

# Improving antimicrobial prescribing – a novel audit tool for remote nurses in Primary Health Care

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*Wish to acknowledge  
Iningai people – at the  
centre of CWHHS where I  
work and their contribution  
to improving far reaching  
healthcare*

# Disclosure

- No conflicts - employed by CWHHS (QH)
- Formally acknowledge work group within CWHHS- including Pharmacy, Primary Health Centre (PHC) - Directors of Nursing, Infection Control, Safety and Quality team.
- ★ Sophie Paviour (Dir. Pharmacy CWHHS)
- ★ Troy Howells (Clinical Pharmacist/AMS champion)
- Queensland Statewide Antimicrobial Stewardship Program (QSAMSP) who have been and continue to be an amazing resource and support for rural and remote QLD

[statewide.AMS@health.qld.gov.au](mailto:statewide.AMS@health.qld.gov.au)

Queensland Statewide Antimicrobial Stewardship Program

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Queensland Statewide Antimicrobial Stewardship Program

**Antimicrobial Stewardship Hotline**—Contact the Queensland Statewide Antimicrobial Stewardship Program Hotline (1300 753 229 / 1300 QLD ABX) as per your Hospital and Health Service procedure.

Antimicrobial Stewardship (AMS) is a systematic approach to optimising antimicrobial use, with a view to improving patient outcomes, minimising adverse events and decreasing the rate of antimicrobial resistance.

At Queensland Statewide Antimicrobial Stewardship Program (QSAMSP), our goal is to unite Queenslanders to enhance the use of antimicrobials now and to preserve them for future generations by advancing clinical practice, education and research.

About us Services Primary sites



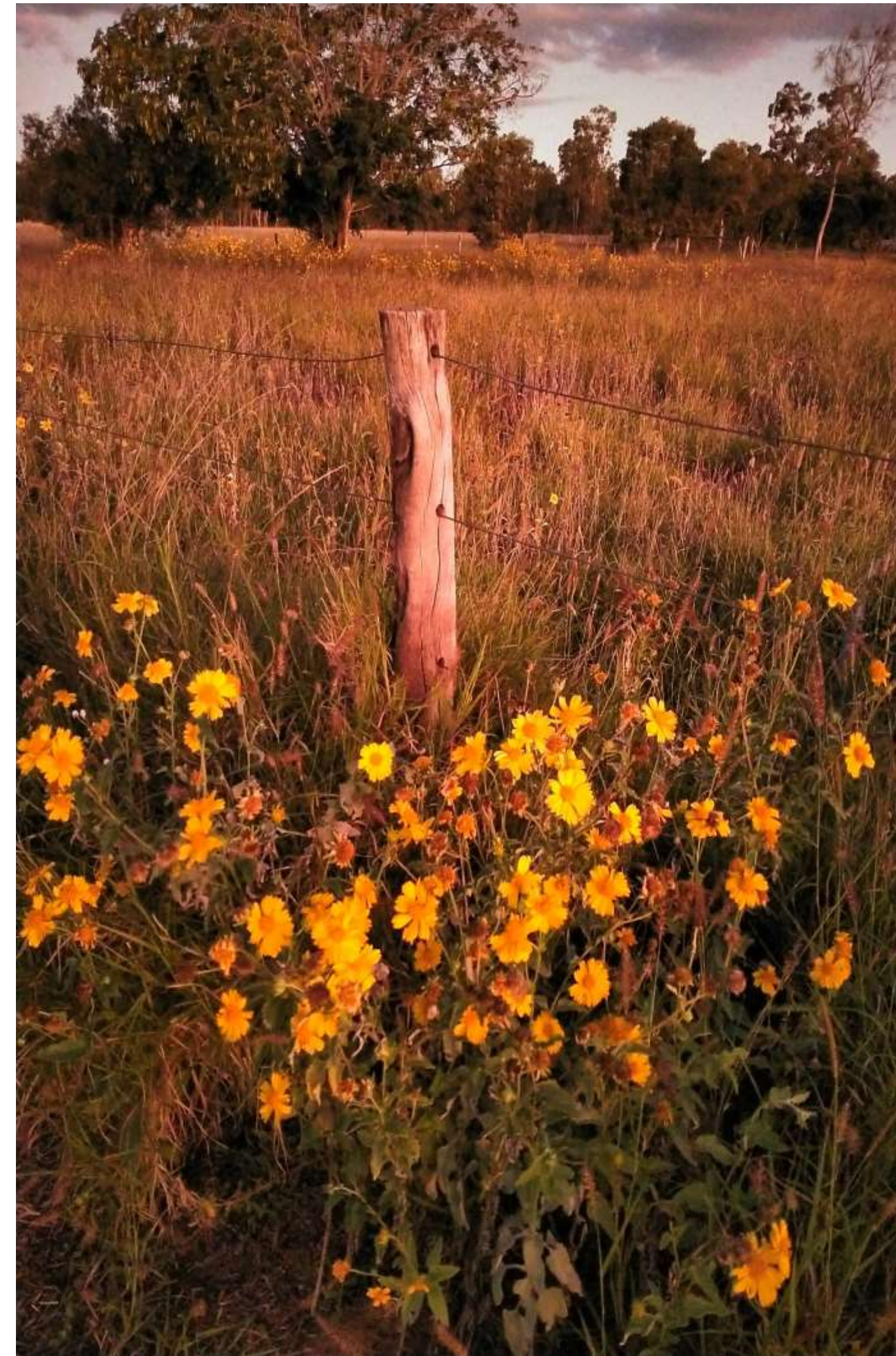
Queensland Statewide  
**Antimicrobial Stewardship Program**  
*PRESERVING EFFECTIVE ANTIBIOTICS*

# Location, Location, Location!

- Western QLD – area 382,800 Km<sup>2</sup>
- 20.6 % of state area
- 0.21% of the population (~10,100)
- 15 facilities + community
- “Far reaching healthcare”
- Challenges = opportunities
- Mass gatherings



# Central West



## In the beginning....

- CWHHS **hospitals** complete the National Antimicrobial Prescribing Survey (NAPS) annually.
- 2023 ACHS accreditation survey MwR – *“antimicrobials are also prescribed by **RIPRN**\* staff and the Medical Staff working in the Primary Health Centres within the district. These prescriptions are not audited for compliance with best-practice, and this should also be included in the scope of the AMS program.”*

\*Rural and Isolated Practice Registered Nurse

**NAPS** National Antimicrobial Prescribing Survey



# Background

## District resources

- Two pharmacists + assistants
- Five hospitals
- Ten Primary Health Centres (PHCs)
- PHC distance from Longreach  
⇒ 113 – 740 kms
- Rural & remote driving requires specialised vehicles, minimum two people travelling, overnight stays, multiple days outreach.

