Antimicrobial use surveillance in Tasmanian rural hospitals

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Background

Antimicrobial use surveillance can provide data to assess usage to allow for targeted interventions to improve appropriate antimicrobial use.

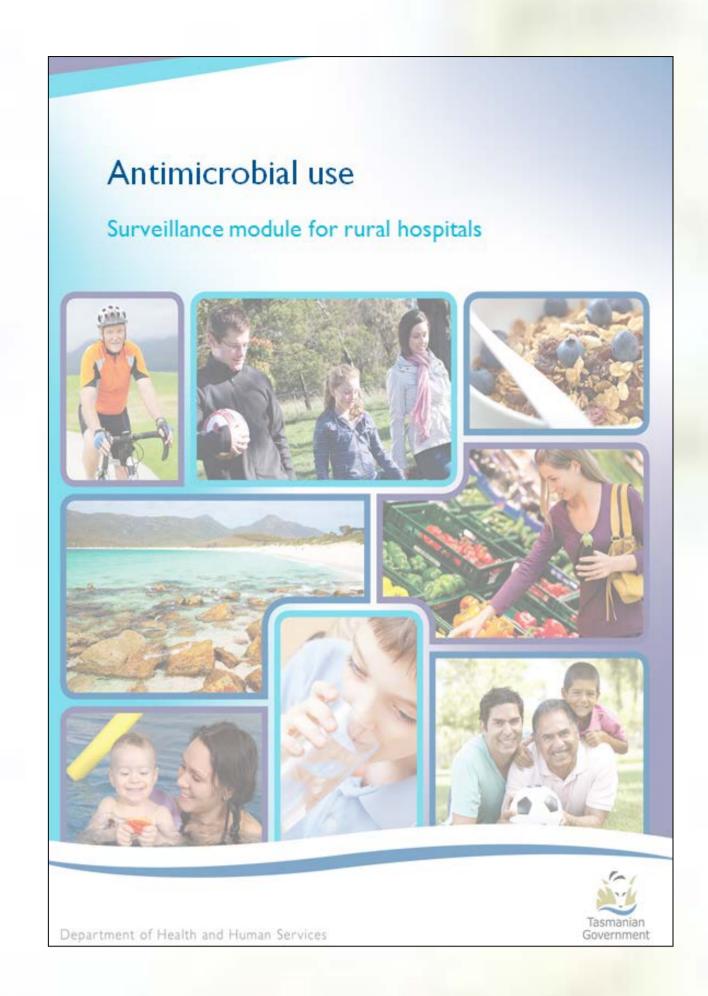
Aims

- To quantify antimicrobial use in Tasmanian rural hospitals.
- To assess appropriateness of antimicrobial use in accordance with 'Therapeutic Guidelines: Antibiotic.'
- To identify areas for targeted interventions to prescribers and other staff
- To identify changes in usage and appropriateness over time particularly in response to targeted interventions

Plan

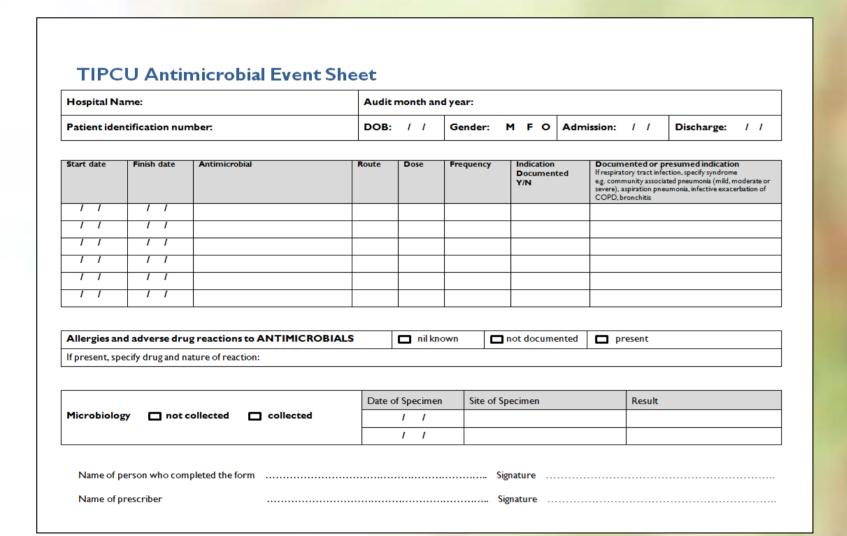
2014 - the Tasmanian Infection Prevention and Control Unit (TIPCU) developed a surveillance protocol and data collection tool with 3 rural hospitals involved in a pilot study to assess the feasibility of the program.

