Antimicrobial utilisation rates provided in this report are calculated using the number of defined daily doses (DDDs) of the antimicrobial agent or class consumed each month per 1,000 occupied bed days using aggregate data for contributing hospitals in the Acute Group A peer group. Rates for aggregated usage of all antimicrobials by all contributors for both total hospital and intensive care unit (ICU) use are shown. Rates are also reported for total hospital use of 6 target antibacterial classes, as well as ICU use and aggregated usage in all other in-patient areas (non-ICU) for these classes. National ICU and non-ICU rates for individual agents within the 6 target classes are also included.

A change to the DDD for a number of high volume antimicrobials occurred in January 2019. This has been applied to all retrospective data. For more information refer to [WHO WTC/DDD alterations 2019](#).

Comparator rates for this reporting period include data from 57 Public acute group A and large private hospital(s). ICU rates include data from 43 ICUs. Some hospitals were unable to submit data for this reporting period and comparator rates may vary from previous reports.

Enquiries should be directed to the Senior Pharmacist, NAUSP (email: HealthAntibio@sa.gov.au)

1. TOTAL HOSPITAL ANTIBACTERIAL USE (INCLUDING ALL CLASSES)

![Chart of antimicrobial use by class and month](image)

**Chart1**: total hospital antimicrobial use by all contributors (all classes)
2. TOTAL INTENSIVE CARE UNIT ANTIBACTERIAL USE (INCLUDING ALL CLASSES)

![Chart 2: total ICU antimicrobial use by all contributors (all classes)](image)

3. TOTAL HOSPITAL USE BY ANTIBACTERIAL CLASS (SELECTED CLASSES)

Total hospital antimicrobial utilisation rates for 3rd/4th generation cephalosporins, glycopeptides, carbapenems, fluoroquinolones, aminoglycosides and anti-pseudomonal penicillin/ß-lactamase inhibitor combinations are displayed for the period July 2017 to June 2019 in charts 3 and 4. In the following charts, ‘C’ denotes Public Acute Group A peer group.

![Chart 3: Total hospital usage of 3rd/4th generation cephalosporins, glycopeptides and carbapenems](image)

![Chart 4: Total hospital usage of fluoroquinolones, aminoglycosides and anti-pseudomonal penicillins plus ß-lactamase inhibitor](image)
4. INTENSIVE CARE (ICU) COMPARED TO OTHER HOSPITAL USAGE (NON-ICU)

Usage rates for ICU compared to non-ICU for each antimicrobial class are shown in charts 5 - 10. Higher usage rates in ICU compared to non-ICU are expected, based on the density of usage in these areas.

- Chart 5: 3rd/4th generation cephalosporins
- Chart 6: glycopeptides
- Chart 7: carbapenems
- Chart 8: fluoroquinolones
- Chart 9: aminoglycosides
- Chart 10: anti-pseudomonal penicillins plus β-lactamase inhibitor
5. ICU ANTIMICROBIAL UTILISATION RATES FOR INDIVIDUAL AGENTS

ICU antimicrobial utilisation rates for individual agents within reported classes are shown in the Charts 11 - 16 below.

- **Chart 11:** 3rd/4th generation cephalosporins (ceftriaxone and cefotaxime grouped together)
- **Chart 12:** Glycopeptides
- **Chart 13:** Carbapenems
- **Chart 14:** Fluoroquinolones
- **Chart 15:** Aminoglycosides
- **Chart 16:** Parenteral penicillin / ß-lactamase inhibitors
6. NON-ICU ANTIMICROBIAL UTILISATION RATES FOR INDIVIDUAL AGENTS

Non-ICU antimicrobial utilisation rates for individual agents within reported classes are shown in Charts 17 - 22 below.

Chart 17: 3rd/4th generation cephalosporins (ceftriaxone and cefotaxime grouped together)

Chart 18: glycopeptides

Chart 19: carbapenems

Chart 20: fluoroquinolones

Chart 21: aminoglycosides

Chart 22: parenteral penicillin / β-lactamase inhibitors
This report includes data from the following hospitals:

**ACT:** CALVARY PUBLIC HOSPITAL BRUCE

**NSW:** BANKSTOWN HOSPITAL, BATHURST BASE HOSPITAL, BLACKTOWN HOSPITAL, CAMPBELLTOWN HOSPITAL, CHRIS O'BRIEN LIFEHOUSE, COFFS HARBOUR HOSPITAL, DUBBO BASE HOSPITAL, GOSFORD HOSPITAL, HORNSBY KU-RING-GAI HOSPITAL, LISMORE BASE HOSPITAL, MATER HOSPITAL NORTH SYDNEY, NEWCASTLE MATER, ORANGE HEALTH SERVICE, PORT MACQUARIE BASE HOSPITAL, SHOALHAVEN HOSPITAL, ST VINCENT'S PRIVATE HOSPITAL SYDNEY, SUTHERLAND HOSPITAL, THE TWEED HOSPITAL, WAGGA WAGGA BASE HOSPITAL, WESTMEAD PRIVATE HOSPITAL, WYONG HOSPITAL

**NT:** ALICE SPRINGS HOSPITAL

**QLD:** BUNDABERG HOSPITAL, CAIRNS BASE HOSPITAL, GOLD COAST PRIVATE HOSPITAL, HERVEY BAY HOSPITAL, MATER HOSPITAL BRISBANE, NAMBOUR GENERAL HOSPITAL, ST VINCENT'S PRIVATE HOSPITAL NORTHSIDE, TOOWOOMBA HOSPITAL

**SA:** CALVARY NORTH ADELAIDE HOSPITAL, CALVARY WAKEFIELD PRIVATE HOSPITAL, FLINDERS PRIVATE HOSPITAL, LYELL MCEWIN HOSPITAL, MEMORIAL HOSPITAL, MOORABbin HOSPITAL, QUEEN ELIZABETH HOSPITAL, ST ANDREW'S HOSPITAL

**TAS:** LAUNCESTON GENERAL HOSPITAL, NORTH WEST REGIONAL HOSPITAL

**VIC:** ALBURY WODONGA - ALBURY, BALLARAT BASE HOSPITAL, BENDIGO HEALTH, BOX HILL HOSPITAL, CENTRAL GIPPSLAND HEALTH, DANDENONG HOSPITAL, FRANKSTON HOSPITAL, MAROONDAH HOSPITAL, MONASH MOORABBIN HOSPITAL, ST VINCENT'S PRIVATE FITZROY, WESTERN HEALTH FOOTSCRAY

**WA:** FREMANTLE HOSPITAL, ROCKINGHAM HOSPITAL, ST JOHN OF GOD MIDLAND, ST JOHN OF GOD MURDOCH, ST JOHN OF GOD SUBIACO

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