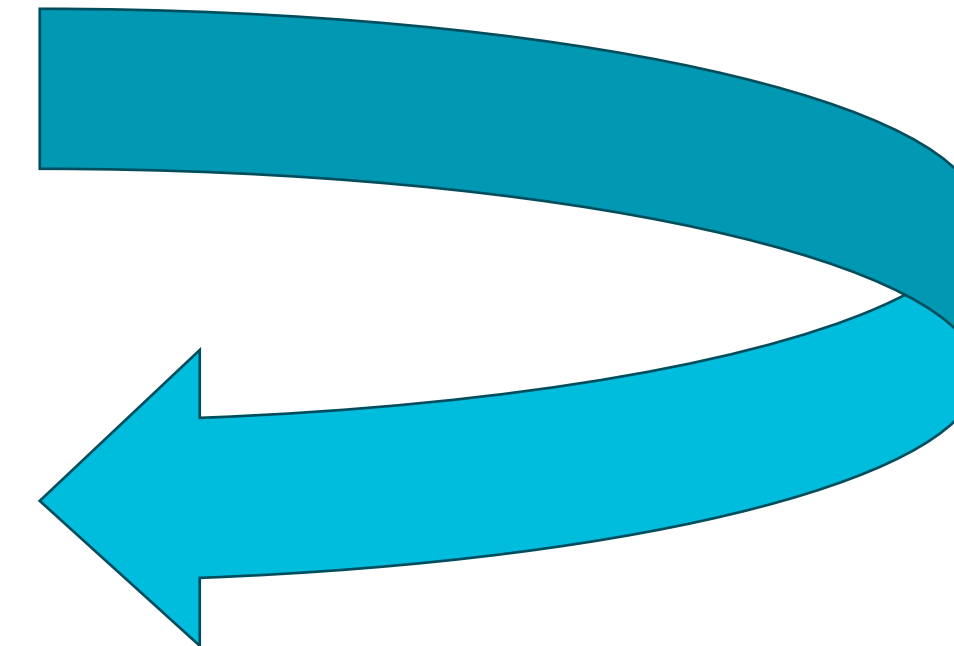


- QSAMSP team
- Paper charts (no ieMR / digital)
- Availability
- Data collation
- Unreliable internet for data collection
- HCW skillset – high turnover



In the middle.....

Find a suitable audit tool?



A novel approach was required



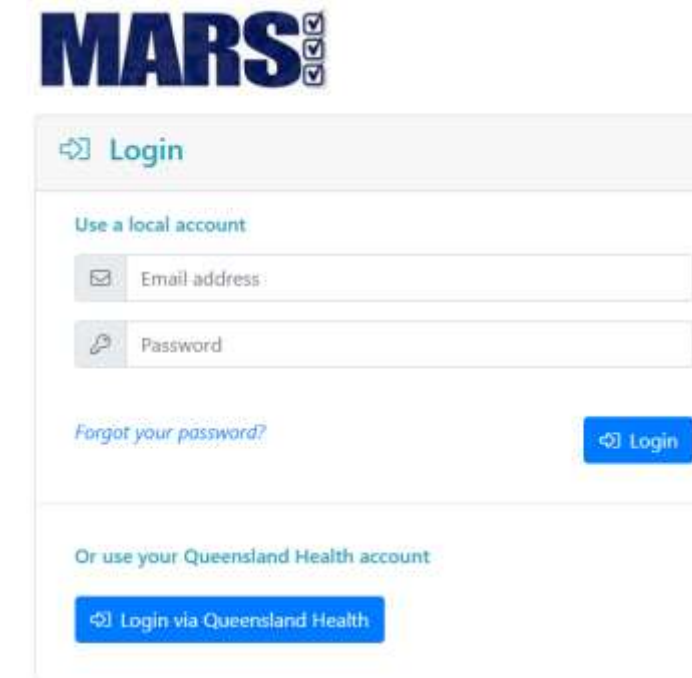
Modify QI audit tool to better fit requirements

In the middle.....

## Solution

⇒ Stakeholders engaged for input and feedback

- Audit tool modified based on further feedback after trial at two pilot sites
- Paper sheet for data collection available at point of care at clinician request
- MARS (audit program) tool developed for direct and post data entry



MARS  
audit software



AMS PHC Audit Tool		
Audit Date <input type="text"/>	UR Number <input type="text"/>	Date Of Birth <input type="text"/>
Presentation Date <input type="text"/>		
Clinician		
Administering Clinician:	Clinician	<input type="text" value="-Select-"/>
Medication ordered by:	Clinician	<input type="text" value="-Select-"/>
Antimicrobial		
Antimicrobial prescribed	Antimicrobial	<input type="text" value="-Select-"/>
Does the patient have any antimicrobial allergies?	<input type="radio"/> Yes <input type="radio"/> No	
Dose of Antimicrobial prescribed (e.g. 500mg)	<input type="text"/>	
Route of Antimicrobial prescribed	<input type="radio"/> Topical <input type="radio"/> PO <input type="radio"/> IM <input type="radio"/> IV <input type="radio"/> Other	
Frequency of Antimicrobial prescribed (e.g. 8 hourly)	<input type="text"/>	