From 2015 - all 13 Tasmanian rural hospitals have agreed to participate in an annual antimicrobial use surveillance program.



Do

Data collection Ist to 30th September on all patients who are prescribed antimicrobial treatment and are an inpatient in an acute bed in a Tasmanian rural hospital. Data collected by rural hospital nursing staff. Completed forms sent to TIPCU.

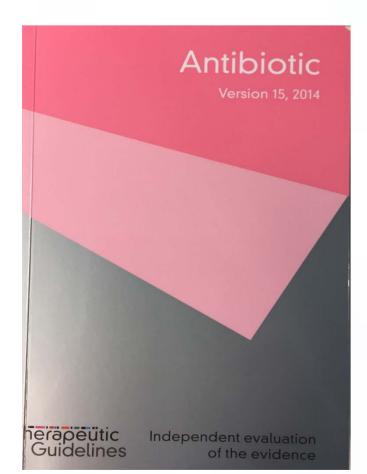


Act

Feedback via individual site reports

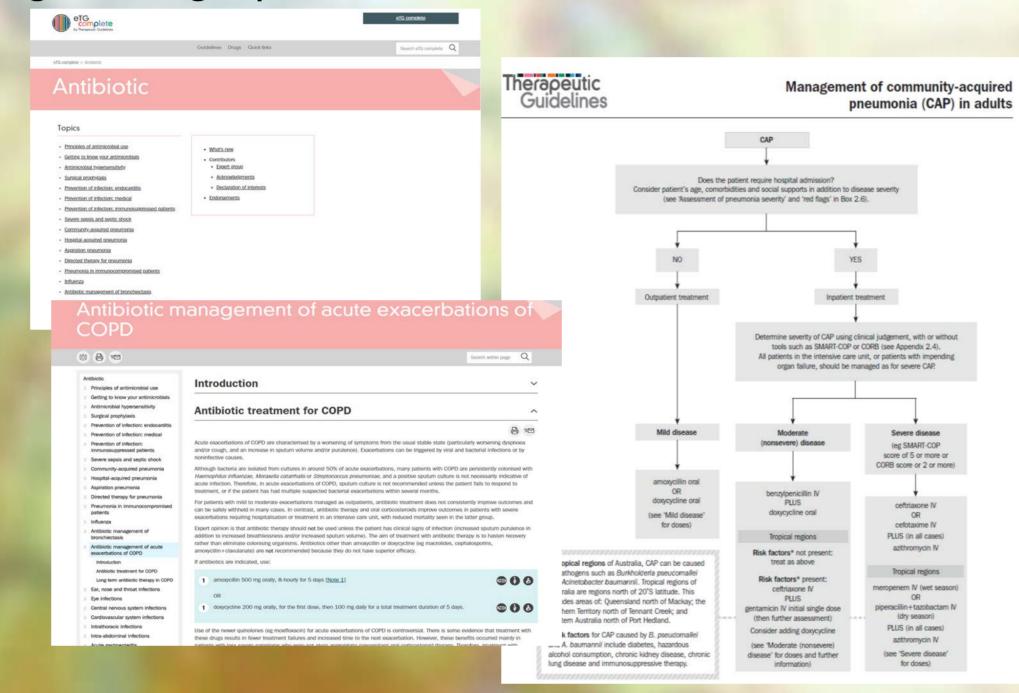


Provide copy of 'Therapeutic Guidelines: Antibiotic' to each Tasmanian rural hospital

