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 aggregated data for contributing hospitals in the All Contributor peer group. Rates for aggregated usage of all antibacterials 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.

Comparator rates for this reporting period include data from 201 hospital(s). ICU rates include data from 92 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 (ALL CLASSES)

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

Chart 2: total ICU antimicrobial use by all contributors (all classes)

3. TOTAL HOSPITAL USE OF SELECTED CLASSES OF ANTIBACTERIALS

Total hospital antimicrobial utilisation rates for 3rd/4th generation cephalosporins, glycopeptides, carbapenems, fluoroquinolones, aminoglycosides and anti-pseudomonal penicillin/β-lactamase inhibitor combinations are displayed for the period January 2017 to December 2018 in charts 3 and 4. In the following charts, C denotes the All Contributor peer group.

Chart 3: Total hospital usage of 3rd/4th generation cephalosporins, glycopeptides and carbapenems

Chart 4: Total hospital usage of fluoroquinolones, aminoglycosides and anti-pseudomonal penicillins plus β-lactamase inhibitor
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 / β-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 / ß-lactamase inhibitors
This report includes data from the following hospitals:

**ACT:**
CALVARY PUBLIC HOSPITAL, CANBERRA HOSPITAL

**NSW:**
ARMIDALE HOSPITAL, AUBURN HOSPITAL, BANKSTOWN HOSPITAL, BATEMANS BAY DISTRICT HOSPITAL, BATHURST BASE HOSPITAL, BELMONT HOSPITAL, BLACKTOWN HOSPITAL, BOWRAL HOSPITAL, CAMPBELL TOWN HOSPITAL, CANTERBURY HOSPITAL, CESSNOCK DISTRICT HOSPITAL, COFFS HARBOUR HOSPITAL, CONCORD HOSPITAL, COOMA HOSPITAL, DUBBO BASE HOSPITAL, FAIRFORD HOSPITAL, FORBES DISTRICT HOSPITAL, GOSFORD HOSPITAL, GOSFORD PRIVATE HOSPITAL, GOULBURN BASE HOSPITAL, GRAFTON BASE HOSPITAL, GRIFFITH BASE HOSPITAL, HORNESBY KU-RING-GAI HOSPITAL, JOHN HUNTER HOSPITAL, KAREENA PRIVATE HOSPITAL, KEMPSEY DISTRICT HOSPITAL, Lismore Base Hospital, Liverpool Hospital, Maclean District Hospital, Maitland Hospital, Manning Base Hospital, Mater Hospital North Sydney, Milton-Ulladulla Hospital, Moruya Hospital, Mudgee District Hospital, Muswellbrook Hospital, Nepean Hospital, Newcastle Mater, Orange Health Service, Parkes Hospital, Port Macquarie Base Hospital, Prince of Wales Hospital, Queanbeyan Hospital, Royal North Shore Hospital, Royal Prince Alfred Hospital, Ryde Hospital, Scott Memorial Hospital, Shellharbour Hospital, Shoalhaven Hospital, Singleton District Hospital, South East Regional Hospital, St George Hospital, St Vincent's Hospital Sydney, St Vincent's Private Hospital Sydney, Sutherland Hospital, Sydney Adventist Hospital, The Tweed Hospital, Wagga Wagga Base Hospital, Westmead Hospital, Westmead Private Hospital, Wollongong Hospital, Wyong Hospital, Young Health Service

**NT:**
ALICE SPRINGS HOSPITAL, GOVE DISTRICT HOSPITAL, KATHERINE DISTRICT HOSPITAL, PALMERSTON REGIONAL HOSPITAL, ROYAL DARWIN HOSPITAL

**QLD:**
ATHERTON HOSPITAL, BUNDABERG HOSPITAL, CABOOLTURE HOSPITAL, CAIRNS BASE HOSPITAL, CALOURDA HEALTH SERVICE, GLADSTONE HOSPITAL, GOLD COAST PRIVATE HOSPITAL, GOLD COAST UNIVERSITY HOSPITAL, GREENESLOPES HOSPITAL, GYMPIE HEALTH SERVICE, HERVEY BAY HOSPITAL, INNISFAIL HOSPITAL, IPSWICH HOSPITAL, KINGAROD HOSPITAL, LOGAN HOSPITAL, MACKAY BASE HOSPITAL, MARREEBA HOSPITAL, MARYBOROUGH HOSPITAL, MATER BUNDABERG, MATER GLADSTONE, MATER HOSPITAL BRISBANE, MATER MACKAY, MATER MOTHERS' HOSPITAL, MATER PRIVATE HOSPITAL BRISBANE, MATER PRIVATE HOSPITAL SPRINGFIELD, MATER REDLAND PRIVATE, MATER ROCKHAMPTON, MISA HOSPITAL, NAMBOUR GENERAL HOSPITAL, PRINCESS ALEXANDRA HOSPITAL, QUEEN ELIZABETH 2 JUBILEE HOSPITAL, REDCLIFFE HOSPITAL, REDLAND HOSPITAL, ROBINA HOSPITAL, ROCKHAMPTON HOSPITAL, ROYAL BRISBANE AND WOMEN'S HOSPITAL, ST ANDREW'S WAR MEMORIAL HOSPITAL, ST VINCENT'S PRIVATE HOSPITAL BRISBANE, ST VINCENT'S PRIVATE HOSPITAL NORTHSIDE, SUNSHINE COAST PRIVATE HOSPITAL, SUNSHINE COAST UNIVERSITY HOSPITAL, THE PRINCE CHARLES HOSPITAL, TOOWOOMBA HOSPITAL, TOWNSVILLE HOSPITAL, WARWICK HOSPITAL