# Audit tool

PHC Site:				Antimicrobial			Indication		Review / Stop Date	Duration	Guideline compliance			Comments		
Patient		Date					Was indication documented?	Specify documented or presumed indication	Was a review or stop date documented?	Duration of therapy specified (e.g number of days)	Was this compliant with guidelines?	If 1-3: which topic was followed (e.g. specify TGs section, PCCM page number)	If 4: is there a documented explanation to justify any deviation?	If documented explanation for deviation, please provide	Any other relevant notes (e.g. Medical Officer or Infectious Diseases advice, microbiology, recent admission etc.)	
Patient ID/URN		Presentation Date	Administering clinician	Medication ordered by	Antimicrobial	Antimicrobial allergies (e.g. drug, reaction, severity, date if known)	Dose & frequency	Yes/No	Yes/No		1 to 6		Yes/No/NA			
<b>Guideline Compliance assessment:</b> 1. Compliant with Therapeutic Guidelines 2. Compliant with PCCM 3. Compliant with Sepsis Pathway 4. Non-compliant with guidelines 5. Directed therapy 6. No guidelines available																
Patient ID		xx/xx/2023	RIPRN	RIPRN	trimethoprim/sulfamethoxazole	penicillin - rash, childhood (1960s)	160mg/800mg oral twice daily	Yes	Yes	3 days	2	Impetigo PCCM pg. 298	NA		recurrent infection, previous MRSA positive	
Patient label																

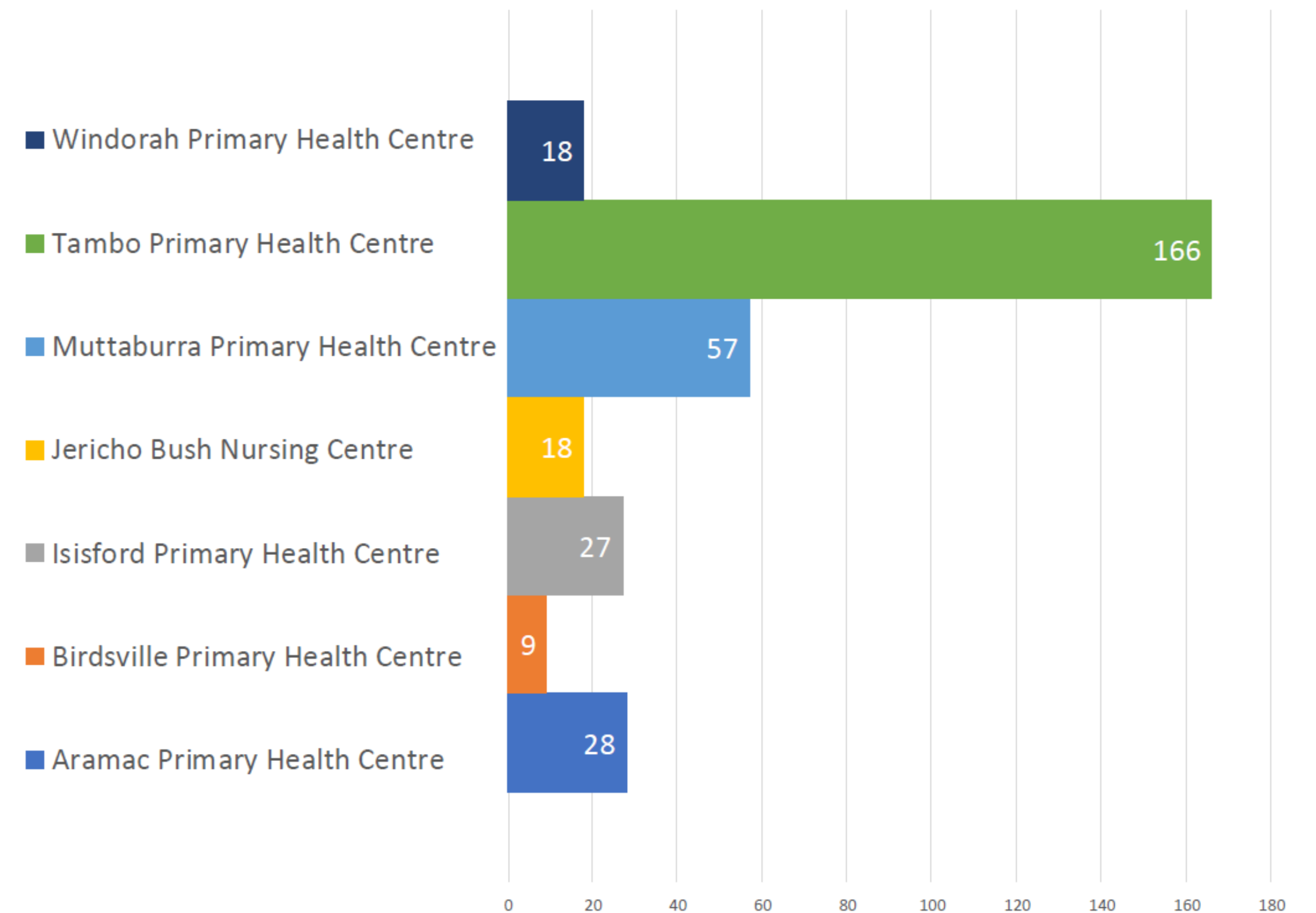
## In the middle.....

- Expanded to 'all' sites
- Data extracted as an excel and sent to QSAMSP team for analysis and reporting

