



Virtually The Best Medicine

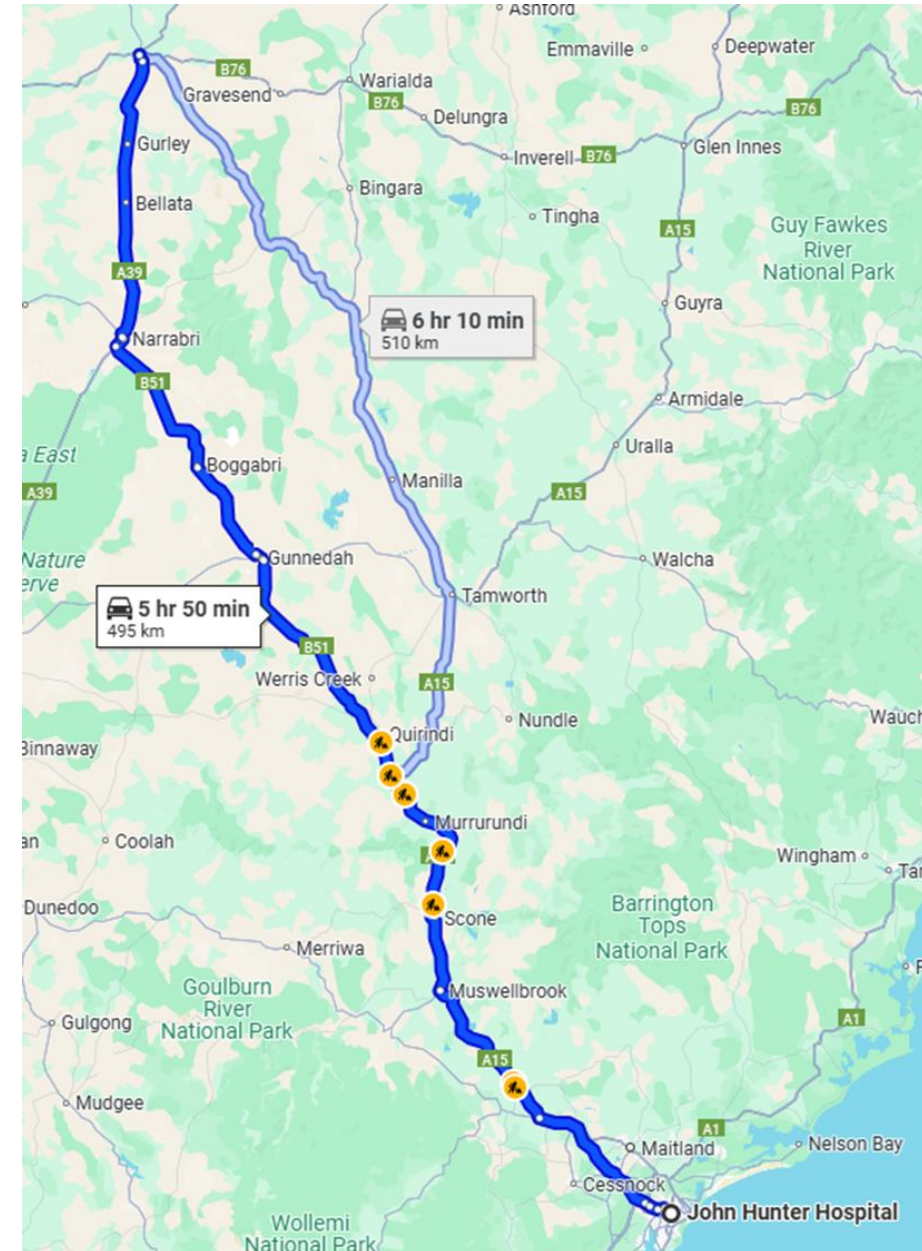
Remote Antimicrobial Stewardship in Rural Care

Bianca Mills – District Antimicrobial Stewardship Pharmacist
Infection Prevention Service – Hunter New England Local Health District



**Moree District Health Service
Main Entrance
Emergency Department**

Just up the road?



Moree Hospital is a 32-bed facility, including a renal unit, oncology infusion unit, maternity unit, one operating theatre.

The hospital is run on a GP VMO model (three separate practices). GP locums work in the ED, and cover is provided almost 24/7 – gaps in the roster are filled by the My Emergency Dr virtual service.

