

MUPIROCIN USE IN AUSTRALIAN HOSPITALS

ANALYSIS OF PRESCRIBING AT A HOSPITAL AND STATE LEVEL



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BACKGROUND

- Very few clinical situations require treatment with topical antibiotics
- Several studies have reported increased rates of mupirocin resistance in methicillin-resistant *S. aureus* (MRSA) isolates associated with overuse of topical mupirocin.^{1,2}
- Reported mupirocin-resistance in MRSA in Australia is currently 1.9%.³

METHODS

- Inpatient mupirocin usage rates (milligrams of active ingredient per 1,000 occupied bed days) were calculated, using pharmacy dispensing records and patient activity data

KEY FINDINGS

- 113 hospitals contributing data to NAUSP reported mupirocin usage in 2019
- The median annual inpatient usage rate in 2019 was 89.3mg of mupirocin per 1,000 OBDs (IQR: 44.2 – 250.8)
- Median annual use in ICU was 12.1mg/1,000 OBDs, however average annual use was 1644.2mg/1,000 OBDs (SD: 8574.8) which was heavily skewed by some outlier hospitals

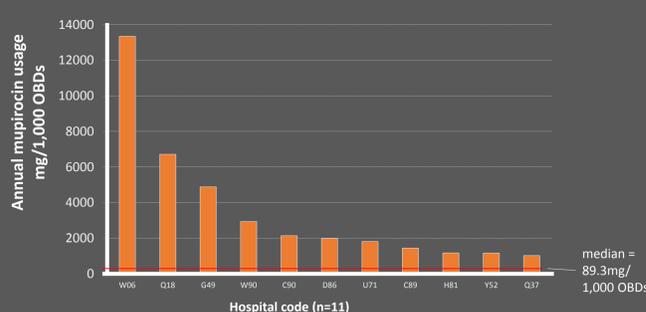
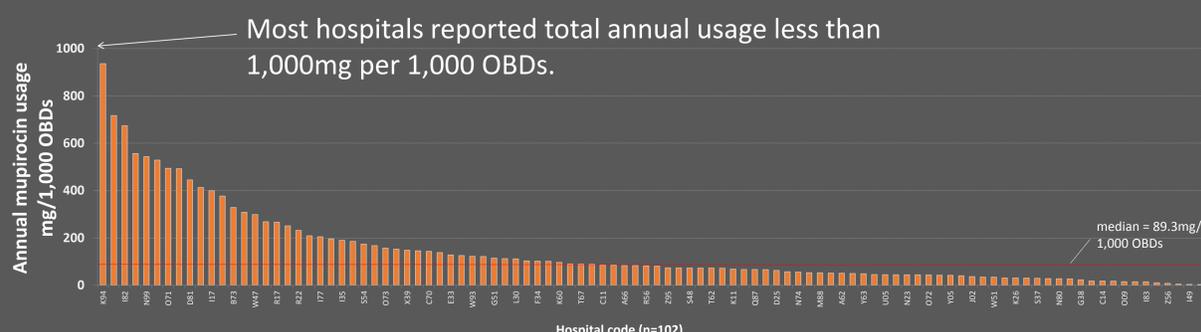
CONCLUSION

- **There is wide variation in usage of topical mupirocin in Australian hospitals, particularly within Intensive Care Units**



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Comparative annual mupirocin usage among NAUSP contributor hospitals - 2019

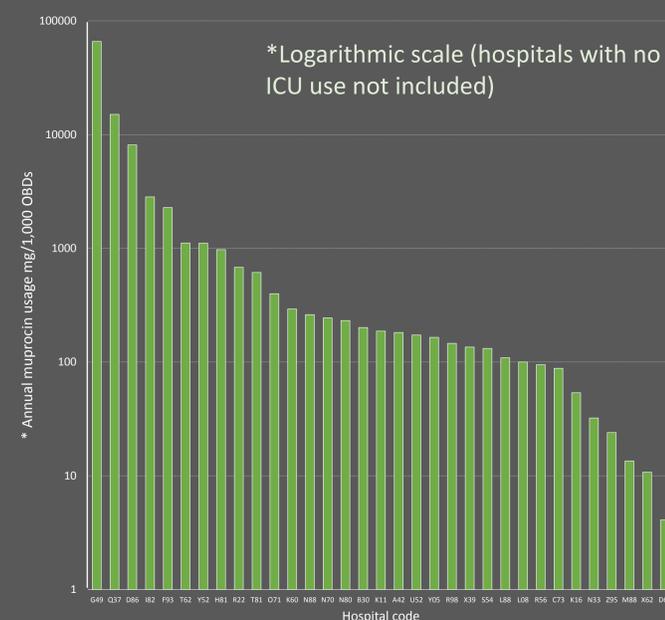


11 (4 private, 7 public) of the 113 hospitals reported annual mupirocin usage of greater than 1,000 mg per 1,000 OBDs in 2019. These high usage hospitals ranged from large Principal Referral hospitals (n=3) down to very small AIHW peer Group C and D hospitals.

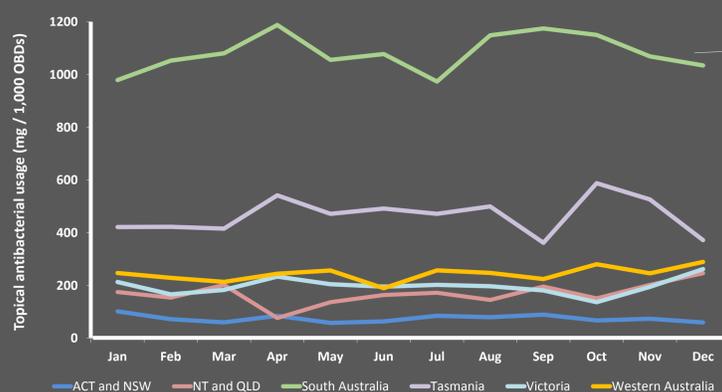
Annual mupirocin usage in Intensive Care Units, 2019

Of the 113 hospitals that reported mupirocin usage to NAUSP, 62 provided data stratified as ICU or non-ICU usage. Reported use of mupirocin in ICUs among Australian hospitals is extremely variable. The mean annual usage in 2019 in hospitals reporting ICU usage to NAUSP was 1644.2mg of mupirocin per 1,000 OBDs (SD: 8574.8mg). 29 (47%) reported no mupirocin use in ICU. In contrast, the highest reported ICU usage rate was 65,896.6mg mupirocin per 1,000 OBDs.

[Note: 65,896.6mg mupirocin per 1,000 OBD = 3.3g of 2% ointment/cream per OBD]



Monthly aggregate inpatient use of mupirocin by state



The monthly inpatient use of mupirocin was substantially higher in South Australia than the other states and territories



Variation in clinical use

Topical mupirocin is used intranasally for decolonisation of patients colonized with *S. aureus*.⁴ The evidence for decolonisation is variable dependent upon the setting or the type of hospital treatment or intervention. In the ICU setting, the aim of decolonisation is reduction in the rates of *S. aureus* bacteraemia (SAB).⁵ The wide variability in ICU mupirocin use in Australia may be driven by varying protocols for *S. aureus* decolonisation. Further research into the relative rates of SAB between ICUs, comparative to their mupirocin usage, is warranted.

References:

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