### Results: January 2024 – January 2025

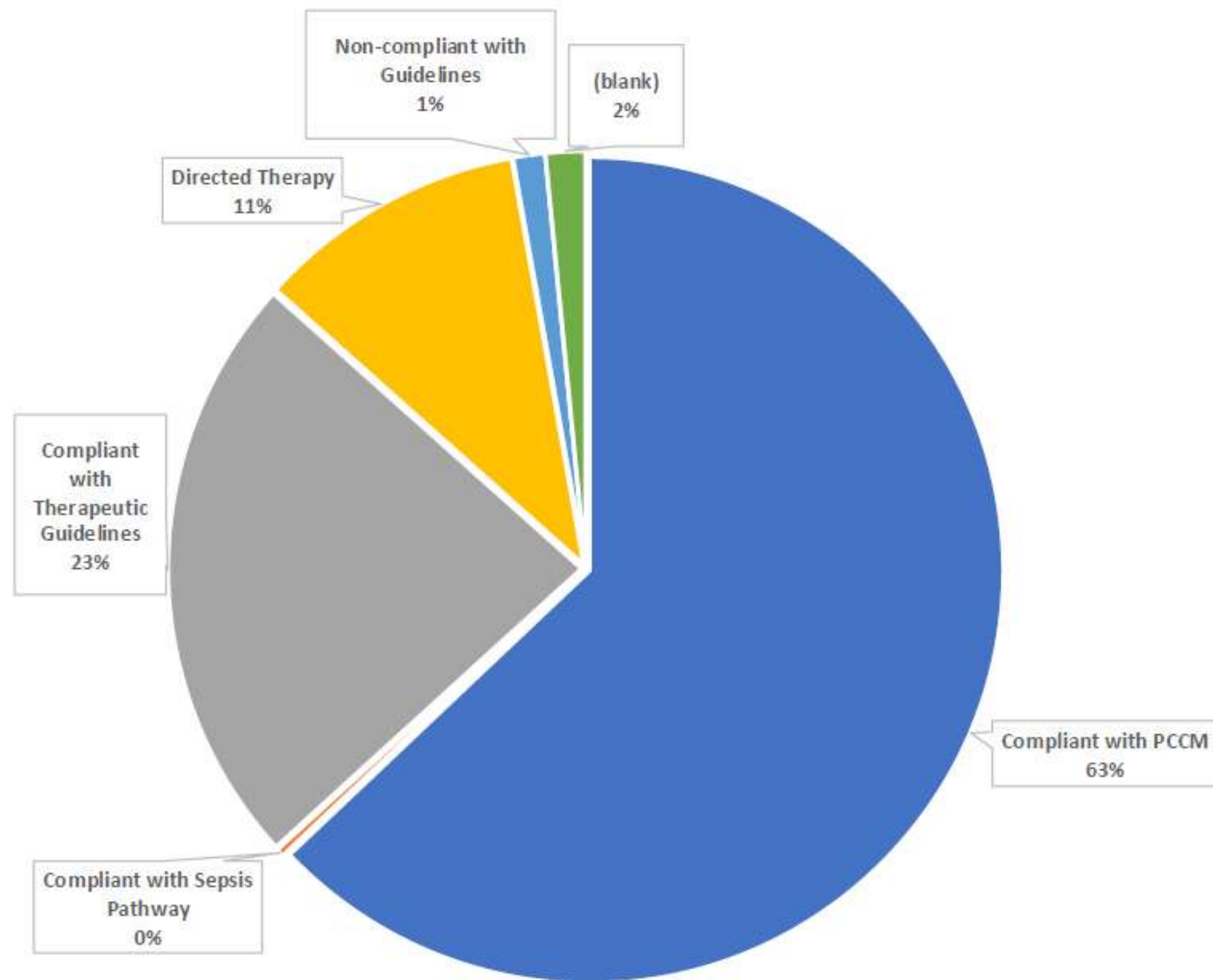
- High compliance with guidelines

321 antimicrobial audits submitted by 7 PHC's

