

The Impact of a Remote Clinical Pharmacy Service on Antimicrobial Stewardship in District Hospitals

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Background

Tasmanian District Hospitals lacked a clinical pharmacy service to support medication management, including Antimicrobial Stewardship (AMS). Acute Hospital Pharmacy Departments supplied medication to District Hospitals in their region but were unable to provide pharmacist oversight.

Objective

We aimed to improve safe medication management for District Hospitals, in a setting without onsite pharmacy or access to Electronic Medication Management (EMM) and electronic AMS tools.

Action

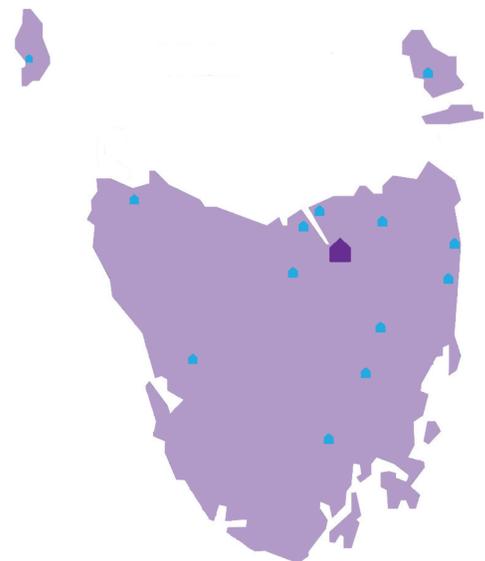
Introducing Clinical Pharmacy

In 2015 a project commenced to develop a remote clinical pharmacy service statewide. We transitioned to a permanent service in 2016, building from

1.1 pharmacist FTE (Full Time Equivalent)

to our current strength of **4.8 pharmacist** FTE in late 2020.

Remote Pharmacy Services



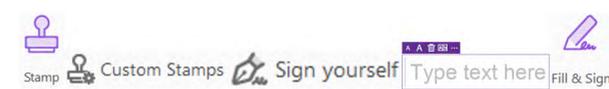
We currently support patient care for **130 beds** in all **Tasmanian District Hospitals** from a central base in **Launceston**.

Primary Health Clinical Pharmacy

We introduced the Primary Health Clinical Pharmacy service to District Hospitals in 2015 providing **medication review and reconciliation (MedMAP)** at admission and **medication lists (PSMLs)** at discharge. Onsite nursing staff facilitate the process by scanning a suite of patient information, including a **Best Possible Medication History** form we developed inhouse for use by nurses.

As our capacity grew, we were able to add services, including **chart review at re-write, crush reviews, fall reviews** and attendance at **Multi-Disciplinary Team meetings** and **ward rounds** via video link. All pharmacy reports are printed directly to the site. MedMaps and PSMLs are also available in the Digital Medical Record. PSMLs now feed directly into the patient's electronic health record.

In 2021 we rolled out **clinical review of medication charts prior to supply** across all District Hospitals. Using existing tools, including Adobe Acrobat Reader, the remote clinical pharmacist annotates the scanned chart and forwards it to the relevant regional Hospital Pharmacy Department for supply.



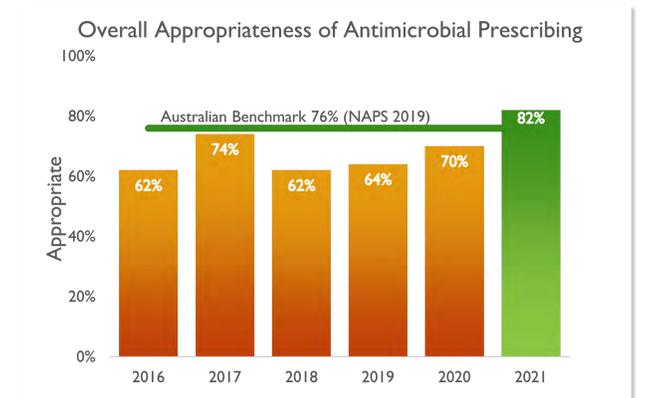
Date	Medicine (print, generic name)	Tick if slow release	0800	CEFTRIAXONE
3/12/22	Ceftriaxone			
Route	Dose	Frequency and NOW enter times		X 10 vials
IV	2g	12 hourly		
Indication	Pharmacy			Please SUPPLY Distribution
Meningitis	A. Pharmacist			
Prescriber signature	Print your name	Contact	2000	
A. Doctor	A. Doctor			

Antimicrobial Prescribing Survey

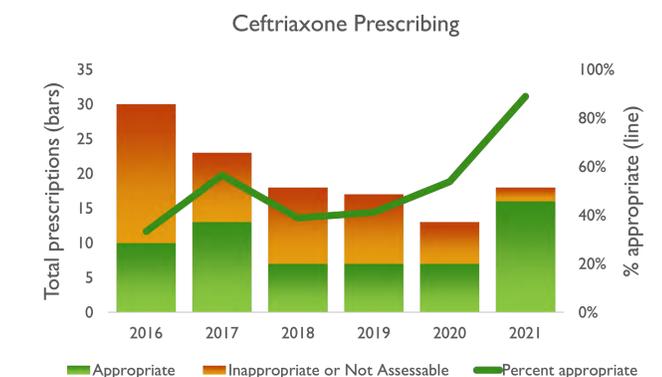
Since 2016, the **Tasmanian Infection Prevention and Control Unit (TIPCU)** has conducted an annual survey¹ based on the National Antimicrobial Prescribing Survey (NAPS). This month-long program records all antimicrobials prescribed in our participating District Hospitals and assesses them according to NAPS definitions. Results are entered into the NAPS database and District Hospital staff are engaged in evaluating and actioning recommendations.

Evaluation

Overall appropriateness of antimicrobial prescribing increased from 62% in 2016 to 82% in 2021. This compares favourably with the national figure of 76%².



There was a particular improvement in Ceftriaxone prescribing from 33% appropriate in 2016 (10/30), to 89% appropriate in 2021 (16/18).



Discussion

With pharmacist input at multiple points during admission, and particularly prior to medication supply, our service has demonstrated that a **remote clinical pharmacy model can effectively support appropriate use of antimicrobials even without access to EMM or electronic AMS tools.**

References:

- Ratcliff, A., Wilson, F. (2022). Antimicrobial use in Tasmanian rural and district hospitals. Report on September 2021 surveillance program. Hobart: Department of Health
- Australian Commission on Safety and Quality in Health Care. AURA 2021: fourth Australian report on antimicrobial use and resistance in human health. Sydney: ACSQHC; 2021