

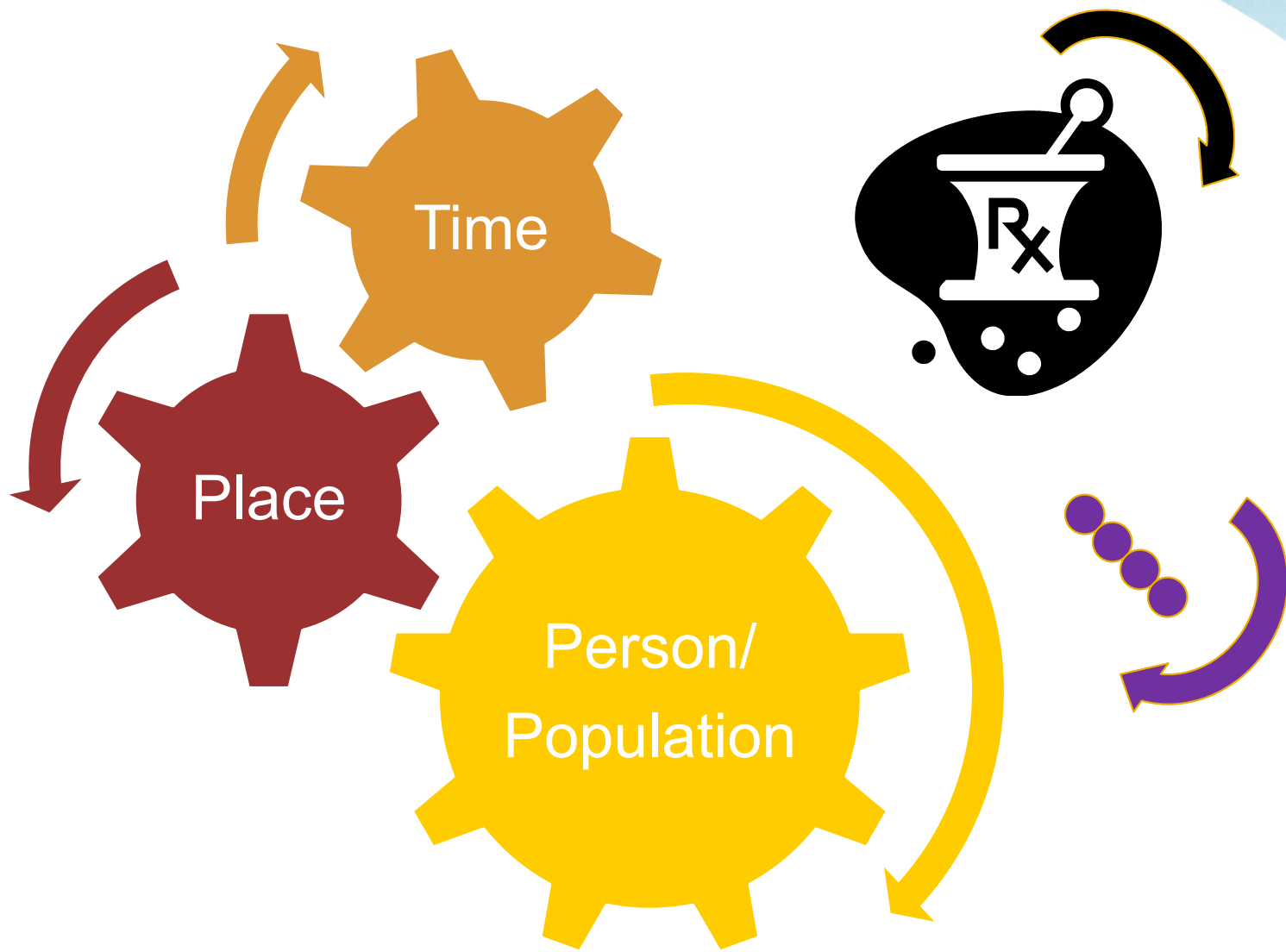


AURA 2017 IMPLICATIONS FOR CHANGE IN CLINICAL PRACTICE

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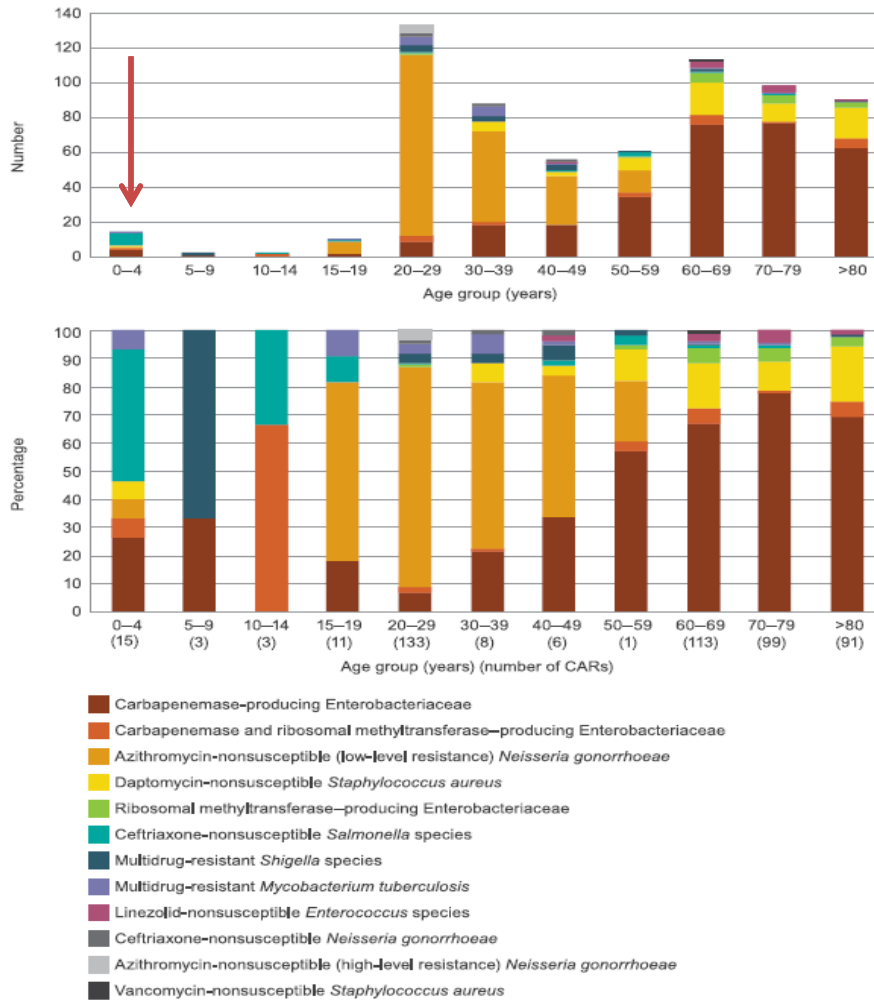
 **#2017AURA**





Resistance impacts everyone

Figure 5.5: Critical antimicrobial resistances (CARs), by age group, 17 March – 31 December 2016