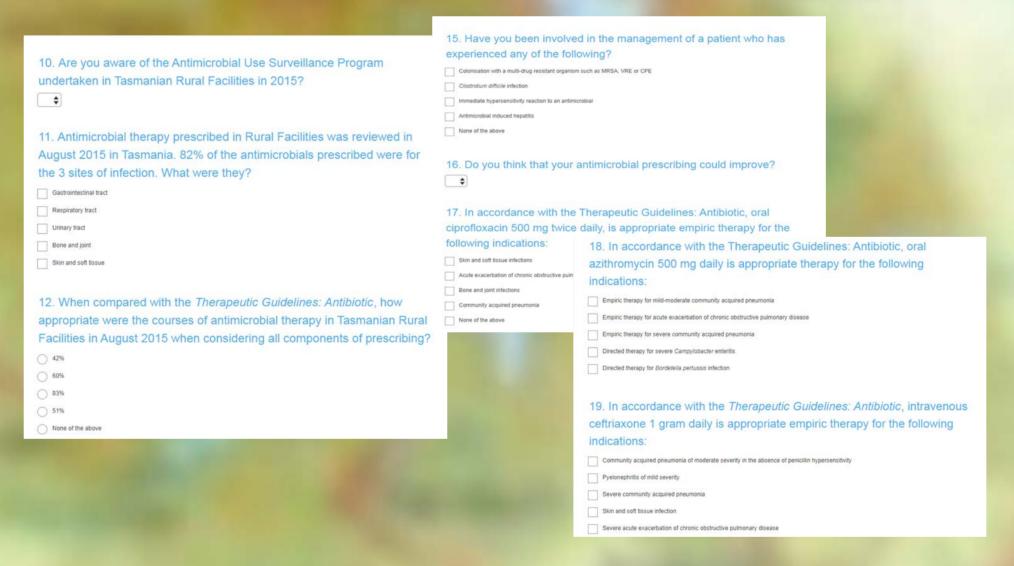


Appropriateness of prescriptions assessed against 'Therapeutic Guidelines: Antibiotic' by the TIPCU Medical Advisor.

Data entered in to the National Antimicrobial Prescribing (NAPS) portal to facilitate data collation and generating reports.



Survey of prescribers



Provide Tasmanian Health Service (THS) statewide community onset pneumonia treatment guideline to assist appropriate prescribing