**SA:**
ASHFORD HOSPITAL, BERRI HOSPITAL, CALVARY NORTH ADELAIDE HOSPITAL, CALVARY WAKEFIELD PRIVATE HOSPITAL, FLINDERS MEDICAL CENTRE, FLINDERS PRIVATE HOSPITAL, GAWLER HEALTH SERVICE, LYELL MCEWIN HOSPITAL, MEMORIAL HOSPITAL, MODDURY HOSPITAL, MT GAMBIER HOSPITAL, NOORLINGA HOSPITAL, PORT AUGUSTA HOSPITAL, PORT LINCOLN HOSPITAL, PORT PIRIE HOSPITAL, QUEEN ELIZABETH HOSPITAL, REPATRIATION GENERAL HOSPITAL, ROYAL ADELAIDE HOSPITAL, ST ANDREW'S HOSPITAL, WHYALLA HOSPITAL, WOMENS AND CHILDRENS HOSPITAL

**TAS:**
CALVARY LENAH VALLEY, HOBART PRIVATE HOSPITAL, LAUNCESTON GENERAL HOSPITAL, MERSEY COMMUNITY HOSPITAL, NORTHWEST REGIONAL HOSPITAL, ROYAL HOBART HOSPITAL

**VIC:**
ALBURY WODONGA - ALBURY WODONGA - WODONGA, ALBURY WODONGA - ALFRED HOSPITAL, ANGLISS HOSPITAL, AUSTIN HOSPITAL, BALLARAT BASE HOSPITAL, BENDIGO HEALTH, BOX HILL HOSPITAL, CABRINI HOSPITAL, BRIGHTON, CABRINI HOSPITAL MALVERN, CASEY HOSPITAL, CENTRAL GIPPSLAND HEALTH, DANDEONG HOSPITAL, FRANKSTON HOSPITAL, GEELONG HOSPITAL, HOLMEGLEN PRIVATE HOSPITAL, MAROONDAH HOSPITAL, MERCY WOMEN'S HOSPITAL, MONASH MEDICAL CENTRE, CLAYTON, MONASH MOORABBIN HOSPITAL, NORTHEAST HEALTH WANGARATTA, ROSEBUD HOSPITAL, ROYAL MELBOURNE HOSPITAL, SANDRINGHAM HOSPITAL, ST VINCENT'S HOSPITAL MELBOURNE, ST VINCENT'S PRIVATE EAST MELB, ST VINCENT'S PRIVATE FITZROY, ST VINCENT'S PRIVATE KEW, ST VINCENT'S PRIVATE WERRIBEE, THE NORTHERN HOSPITAL, WARRNAMBOOL BASE HOSPITAL, WERRIBEE MERCY HOSPITAL, WEST GIPPSLAND HOSPITAL, WESTERN HEALTH FOOTSCRAY, WESTERN HEALTH SUNSHINE

**WA:**
ALBANY HOSPITAL, BENTLEY HEALTH SERVICE, BROOME HOSPITAL, BUNBURY REGIONAL HOSPITAL, BUSSELTON HEALTH, DERBY HOSPITAL, ESPERANCE HOSPITAL, FIONA STANLEY HOSPITAL, FREMANTLE HOSPITAL, GERALDTON HOSPITAL, HEDLAND HEALTH, JUNO DALIP HEALTH HOSPITAL, KALGOORLIE HEALTH HOSPITAL, KING EDWARD MEMORIAL HOSPITAL, KUNUNURRA HOSPITAL, NARROGIN HOSPITAL, NORTHAM HOSPITAL, OSBORNE PARK HOSPITAL, ROCKHAMPTON HOSPITAL, ROYAL PERTH HOSPITAL, SIR CHARLES GAIRDERN HOSPITAL, ST JOHN OF GOD MIDLAND, ST JOHN OF GOD MURDOCH, ST JOHN OF GOD SUBIACO