Nurses in the ED are ECAT accredited.

The pharmacy service is run from Tamworth (3.5 hours away), with a clinical pharmacist allocated 0.08 FTE.

Step 1. Engagement and connections

2018 -2023



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- High locum turnover
- Microbiology was sent to Syd Path or private providers
- Worst performing hospital in HNE for most AMS KPIs

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- Site visit - Engaged with PHN to run an education evening
- Polled the attendees to gauge interest, appetite and feasibility
- Engaged 2 x UNE students to assist with project

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November 2024

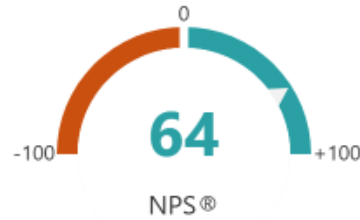
- Create the team.
- First virtual meeting

Step 1. Engagement and connections



4. How beneficial do you believe an antimicrobial stewardship service would be for patient care at Moree Hospital?

Promoters	10
Passives	3
Detractors	1



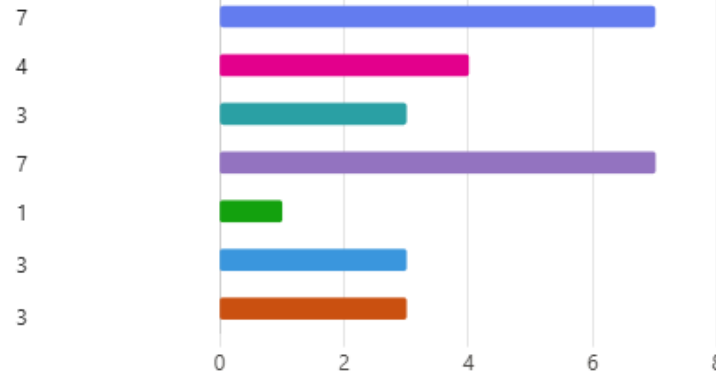
6. How likely are you to support the implementation of a virtual antimicrobial stewardship service for Moree Hospital?

Promoters	7
Passives	2
Detractors	5



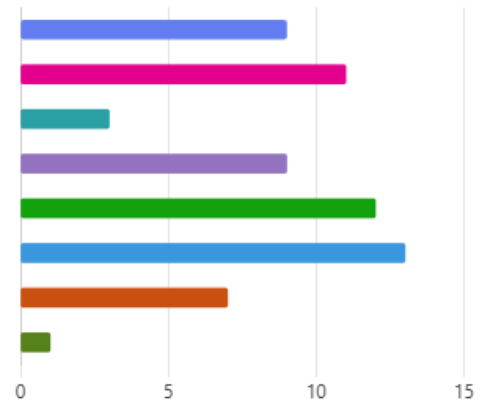
5. What concerns do you have about implementing a virtual antimicrobial stewardship service? (Select all that apply)

- Increased workload
- Resistance from staff
- Resistance from patients/carers
- Lack of resources
- Limited impact on patient outcomes
- Limited confidence in remote/virtual programs
- Other



7. What are the potential opportunities the implementation of a virtual antimicrobial stewardship service for Moree? (Select all that apply)

- Increased education opportunities
- Improved patient outcomes
- Networking opportunities
- Cost savings
- Reduced length of stay for inpatients
- Reduced antimicrobial resistance
- Lower antimicrobial consumption
- Other



Step 2. Creating the team

Local (on-site) clinicians

- Two rotational JMOs
- Transitional Nurse Practitioner
- Acting Health Service Manager / Nurse Unit Manager

Virtual (off-site) clinicians

- District AMS/ID Physician
- Regional Clinical Pharmacist (based in Tamworth)
- District AMS Pharmacist

Step 3. Running and Recording Virtual AMS Rounds



All patients on antimicrobials on Thursday mornings in Moree hospital are reviewed during the round.



A report is run, capturing the acute ward, ED patients and maternity patients.



Any patients not on MedChart at the time of the report are captured by TNP/Regional Pharmacist and scanned/emailed charts are reviewed too.



Recommendations made are shared across the team, and local clinicians follow up recommendations and record in progress notes and MedChart.