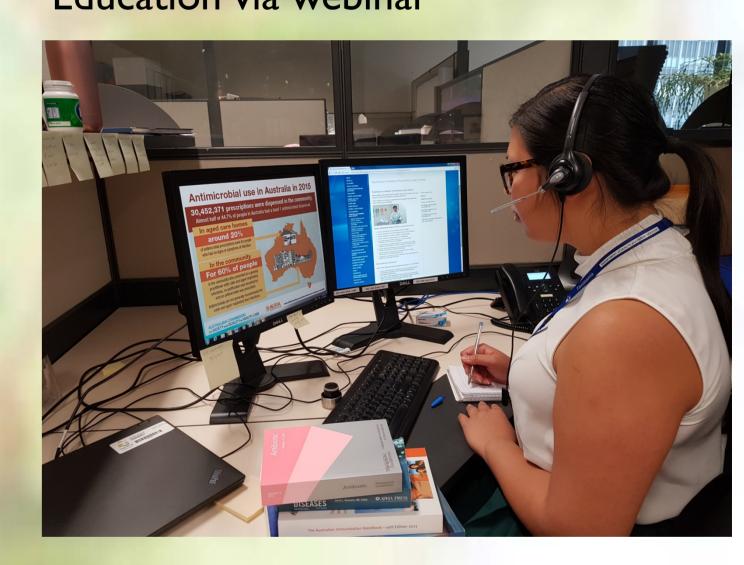
	Syndrome	Empirical Antibiotic regimen	Empirical Antibiotic regimen if non-life threatening penicillin allergy or reaction	Empirical Antibiotic regimen if severe penicillin or cephalosporin allergy or reaction	Total Recommended duration of oral and IV antibiotics
COMMUNITY ACQUIRED PNEUMONIA	Mild CAP (CORB 0)	Amosycilin 1 gram orally 8 hourly 5-7 days OR if suspicion of atypical pathogens then: Doxycycline 200mg stat then 100mg orally 12 hourly	Doxycycline 200mg stat then 100mg orally 12 hourly	Doxycycline 200mg stat then 100mg orally 12 hourly	5-7 days
	Moderate CAP (CORB 1)	Benzylpenicillin 1.2 gram IV 6 hourly AND Doxycycline 200mg stat then 100mg orally 12 hourly After clinical improvement, switch to oral therapy.	Ceftriaxone 1 gram IV daily AND Doxycycline 200mg star then 100mg orally 12 hourly After clinical improvement, switch to oral therapy.	Moxifloxacin 400mg orally TV daily	7 days
		Amoxycillin 1 gram orally 8 hourly AND Doxycycline 200mg stat then 100mg orally 12 hourly	Cefuroxime 500 mg orally 12 hourly AND Doxycycline 200mg stat then 100mg orally 12 hourly		
	Severe CAP (CORB ≥ 2); nontropical regions*	Ceftriaxone 1 gram IV daily AND Azithromycin 500mg orally/IV daily	Ceftriaxone 1 gram IV daily AND Azithromycin 500mg orally/IV daily	Moxifloxacin 400mg orally/TV daily	Minimum 7 days
		After clinical improvement, switch to oral therapy: Amoxycillin 1gram orally 8 hourly AND Doxycycline 200mg stat then 100mg orally 12 hourly	After clinical improvement, switch to oral therapy: Cefuroxime 500 mg orally 12 hourly AND Doxycycline 200mg stat then 100mg orally 12 hourly		
COMMENTY AND NURSING CARE NURSING HOME HOME	Mild	Amoxycillin 1 gram orally 8 hourly	Cefuroxime 500mg orally 12 hourly	Doxycycline 200mg stat then 100mg orally 12 hourly	7 days
	Moderate	Benzylpenicillin 1.2 gram IV 6 hourly After clinical improvement, switch to oral therapy: Amosycillin I gram orally 8 hourly	Ceffriaxone 1 gram IV daily After clinical improvement, switch to oral therapy: Cefuroxime 500mz 12 hourly	Moxifloxacin 400mg orally/IV daily	7 days
		Amoxycilin+clavulanate 1.2 grams IV 8 hourly	Ceftriaxone 1 gram IV daily	Moxifloxacin 400mg orally/TV daily	7 days
	Severe	AND Azithromycin 500mg PO/IV daily	AND Azithromycin 500mg PO/IV daily		
		After clinical improvement, switch to oral therapy: Amoxycillin 1 gram orally 8 hourly AND Doxycycline 200mg stat then 100mg orally 12 hourly	After clinical improvement, switch to oral therapy: Cefuroxime 500 mg orally 12 hourly AND Doxycycline 200mg stat then 100mg orally 12 hourly		
	Mild	Amoxycillin 1 gram orally 8 hourly	Cefuroxime 500 mg orally 12 hourly	Clindamycin 450 mg orally 8 hourly	7 days
	Moderate	Benzylpenicillin 12 grams IV 6 hourly AND "Metroudanole 500 mg IV 12 hourly (if anserobic cover required) After clinical improvement, switch to oral therapy. Amoxycillin+clavulanate 875/125mg orally 12 hourly	Cefrizacosa I gram IV daily AND "Meteroidancle 500 mg IV 12 hourly (if anaerobic cover required) After clinical improvement, switch to oral therapy: Cefricosime 500 mg orally 12 hourly AND Meteroidancels 400 mg orally 12 hourly	Clindamycin 450 mg orally/IV 8 hourly	7 days
	Severe	Amoxycillin+clavulanate 1.2 grams IV 8 hourly	Ceftriaxone 1 gram IV daily AND Metronidazole 500 mg IV 12 hourly	Moxifloxacin 400mg orally/IV daily	7 days
		After clinical improvement, switch to oral therapy: Amoxycillin+clavulanate 875/125 orally 12 hourly	After clinical improvement, switch to oral therapy: Cefuroxime 500 mg orally 12 hourly AND Metronidazole 400 mg orally 12 hourly		
ECOPD I	Infective exacerbation of COAD with increased sputum purulence with breathlessness i.e. signs of infection (AND NO EVIDENCE OF PNEUMONIA)	Amoxycillin 500mg orally 8 hourly OR Doxycycline 200mg orally stat then 100mg daily (CXR pneumonic changes must be evident to warrant IV	Doxycycline 200mg orally stat then 100mg daily CXR pneumonic changes must be evident to warrant IV therapy	Doxycycline 200mg orally stat then 100mg daily CXR pneumonic changes must be evident to warrant IV therapy	5 days



GUIDANCE NCAS

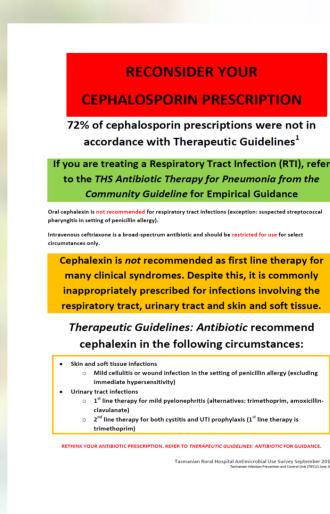
NAPS National Antimicrobial Prescribing Survey