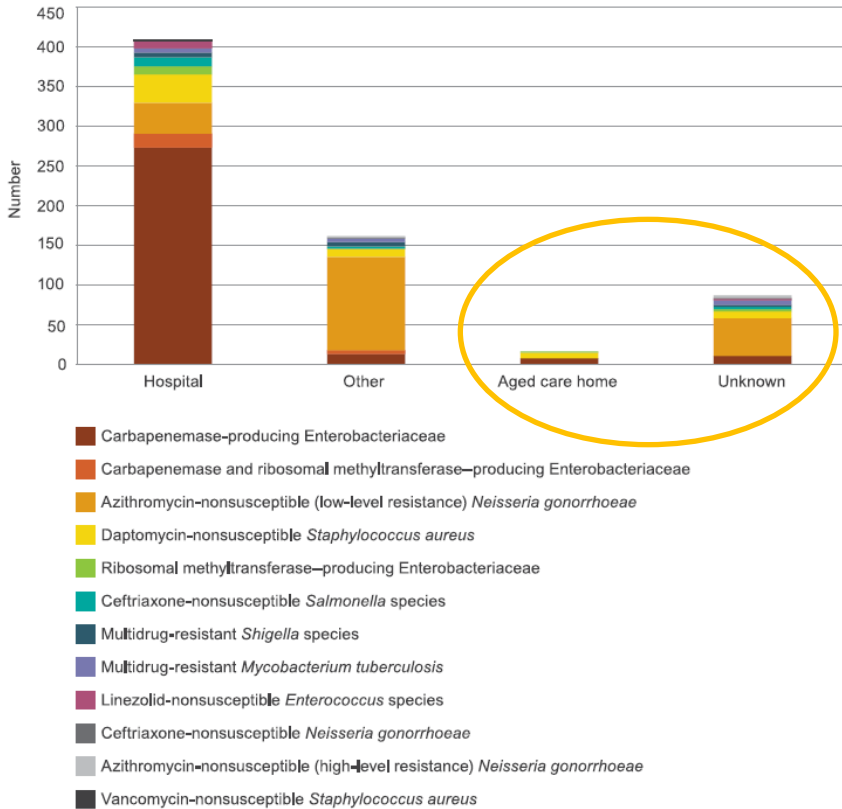


Note: Low-level resistance is a minimum inhibitory concentration (MIC) of <256 mg/L. High-level resistance is an MIC of ≥256 mg/L
Source: CARAlert



Resistance is not restricted to tertiary care

Figure 5.7: Critical antimicrobial resistances reported, by facility type, 17 March – 31 December 2016

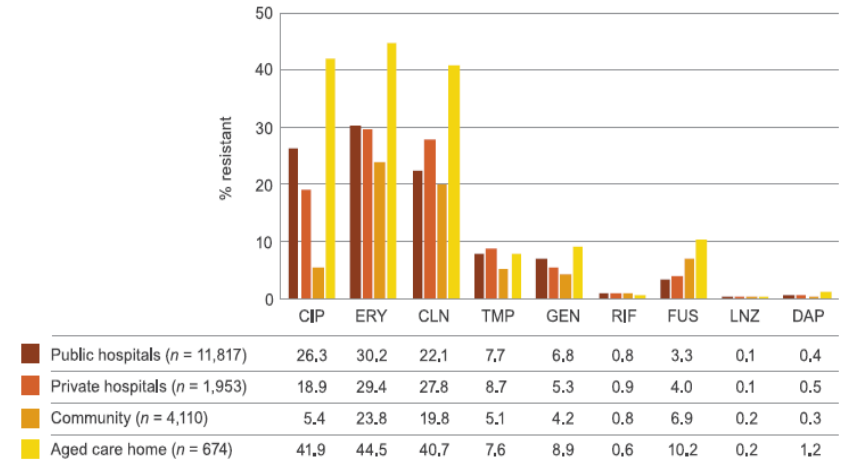


Notes:

1. Low-level resistance is a minimum inhibitory concentration (MIC) of <256 mg/L. High-level resistance is an MIC of ≥256 mg/L.
2. 'Other' refers to community (non-hospital and non-aged care home).

Source: CARAlert

Figure 4.34: Methicillin-resistant *Staphylococcus aureus* resistance to non-β-lactam agents, by clinical setting, 2015



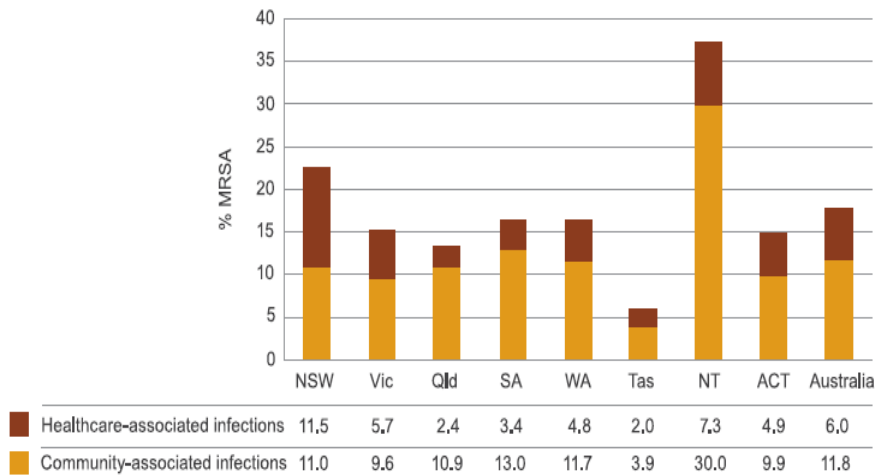
CIP = ciprofloxacin; CLN = clindamycin; DAP = daptomycin; ERY = erythromycin; FUS = fusidic acid; GEN = gentamicin; LNZ = linezolid; RIF = rifampicin; SXT = trimethoprim-sulfamethoxazole