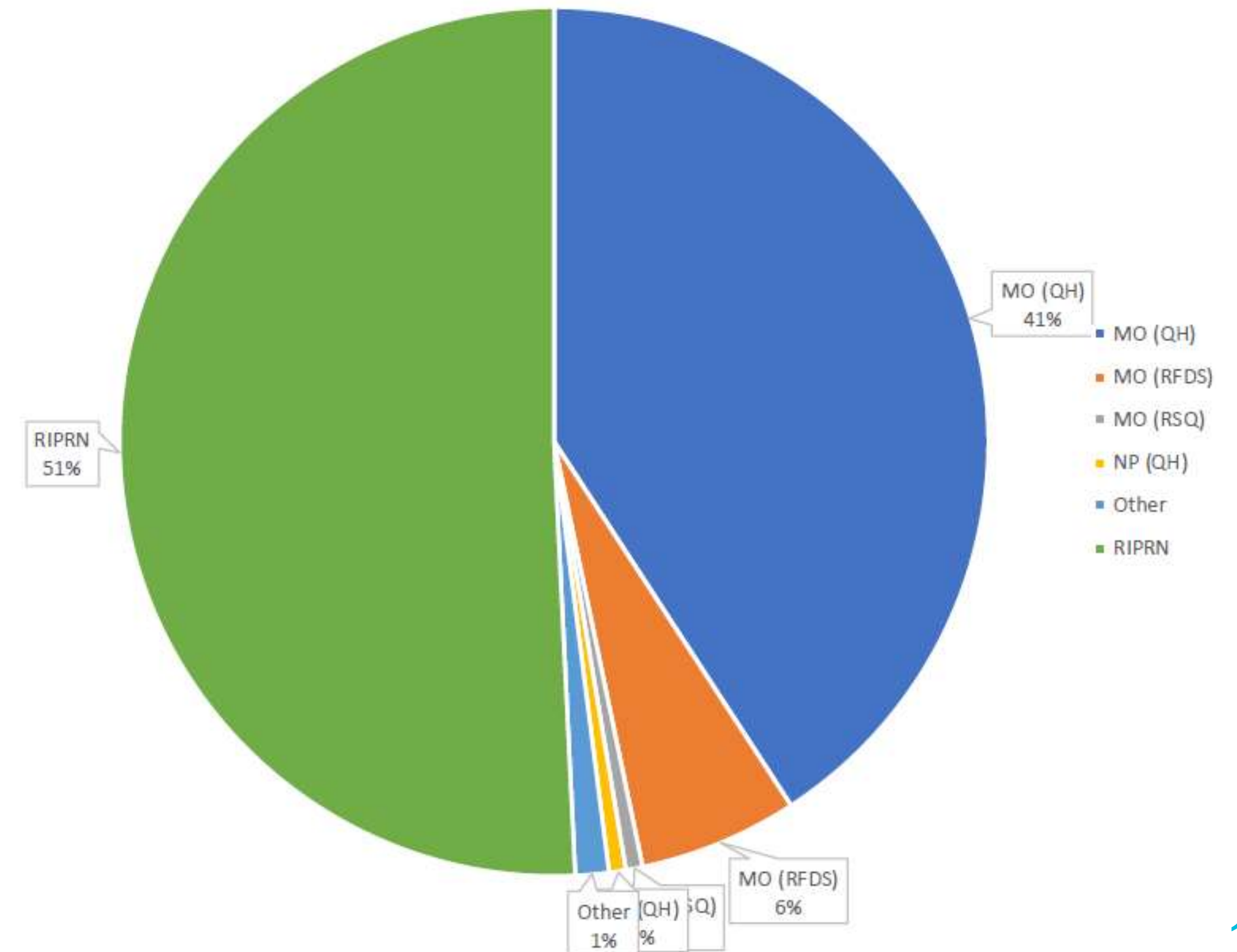


# Outcomes

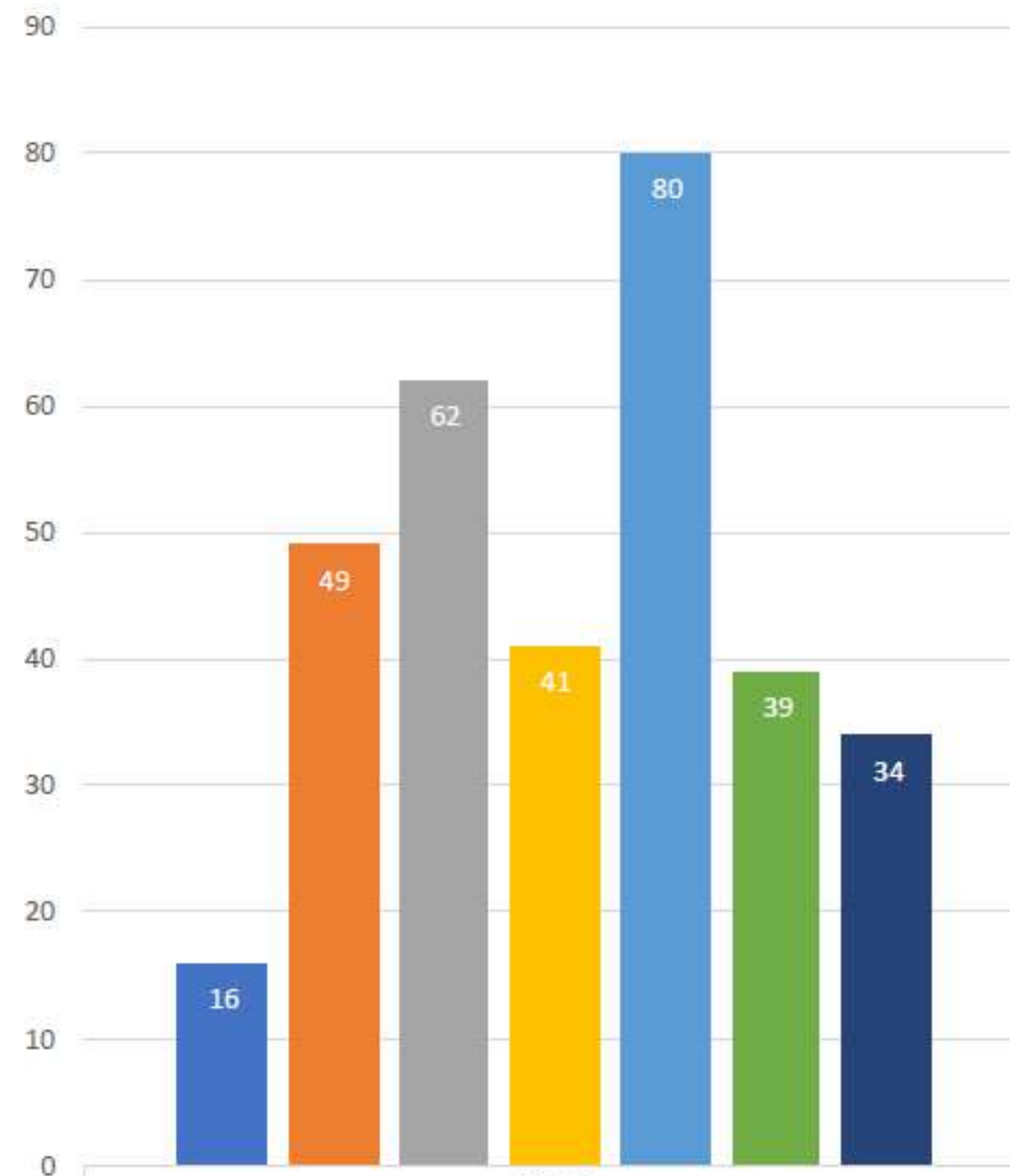
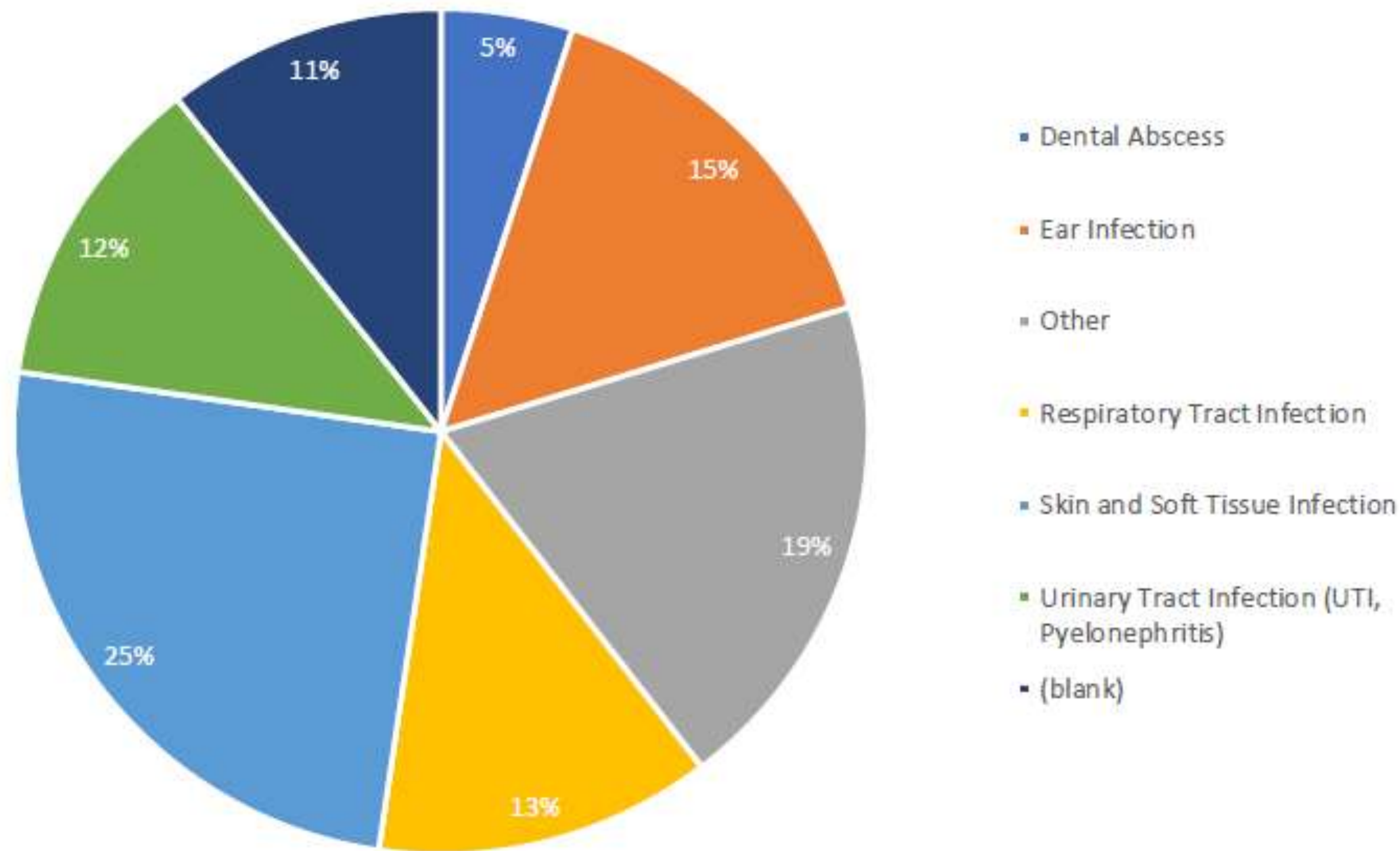
## Antimicrobial compliance with guidelines



