

Antimicrobial Stewardship in regional, rural and remote hospitals: finding the X factor

Jaclyn L Bishop^{1,2}, Thomas R Schulz^{1,2,3}, David CM Kong^{1,2,4,5}, Karin A Thursky^{1,2,3}, Kirsty L Buising^{1,2,3}

National Centre for Antimicrobial Stewardship (NCAS)¹, University of Melbourne – Faculty of Medicine, Dentistry and Health Sciences², Victorian Infectious Diseases Service – Royal Melbourne Hospital³, Centre for Medicine Use and Safety – Monash University⁴, Pharmacy Department – Ballarat Health Services⁵

Introduction

The National Safety and Quality Health Service (NSQHS) Standards mandate the implementation of Antimicrobial Stewardship (AMS) programs in hospitals.

Little is known about the contemporary barriers to and enablers for AMS programs in Australian regional, rural and remote ('regional') hospitals.

Aim

To present the insights of clinicians working at the coalface of AMS programs in Australian regional hospitals about the enablers of AMS program delivery and the barriers that remain.

Methods

This study was approved by Melbourne Health HREC (QA2017012).

Methodology: qualitative study.

Sampling: purposive via professional networks and groups.

Inclusion criteria: clinical champions/lead AMS clinicians working in/with public or private hospitals with an Australian Statistical Geography Standard Remoteness Area class group of inner regional, outer regional, remote or very remote.

Method: a series of focus groups were facilitated by an ID physician (TS) using semi-structured questions. Where a focus group was not practical, the protocol permitted individual interviews. Focus groups and interviews were conducted between March and October 2017.

Analysis: the transcripts were transcribed verbatim and independently coded by two researchers. The data was analysed using the Framework Method.

Results

Four focus groups and one individual interview were conducted. The respondents' professions are shown in Table 1.

Table 1 – respondents' professions

Profession	No
Infectious diseases physician/ microbiologist	6
Pharmacist	8
Infection control practitioner/nurse	3
General practitioner	3
Clinical administration	2
Total	22

Key themes identified

A. Resources are limited

Multi-campus responsibilities

F5: "It's like you've always got two hats on in the country. So, you've got a lack of speciality. You're always doing more than one job. Very resource poor"

Stretched pharmacy resources

F15: "Even though there is FTE associated with it, it is very easy due to limited staff, for the AMS to be dropped in preference for patient on ward management and discharging"

Lack of funding & resources for technology

F18: "The cost of the software was prohibitive to our hospital"

Limited access to ID expertise

F15: "Appropriateness across both sites is actually pretty poor. A lot of that has got to do with the lack of significant ID support"

Key person dependent

F17: "Certainly when I go on leave our program stops"

F12: "There is a risk if you have Eddie the Expert, and there's one of them, all the other pharmacists will just be de-skilled"

D. Economy of scale

Inability to justify full-time positions due to small bed numbers and recruitment barriers

F12: "The hospital is just not big enough to justify [a full time position]"

F18: "There's a smaller pool of staff to recruit from"

Limited ability to benchmark

F17: "We haven't been able to pair our service with a similar regional hospital to discuss what they're doing better or worse"

B. Relationships both enable and impede

Small town relationships hindering difficult conversations

F9: "In our towns, literally the GP is your GP. So, you're not going to have a challenging conversation about 'why did you order this antibiotic?' and then go and see him for a sick certificate the next day. It doesn't work"

Small town relationships enhancing team work

F12: "We've got a really good relationship with all the physicians and most of the surgeons that come here"

C. Inequity

Patient outcomes

F8: "The thing I worry about is I think our patients are getting second-rate care"

Access to clinical information

F5: "The turnaround and the delivery of the pathology information, if it's delayed, which it can be. How are they going to de-escalate in a timely manner and do this IV switch if we don't have any pathology results?"

F3: "I have found with using an external pathology or someone like that is that they're not always completely across the full clinical picture with the patient. It can be quite difficult getting advice on more complex patients from them"

E. Difficulty translating data into action

Lack of a meaningful impact from accreditation

F2: "A lot of places have just put AMS in for the process of accreditation. They haven't really gone the next step and owned it"

Lack of guidance for an appropriate standard

F14: "Where are our goal posts? We're never exactly sure when a good standard is met"

Enablers to build on

- Foster network arrangements to share expertise.
- Provide services with consistent and invested staff to help build relationships and trust.
- Use systems that are already in place – don't reinvent the wheel.
- Develop clear Australia-wide best-practice AMS program guidelines for hospitals of different sizes.



Conclusion

- Australian regional hospitals still experience challenges in delivering AMS programs.
- Enablers such as sharing expertise through networks, clear guidelines appropriate to facility size and relationship building were identified. These provide direction for future support strategies

Acknowledgements

National Centre for Antimicrobial Stewardship (NCAS)

University of Melbourne – Faculty of Medicine, Dentistry & Health Sciences- Department of Medicine RMH

Australian Government Training Grant

All participants involved in this study