Sources: AGAR (public hospitals); National Passive AMR Surveillance System (OrgTRx) (public hospitals and health services); AGAR and SNP (private hospitals); SNP (community and aged care homes)



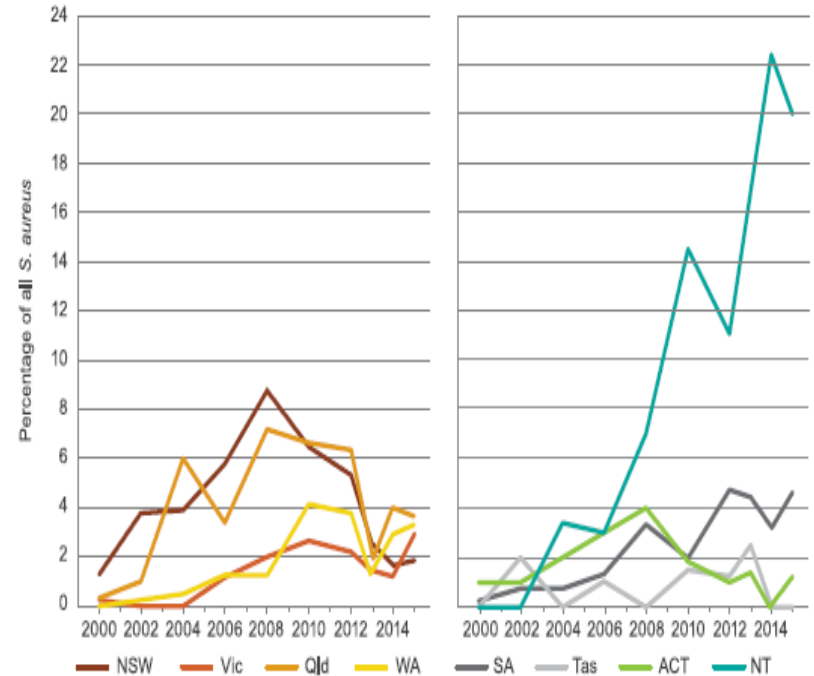
Resistance is important all across Australia

Figure 4.37: Methicillin-resistant *Staphylococcus aureus* as a percentage of all *S. aureus* isolates, by state and territory (blood culture isolates), 2015



MRSA = methicillin-resistant *Staphylococcus aureus*
Source: AGAR (national)

Figure 6.3: Trends in Queensland CA-MRSA across states and territories, 2000-2015