Vancomycin

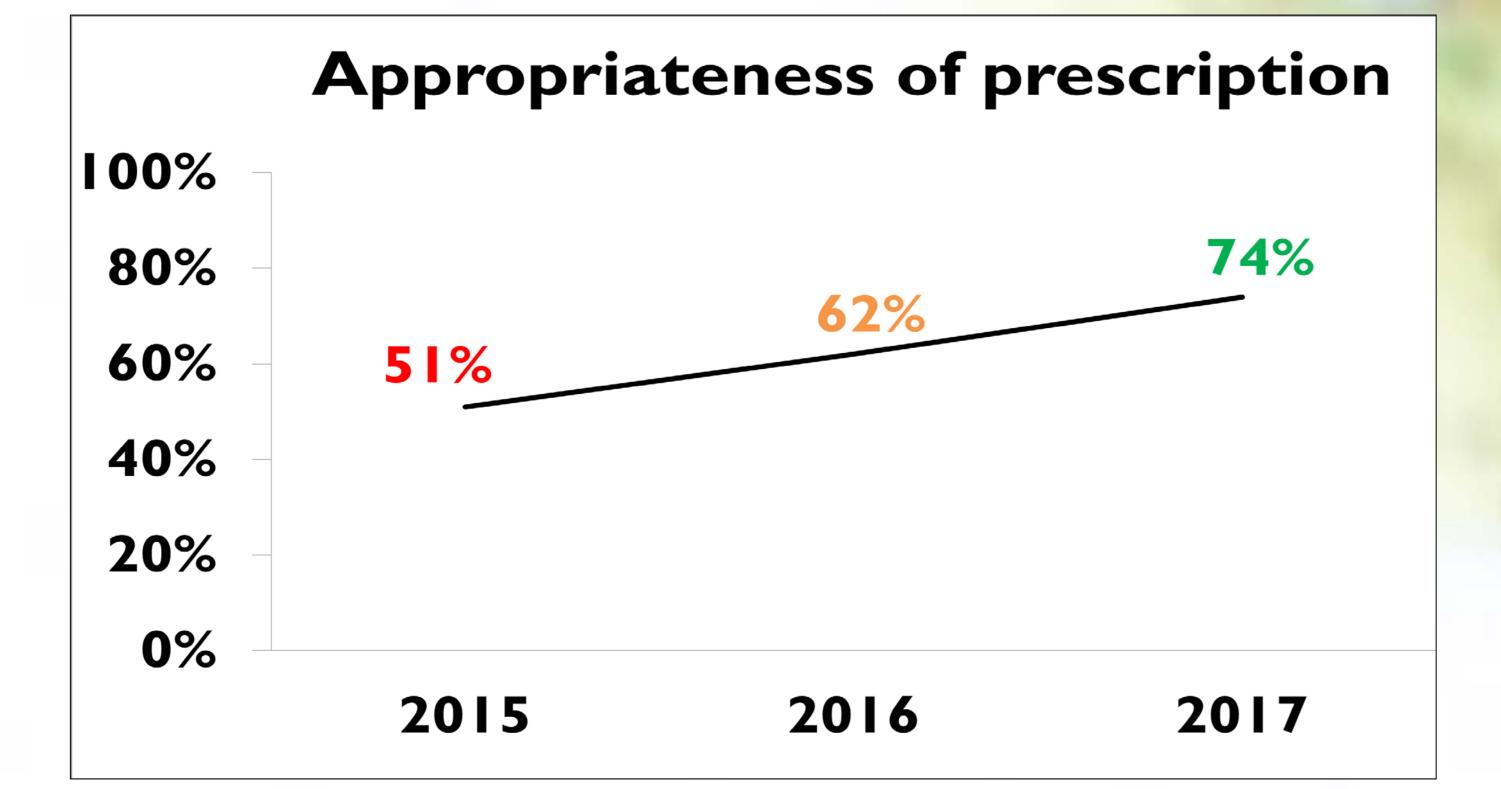


Provide cephalosporin prescribing poster to prescribers and Tasmanian rural

hospitals



Results



Since commencing the program:

- The top three indications for use have remained unchanged - respiratory tract infection, skin and soft tissue infection and urinary tract infection.
- Appropriateness of antimicrobial prescribing has increased.
 - Ceftriaxone use has decreased appropriately
 - Amoxicillin use has increased appropriately
 - Doxycycline use has increased appropriately