

Antimicrobial Utilisation Surveillance in Australian Hospitals

Public and Private Acute Group B Critical Care benchmarking report July 2023 – December 2023

Antibacterial utilisation rates provided in this report are calculated using the number of defined daily doses (DDDs) of the antibacterial class consumed each month per 1,000 occupied bed days.

Contributing hospitals are assigned to Australian Institute for Health and Welfare (AIHW) defined peer groups. Contributing hospitals can find their de-identifying code via the NAUSP Portal 'Maintain My Hospital' drop-down menu.

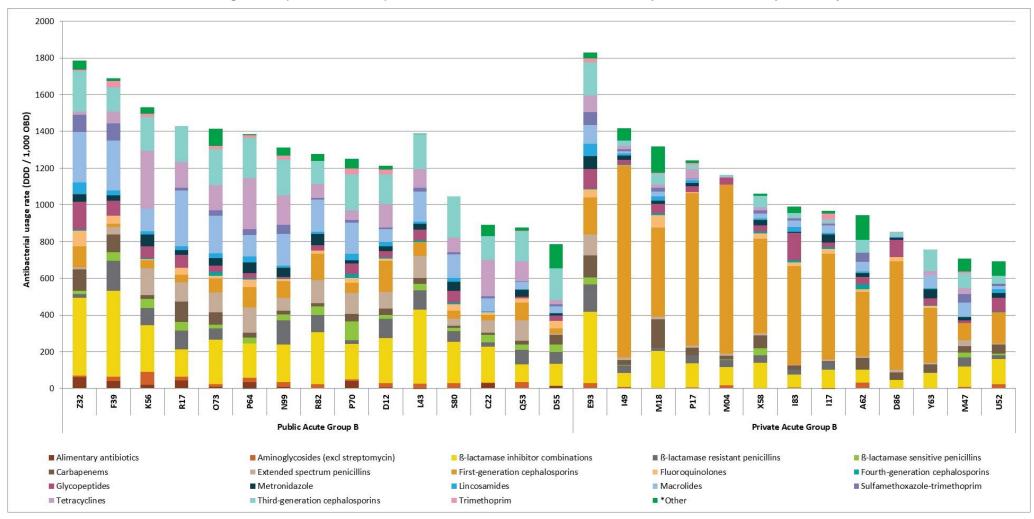
DDD values for each antimicrobial are assigned by the World Health Organization based on the "assumed average maintenance dose per day for the main indication in adults". DDDs are reviewed annually by the WHO as dosing recommendations change over time. For more information refer to: https://www.whocc.no/atc_ddd_methodology/purpose_of_the_atc_ddd_system/

The chart below presents aggregate antibacterial usage data in the Critical Care for the respective contributing hospitals over the six-month period from 1 July 2023 to 31 December 2023.

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¹ AIHW. *Hospital resources 2017-18: Australian hospital statistics*. Available from https://www.aihw.gov.au/reports/hospitals/hospital-resources-2017-18-ahs/data

Chart 1: Critical Care antibacterial usage rates (DDD/1000 OBD) in NAUSP Public and Private Acute Group B contributor hospitals, July - December 2023



Alimentary antibiotics = rifaximin, fidaxomicin, paromomycin. Other = amphenicols, antimycotics, combinations for eradication of Helicobacter pylori, monobactams, nitrofurans, linezolid, daptomycin, other cephalosporins, polymyxins, rifamycins, second-generation cephalosporins, steroids, streptogramins and streptomycin.

This report includes data from 28 Public and Private Acute Group B hospitals:

Albany Hospital Angliss Hospital Armidale Hospital Auburn Hospital Bowral Hospital

Broken Hill Base Hospital Buderim Private Hospital Bunbury Regional Hospital

Caboolture Hospital

Calvary North Adelaide Hospital

Canterbury Hospital Flinders Private Hospital Geraldton Hospital Gosford Private Hospital Goulburn Base Hospital Hollywood Private Hospital Mater Hospital North Sydney

Memorial Hospital Mount Hospital Mt Isa Hospital Redland Hospital Ryde Hospital

South East Regional Hospital

St Andrew's Hospital St John Of God Geelong St John Of God Subiaco St Vincent's Private Fitzroy

St Vincent's Private Hospital Toowoomba

Disclaimer: Data presented in this report were correct at the time of publication. As additional hospitals join NAUSP, retrospective data are included. Data may change when quality assurance processes identify the need for data updates.

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ANTIBACTERIAL CLAS	SES		
Alimentary antibiotics	fidaxomicin	Lincosamides	clindamycin
	paromomycin		lincomycin
	rifaximin		azithromycin
Aminoglycosides	amikacin		clarithromycin
	gentamycin	Macrolides	erythromycin
	neomycin		roxithromycin
	tobramycin		spiramycin
ß-lactamase inhibitor combinations	amoxicillin - clavulanate	Monobactams	aztreonam
	piperacillin - tazobactam	Nitrofuran derivatives	nitrofurantoin
ß-lactamase resistant penicillins	dicloxacillin	Polymyxins	colistin
	flucloxacillin		polymyxin B
ß-lactamase sensitive penicillins	benzathine benzylpenicillin	Second-generation cephalosporins	cefaclor
	benzylpenicillin		cefamandole
	phenoxymethylpenicillin		cefotetan
	procaine benzylpenicillin		cefoxitin
Carbapenems	doripenem		cefuroxime
	ertapenem	Steroid antibacterials	fusidic acid
	imipenem - cilastatin	Streptogramins	pristinamycin
	meropenem	Streptomycins	streptomycin
	meropenem - vaborbactam	Sulfonamide- trimethoprim combinations	sulfamethoxazole - trimethoprim
Extended-spectrum penicillins	amoxicillin	Tetracyclines	doxycycline
	ampicillin		minocycline
	pivmecillinam		tetracycline
	temocillin		tigecycline
First-generation cephalosporins	cefalexin	Third-generation cephalosporins	cefixime
	cefalotin		cefotaxime
	cefazolin		ceftazidime
Fluoroquinolones	ciprofloxacin		ceftazidime - avibactam
	levofloxacin		ceftriaxone
	moxifloxacin	Trimethoprim	trimethoprim
	norfloxacin	-	ceftaroline fosamil
Fourth-generation cephalosporins	cefepime		ceftolozane - tazobactam
	cefpirome	Other (including	daptomycin
Glycopeptides	dalbavancin	Other (including other cephalosporins and penems)	faropenem
	oritavancin		fosfomycin
	teicoplanin		linezolid
	vancomycin		rifampicin
Imidazole derivatives	metronidazole		tedizolid
Intermediate-acting sulfonamides	sulfadiazine		