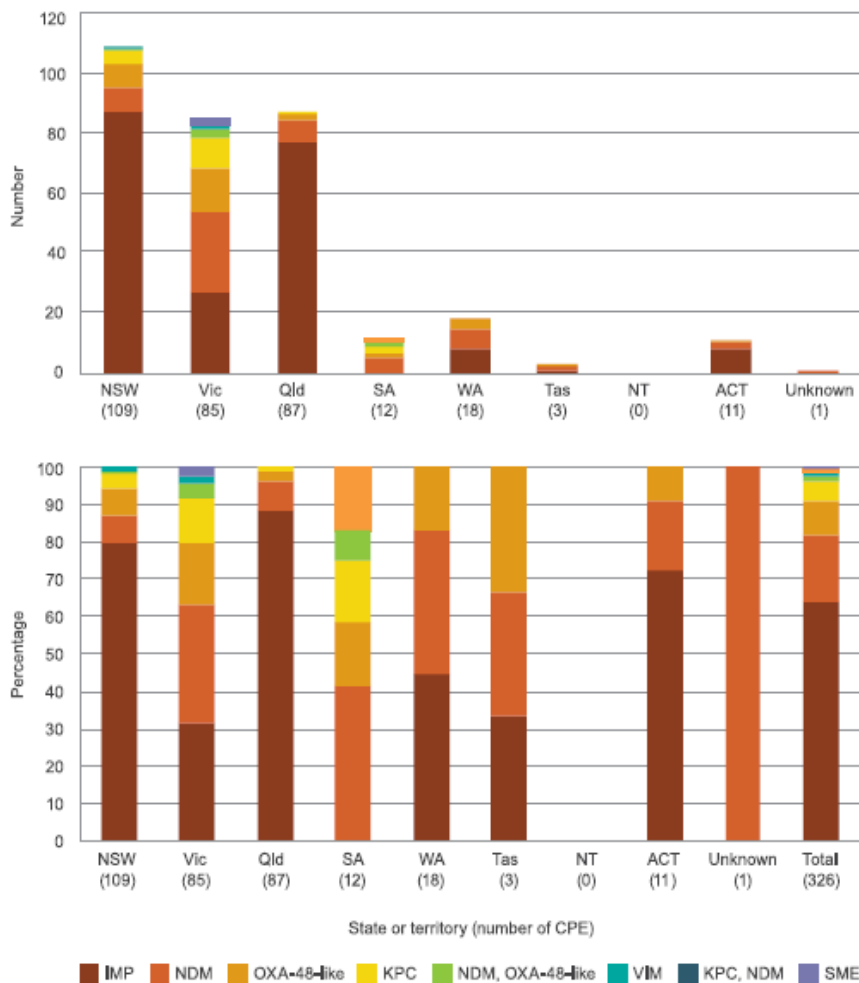


CA-MRSA = community-associated methicillin-resistant *Staphylococcus aureus*
Source: AGAR surveys



Resistance is different all across Australia

Figure 5.8: Carbapenemases produced by reported carbapenemase-producing Enterobacteriaceae (CPE), by patient's state or territory of residence; 17 March - 31 December 2016

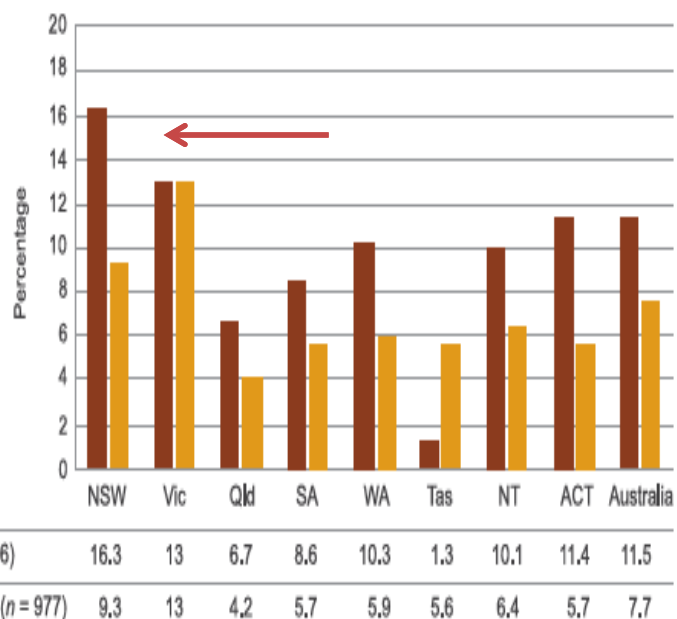


Source: CARAlert



Resistance needs action now

Figure 4.10: Percentage of *Escherichia coli* and *Klebsiella pneumoniae* with extended-spectrum β -lactamase phenotype, by state and territory, 2015



Note: The extended-spectrum β -lactamase phenotype has a minimum inhibitory concentration >1 mg/mL for ceftriaxone or ceftazidime.
Source: AGAR (public and private hospitals)

