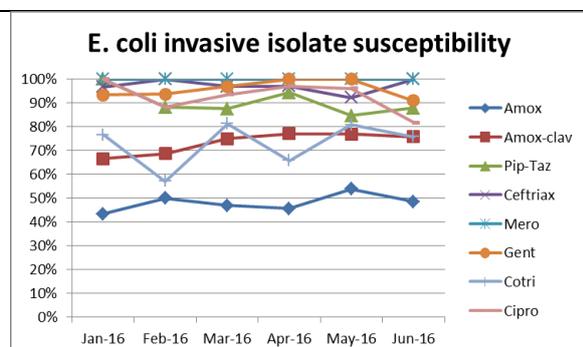
Organisms with resistance of special concern (MRSA & ESBL) are shown in red.



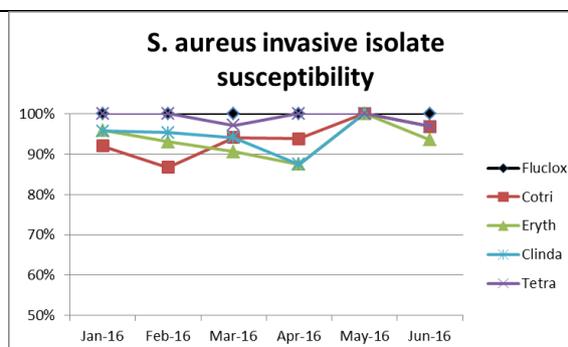
## Monthly dashboard

Alert Organisms	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16
nmMRSA		4	2	3	2	5
mMRSA			2		1	1
ESBL E. coli		1	2	1	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.



These are E. coli excluding ESBL producers.



These are S. aureus excluding MRSA.

## Rates of Selected Antimicrobial Resistances

Invasive isolates resistance rates for 6 months Jan to June 2016				
	n	R		
Total S. aureus	224	16	7%	nmMRSA
	224	4	2%	mMRSA
Total E. coli	181	8	4%	ESBL E. coli
Total K. pneumoniae	47	3	6%	ESBL K. pneumoniae
Total Enterobacteriaceae	357	0	0%	CPE
Total Enterococci	69	0	0%	VRE
Total P. aeruginosa	37	3	8%	Mero R P. aeruginosa