Prescribing clinician (2)



# Prescribed indication for antimicrobials across all PHC's

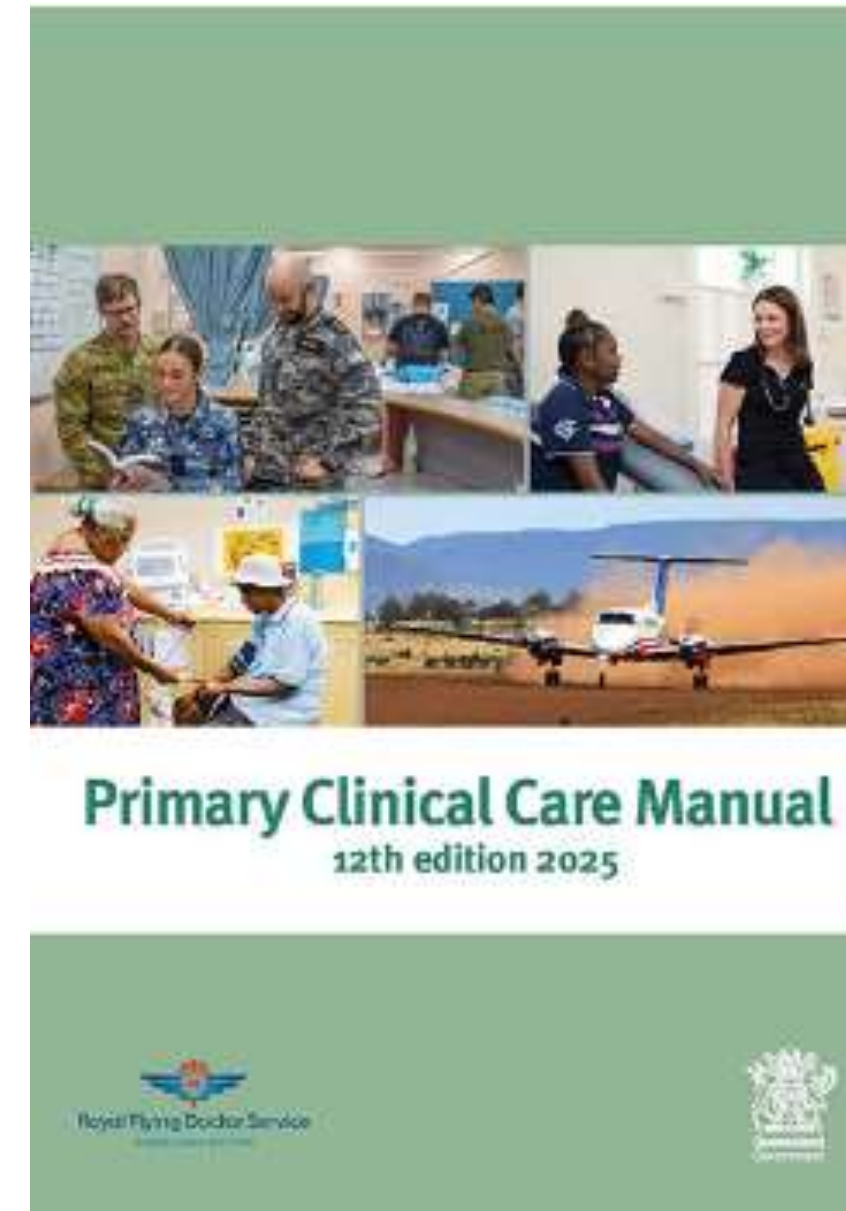


Dental Abscess	16
Ear Infection	49
Other	62
Respiratory Tract Infection	41
Skin and Soft Tissue Infection	80
Urinary Tract Infection (UTI, Pyelonephritis)	39
(blank)	34