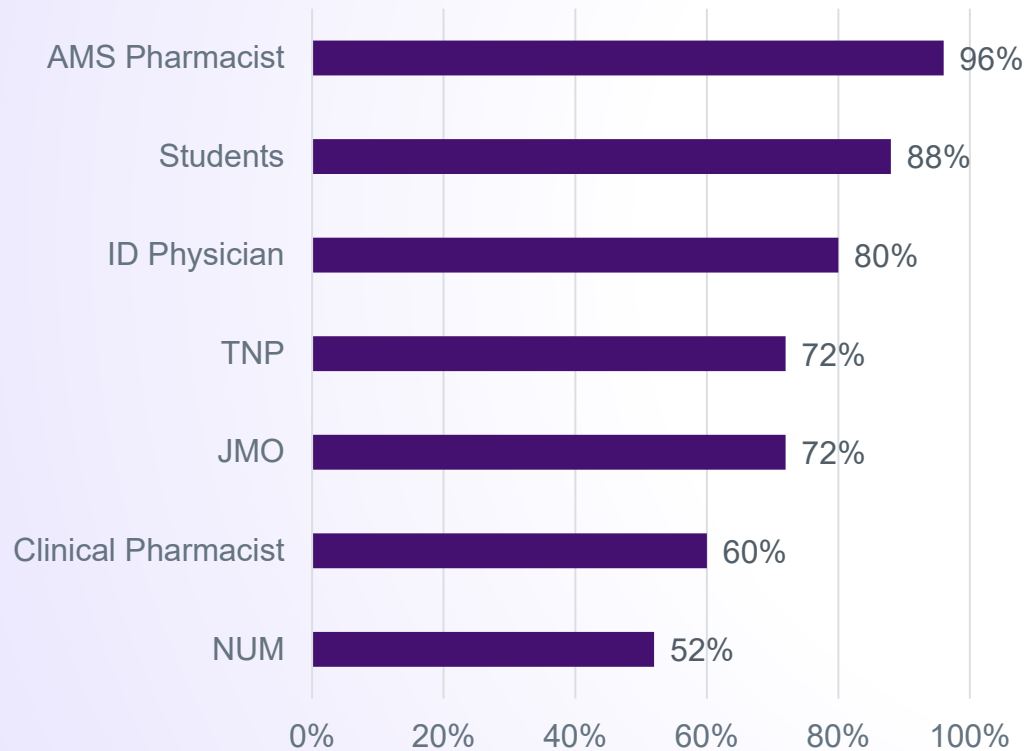


Locum GP providers are often contacted directly

Data for the project was collated into Redcap with the help of the UNE students, including whether recommendations were accepted, and patients' antimicrobial regimens were reassessed at 48 hours post rounding.

Step 3. Running and Recording Virtual AMS Rounds

Who joined the meetings?



Average number of clinicians present = 6

Average number of patients reviewed = 5
(range 0 to 9)

Average time taken to complete rounds =
20 minutes (range 8 to 36mins)

Total weeks assessed = 25

Total number of patients reviewed = 128

Step 4. Adjusting for lessons learnt

Staff

- JMO program – optional rotation meant not always filled, also AHPRA issue as a training location

Documentation

- Initial focus on recording for reporting vs recording for communication amongst team

Communication

- Learnt early in the process that locums new to Moree needed to be contacted by ID physician directly, to explain the rounding that occurs and what our aims were.

Step 5. Outcomes

AMS Recommendations made

- for 68.8% of cases (88/128)

Recommendation uptake within 48 hours

- 61.4% accepted and actioned
- 4% lost to follow up/not re-assessable
- (Regular GPs uptake was 71.9% vs locums at 55.4%)

Pre-rounding antimicrobial assessment

- 190 prescriptions
- 52.1% appropriate (optimal or adequate)
- NAPS survey the year prior also 52.3% appropriate