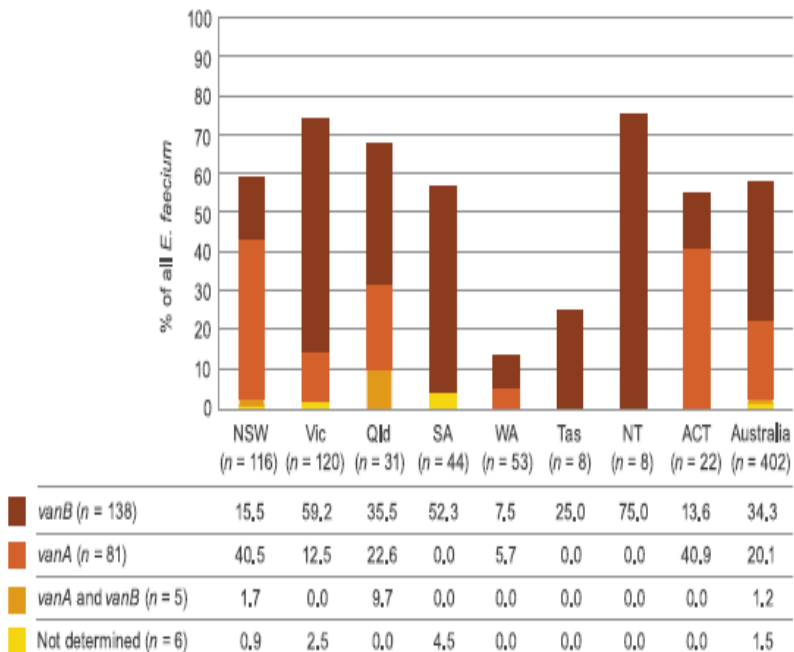
Table 4.2: Summary of antimicrobial resistance for high-priority organisms

Organism	Main types of infection	Where seen	Important antimicrobials for treatment	% resistant, 2014	% resistant, 2015
<i>Escherichia coli</i>	Urinary tract infections, biliary tract infections, other intra-abdominal infections, septicaemia	Community, hospitals	Amoxicillin-clavulanate	18.2-21.1	9.4-20.1
			Ampicillin/amoxicillin	42.3-51.3	42.9-53.2
			Cefazolin	15.2-25.0	15.8-24.8
			Ceftriaxone	5.1-12.4	6.4-10.8
			Ciprofloxacin	6.2-8.7	7.3-11.2
			Gentamicin	4.5-7.0	4.9-7.5
			Piperacillin-tazobactam	5.3-9.4	4.6-7.3
			Trimethoprim	21.0-29.4	21.8-31.3
Multidrug resistant	13.1	23.7			



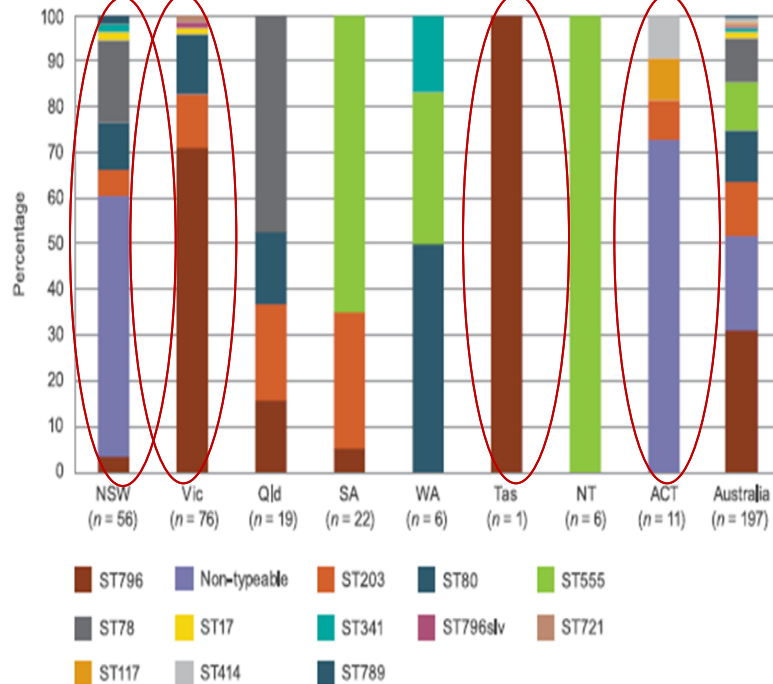
Resistance needs to be tackled by everyone

Figure 4.15: Vancomycin-resistant *Enterococcus faecium* genotype, by state or territory of testing (blood culture isolates), 2015



Source: AGAR (national)

Figure 4.16: Distribution of vancomycin-resistant *Enterococcus faecium* sequence types, by state or territory of testing (blood culture isolates), 2015



Source: AGAR (national)



The Future Power of AURA for Clinical Practice



The Little Engine that Could