# What was achieved?

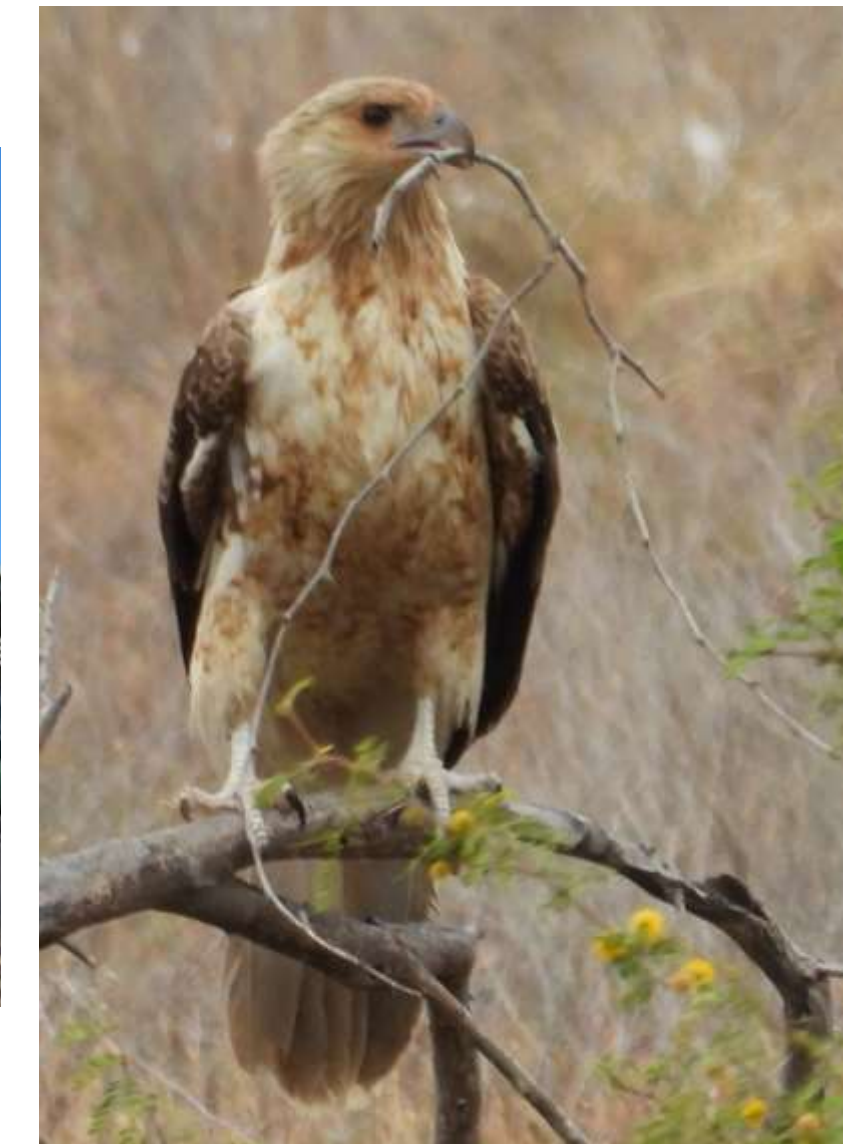
## Key Benefits

- Addressed the MwR from survey
- Successful Implementation
- Embedded - Sustainable process
- Improved HCW knowledge & compliance of antimicrobial guidelines via self reflection & checking



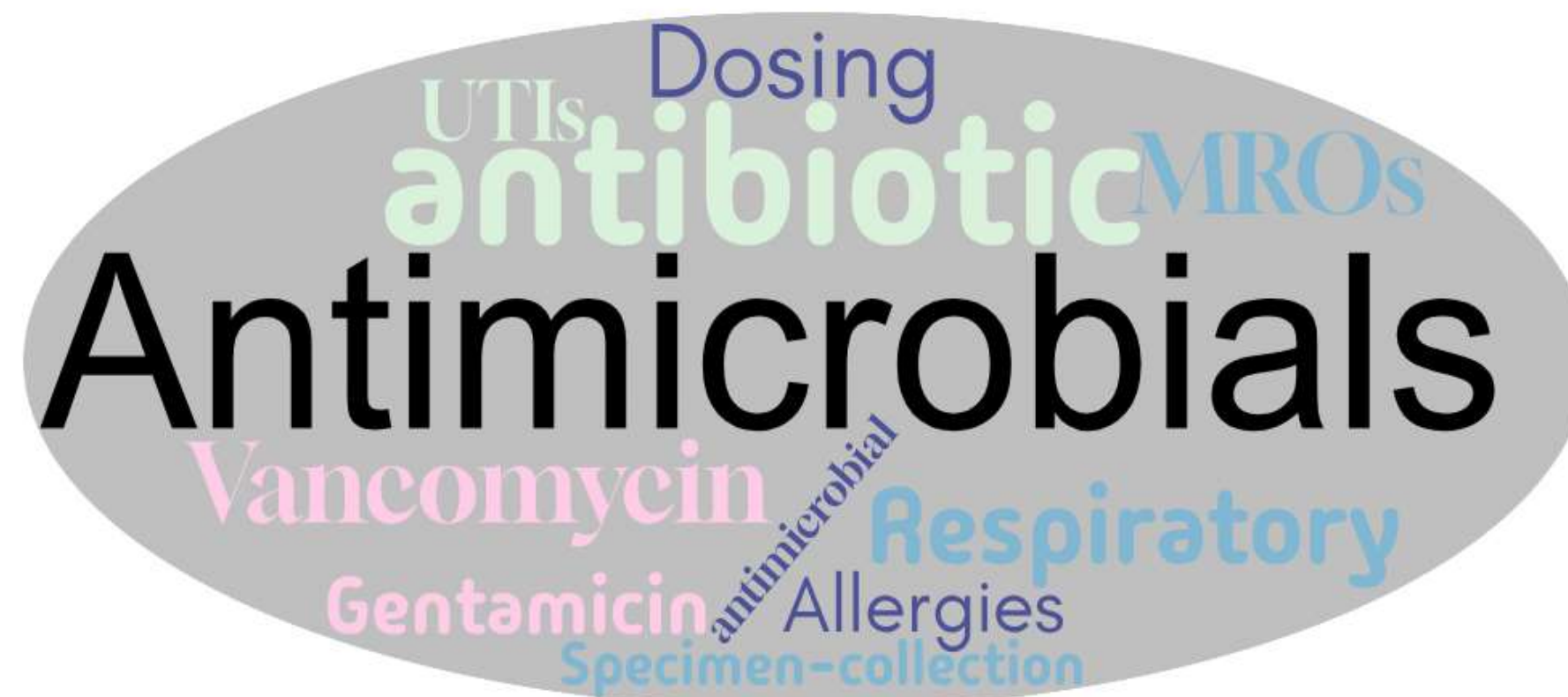
## In the end.....