48 hours post- rounding reassessment

- 68.9% appropriate
- 16.8% improvement

Step 5. Outcomes

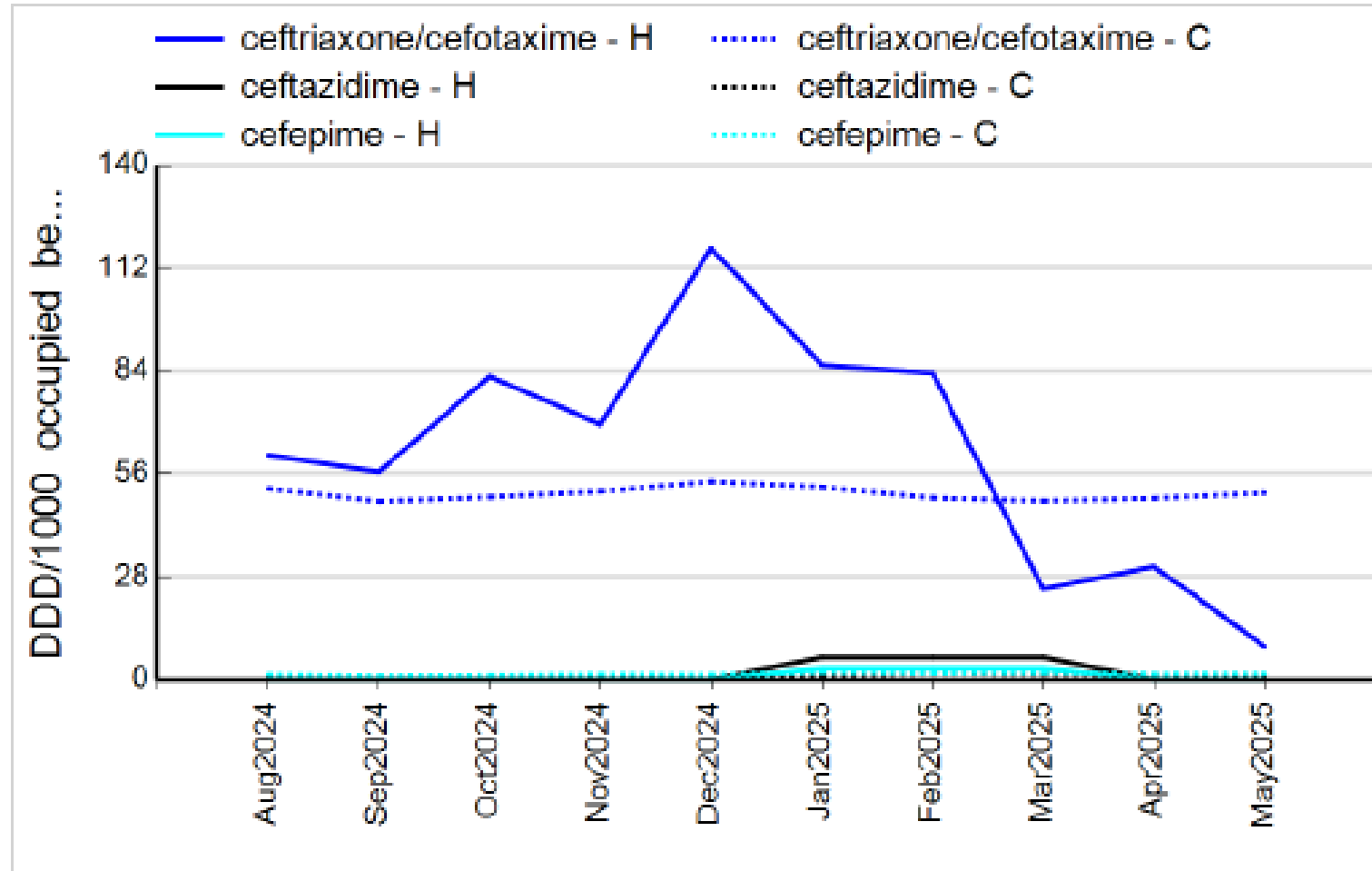


Chart 3: 3rd/4th generation cephalosporins (ceftriaxone and cefotaxime grouped together).

