

Project on improving comprehensive Allergy and adverse drug reaction Documentation of Antimicrobials (PADA) in a regional hospital

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Background

Patients who are labelled as “allergic” to “penicillins” may:

- be treated with potentially less effective or broader spectrum antibiotics
- have increased risk of patient adverse drug reactions (ADR)
- experience treatment failure and increase antibiotic resistance
- have longer hospital stays
- have increased risk of readmission

Comprehensive documentation of antimicrobial ADRs improves appropriate antimicrobial selection.

Over the last few years there have been a number of antimicrobial allergy documentation incidences reported via the incident management system at Dubbo Hospital.

A baseline audit was conducted to determine the proportion of patients with an antimicrobial ADR documented comprehensively. Entries were considered comprehensive if it listed all three criteria:

- the specific agent
- nature of reaction
- severity of reaction

Baseline audit showed 13% of electronic medical record (eMR) entries (n=100) with an antimicrobial allergy/ADR were comprehensive.

	Penicillins is a “class” of drugs	No reaction or severity listed									
	<table border="1"> <thead> <tr> <th>Substance</th> <th>Category</th> <th>Reactions</th> <th>Severity</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>penicillins</td> <td>Drug</td> <td></td> <td></td> <td>Allergy</td> </tr> </tbody> </table>	Substance	Category	Reactions	Severity	Type	penicillins	Drug			Allergy
Substance	Category	Reactions	Severity	Type							
penicillins	Drug			Allergy							
	Documentation is comprehensive and contains active ingredient, nature of reaction and severity										
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Aim

The objective of this project was to improve comprehensive antimicrobial ADR documentation to achieve 75% by 31st July 2023.



Interventions

Data was retrieved from the eMR allergy report and 100 entries were selected randomly for each baseline and post-intervention audit. Entries were included if there was a documented antimicrobial ADR. Non-antimicrobial entries were excluded.

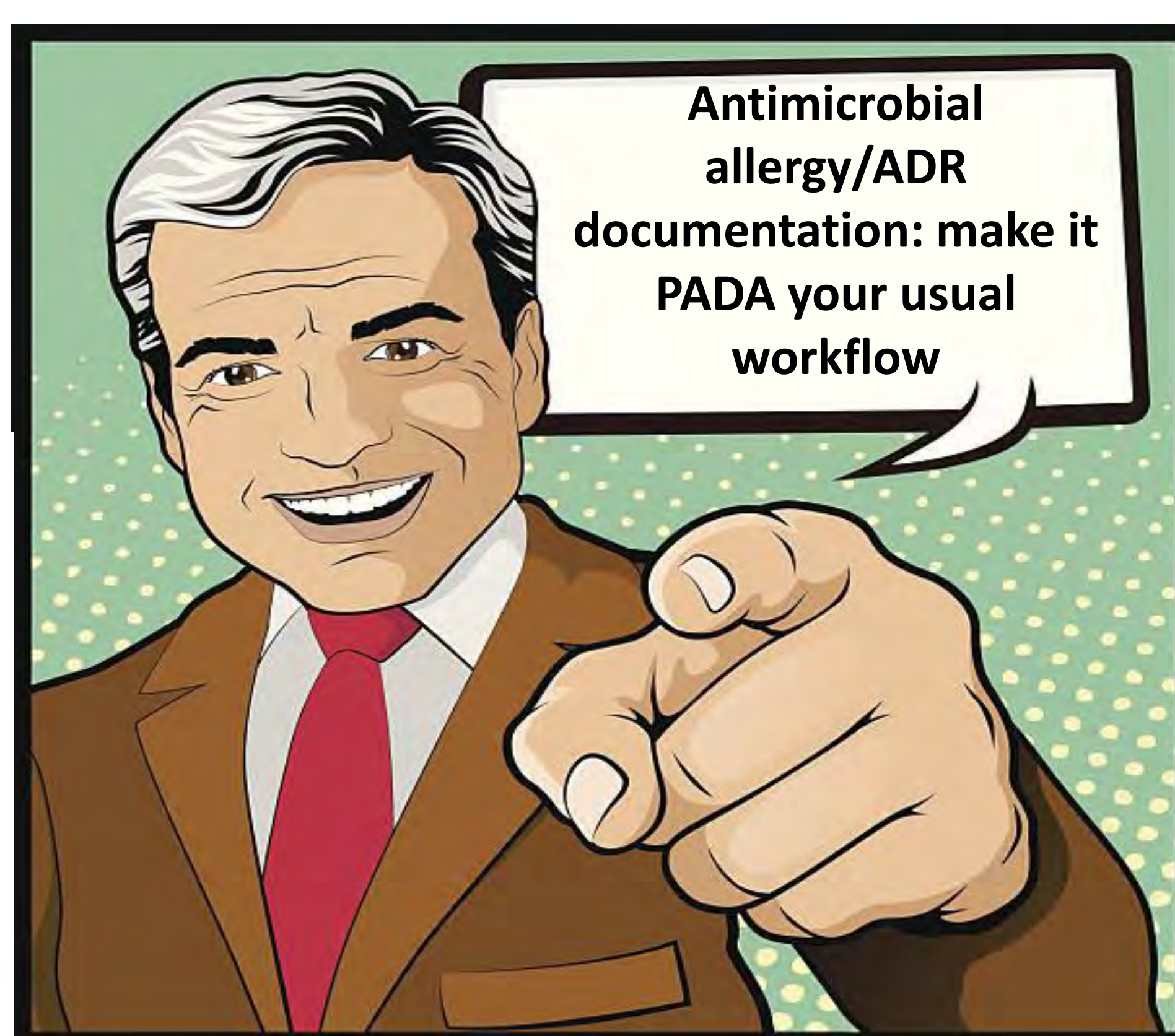
A multidisciplinary PADA team was formed to implement the project. Members included:

- Antimicrobial Stewardship Pharmacist
- Infectious Diseases Physician
- Clinical Pharmacists
- Nurse Educators
- Executive Sponsor

Implementation:

- presentation was delivered to all medical, nursing and pharmacy staff. Education involved a demonstration
- posters developed and displayed in clinical staff areas and shared tea rooms
- PADA discussed during in-services, at clinical meetings and huddles
- newsletter distributed via e-mail

Samples of poster content:



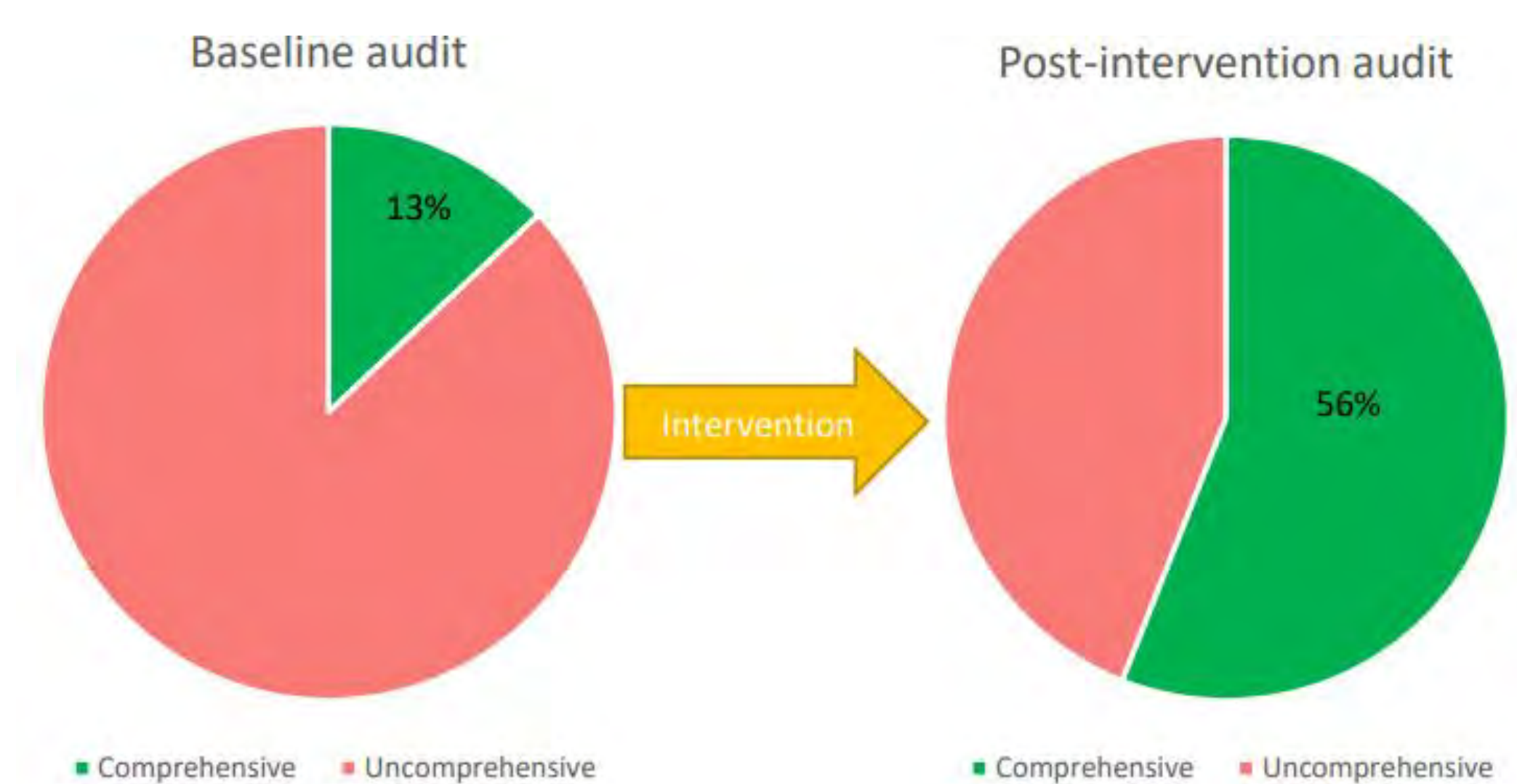
TIPS FOR DOCUMENTING ANTIMICROBIAL ALLERGIES	
Agent	•Name the implicated agent/active ingredient, not the class
Severity	•Severe or non-severe •Ask: Do you remember the details of the reaction? How was the reaction managed? Did it require treatment of hospitalisation?
Reaction	•Document nature of reaction •Is it a true allergy, side effect or intolerance?
Timing	•Immediate (from minutes up to two hours after dose) or delayed (two hours to days after starting)? •Ask: How long after taking the antimicrobial did the reaction occur? How many years ago did the reaction occur?
Tolerated	•Antimicrobials tolerated in the past •Ask: Are there other antimicrobials you have taken in the past without problems?

Improving antimicrobial allergy documentation to include the above will better inform prescribers when the patient requires antimicrobials

Results

Post-intervention audit showed:

- 56% of entries were considered comprehensive (improvement of 43% compared with baseline audit)
- Clinicians were more inclined to specify additional ADR details in the comments section such as timing of reaction or tolerance of other antimicrobials to guide future treatment



Outcomes

Although the project did not meet its target, the intervention showed significant improvement of comprehensive documentation.

This project highlighted clinician education and awareness significantly improved clinical practice in relation to comprehensive documentation of antimicrobial ADRs in eMR. Other systemic interventions could be considered in future projects.

Project Team

- Lydia Nguyen (AMS Pharmacist)
- Samantha Quarmby (Director of Nursing)
- Dr Ross Bradbury (Infectious Diseases Physician)
- Dr Annabelle Stephenson (Junior Medical Officer)
- Daniel Kendall (Clinical Pharmacist)
- Fiona Ryan (Clinical Pharmacist)
- Samuel Wells (Clinical Pharmacist)
- Dhanya George (Nurse Educator)
- Shelley Irwin (Nurse Educator)

Contact

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