- Participation from all except one site (WIP)
- Included in outreach visits not just from pharmacy but also Infection Control and Safety & Quality team.
- Increased data ⇒ more robust reports
- Reports provided back to Primary Health Centres and divisions and discussed at Preventing & Controlling Infections Committee (Standard 3) & Medication Management Committee (Standard 4)



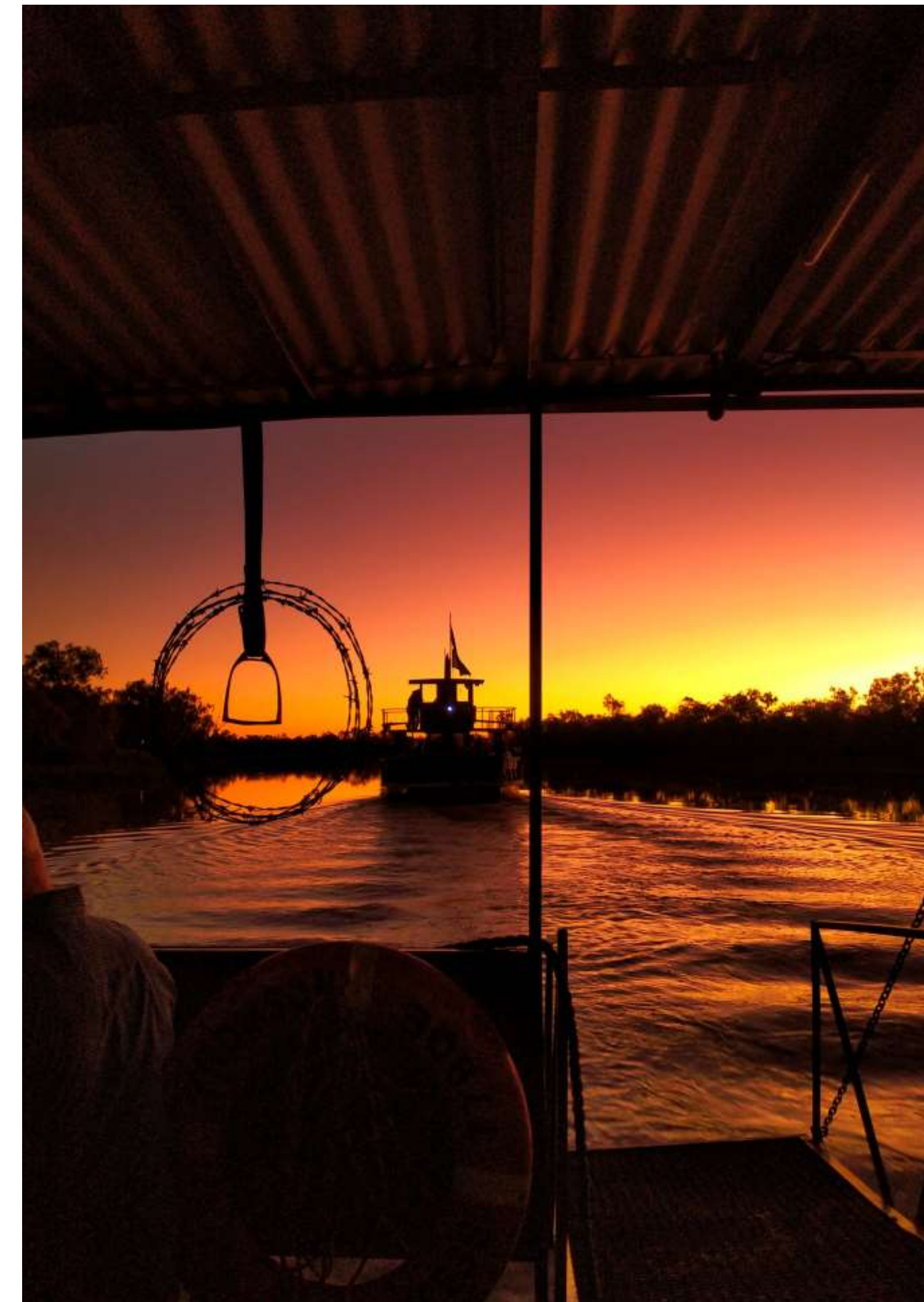
## The future

- Embedded into district audit calendar
- Ongoing education and promotion
- AMS weekly ward rounds, specific nursing and statewide education sessions supported by QSAMSP team & recorded for wider access to all



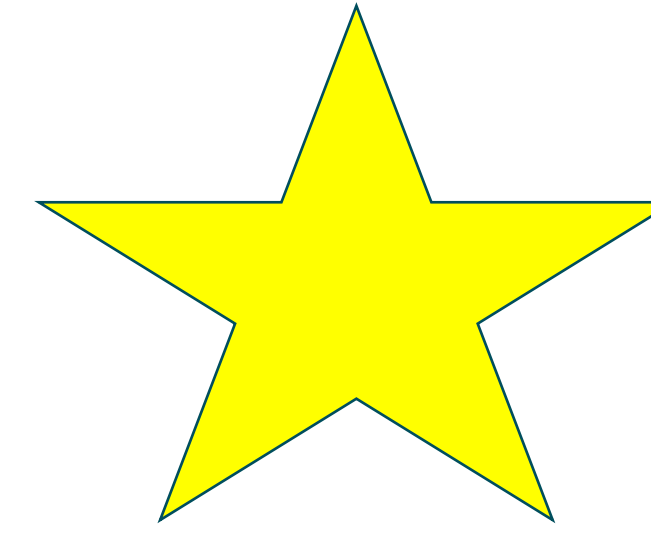
## Improvements

- increase use of sepsis pathways
- periodic reviews as a check process



# References and acknowledgement

1. NAPS audit tools – <https://naps.org.au/Default.aspx>
2. NSQHS:
  - [The NSQHS Standards | Australian Commission on Safety and Quality in Health Care](#)
  - [Antimicrobial Stewardship Clinical Care Standard | Australian Commission on Safety and Quality in Health Care](#)
3. Primary Clinical Care Manual (PCCM) 12<sup>th</sup> edition 2025  
<https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/clinical-resources/rural-and-remote-health-clinical-resources/primary-clinical-care-manual>
4. Therapeutic Guidelines [Home | Therapeutic Guidelines](#)



Thanks to the many staff who continue to participate, invest and grow this initiative to improve AMS for all patients.



*All facility images provided by CWHHS  
All other photos credited to Robyn Birch*