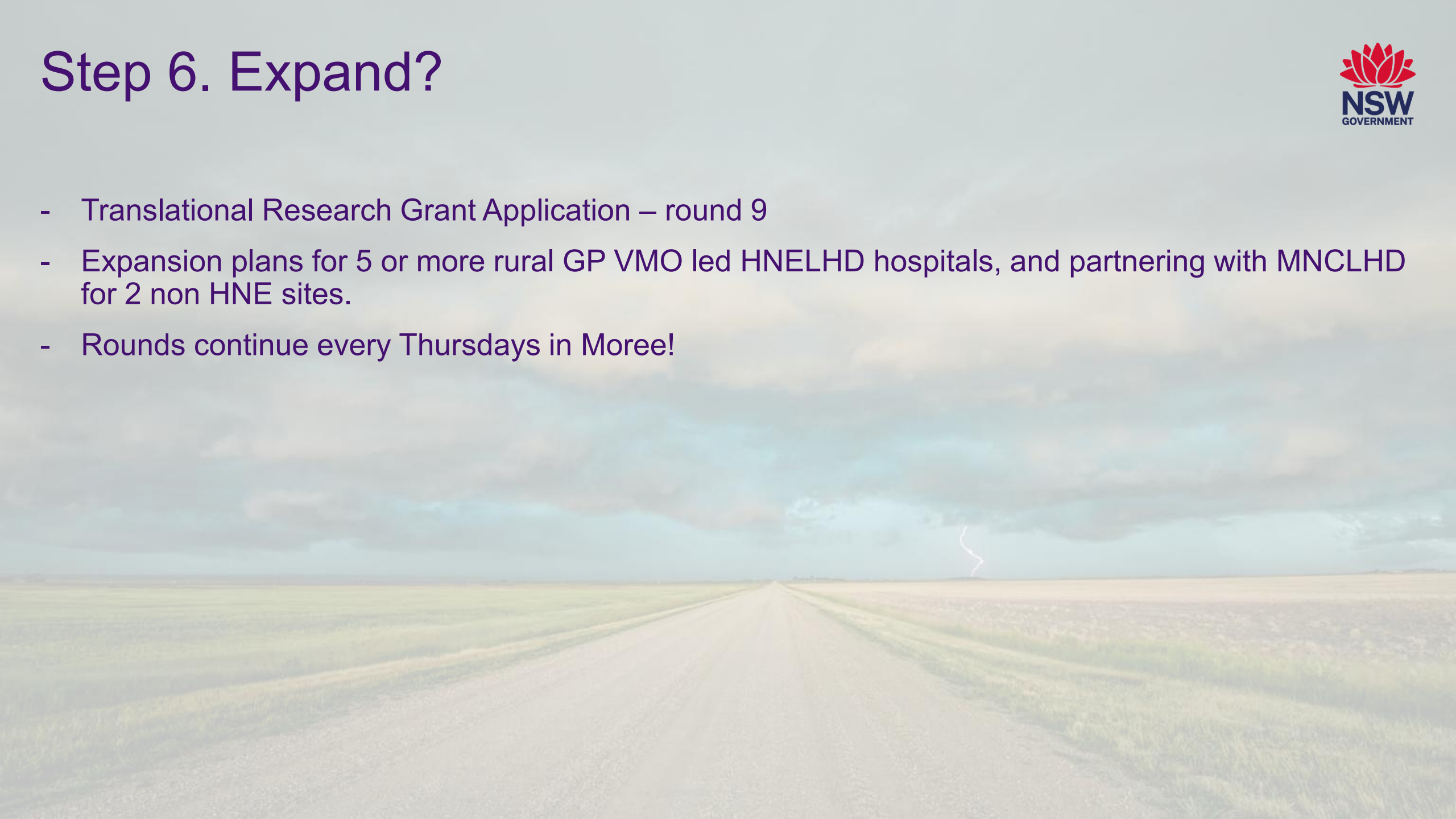
Step 5. Outcomes

Top 5 antimicrobials assessed during rounds	Nov 2023 – May 2024 DDD/1000 OBD 7-month average	Nov 2024 – May 2025 DDD/ 1000 OBDS 7-month average	Consumption Reduction
Amoxicillin Clavulanate	113	65	48 DDD/1000 OBDS 42% reduction
Benzylopenicillin	50	36	14 DDD/ 1000 OBDS 28% reduction
Cefazolin	51	44	7 DDD/ 1000 OBDS 14% reduction
Ceftriaxone	83	63	20 DDD/1000 OBDS 24% reduction
Piperacillin Tazobactam	40	31	9 DDD/1000 OBDS 22% reduction

Step 6. Expand?



- Translational Research Grant Application – round 9
- Expansion plans for 5 or more rural GP VMO led HNELHD hospitals, and partnering with MNCLHD for 2 non HNE sites.
- Rounds continue every Thursdays in Moree!



Thanks from the team!



Sharon Nash (Hunter New England LHD) ...