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.

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 177 hospital(s). ICU rates include data from 83 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/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 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 ß-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 / 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 / ß-lactamase inhibitors
This report includes data from the following hospitals:

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

**NSW:** ARRMIDALE HOSPITAL, AUBURN HOSPITAL, BANKSTOWN HOSPITAL, BATHURST BASE HOSPITAL, BELMONT HOSPITAL, BLACKTOWN HOSPITAL, BOWRAL HOSPITAL, CALVARY RIVERINA HOSPITAL, CAMPBELLTOWN HOSPITAL, CANTERBURY HOSPITAL, CESSnock DISTRICT HOSPITAL, CHRIS O'BRIEN LIFEHOUSE, COFFS HARBOUR HOSPITAL, CONCORD HOSPITAL, DUBBO BASE HOSPITAL, FAIRFIELD HOSPITAL, FORBES DISTRICT HOSPITAL, GOSFORD HOSPITAL, GOSFORD PRIVATE HOSPITAL, GRAFTON BASE HOSPITAL, HORNSBY KU-RING-GAI HOSPITAL, KAREENA PRIVATE HOSPITAL, KEMPSEY DISTRICT HOSPITAL, LISMORE BASE HOSPITAL, LIVERPOOL HOSPITAL, MACLEAN DISTRICT HOSPITAL, MAITLAND HOSPITAL, MATER HOSPITAL NORTH SYDNEY, MILTON-Ulladulla HOSPITAL, MUDGEE DISTRICT HOSPITAL, MUSWELLBROOK HOSPITAL, NEPEAN HOSPITAL, NEWCASTLE MATER, NORTHERN BEACHES HOSPITAL, ORANGE HEALTH SERVICE, PARKES HOSPITAL, PORT MACQUARIE BASE HOSPITAL, PRINCE OF WALES HOSPITAL, ROYAL NORTH SHORE HOSPITAL, ROYAL PRINCE ALFRED HOSPITAL, RYDE HOSPITAL, SCOTT MEMORIAL HOSPITAL, SHELLHARBOUR HOSPITAL, SHOALHAVEN HOSPITAL, SINGLETON DISTRICT 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, WEMSTEAD HOSPITAL, WESTMEAD HOSPITAL, WYONG HOSPITAL, YOUNG HEALTH SERVICE

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

**QLD:** AHERTON HOSPITAL, BUNDABERG HOSPITAL, CABOOLTURE HOSPITAL, CAIRNS BASE HOSPITAL, GOLD COAST PRIVATE HOSPITAL, GOLD COAST UNIVERSITY HOSPITAL, GYMIE HEALTH SERVICE, HERVEY BAY HOSPITAL, KINGAROY HOSPITAL, MAREEBA 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, MT ISA HOSPITAL, NAMBOUR GENERAL HOSPITAL, PRINCESS ALEXANDRA HOSPITAL, REDLAND HOSPITAL, ROBINA HOSPITAL, ROYAL BRISBANE AND WOMEN'S HOSPITAL, ST STEPHENS' HOSPITAL, HERVEY BAY, ST VINCENT'S PRIVATE HOSPITAL BRISBANE, ST VINCENT'S PRIVATE HOSPITAL NORTHSIDE, SUNSHINE COAST UNIVERSITY HOSPITAL, TOOWOOMBA HOSPITAL, TOWNSVILLE HOSPITAL, WARWICK HOSPITAL

**SA:** CALVARY NORTH ADELAIDE HOSPITAL, CALVARY WAKEFIELD PRIVATE HOSPITAL, FLINDERS MEDICAL CENTRE, FLINDERS PRIVATE HOSPITAL, GAWLER HEALTH SERVICE, LYELL MCEWIN HOSPITAL, MEMORIAL HOSPITAL, MODbury HOSPITAL, NOARLUNGA HOSPITAL, PORT AUGUSTA HOSPITAL, PORT LINCOLN HOSPITAL, QUEEN ELIZABETH HOSPITAL, ROYAL ADELAIDE HOSPITAL, ST ANDREWS HOSPITAL, WHYalla HOSPITAL, WOMENS AND CHILDREN'S HOSPITAL

**TAS:** HOBART PRIVATE HOSPITAL, LAUNCESTON GENERAL HOSPITAL, MERSEY COMMUNITY HOSPITAL, NORTH WEST REGIONAL HOSPITAL, ROYAL HOBART HOSPITAL

**VIC:** ALBURY ALBURY WODONGA - ALBURY, ALBURY WODONGA - WODONGA, ALFRED HOSPITAL, ANGLISS HOSPITAL, AUSTIN HOSPITAL, BALLARAT BASE HOSPITAL, BENDIGO HEALTH BOX HILL HOSPITAL, CABRINI HOSPITAL, CABRINI HOSPITAL BRIGHTON, CABRINI HOSPITAL MALVERN, CASEY HOSPITAL, CENTRAL GIPPSLAND HOSPITAL, DANDENONG HOSPITAL, FRANKSTON HOSPITAL, GEELONG HOSPITAL, MAROONDHA HOSPITAL, MERCY WOMEN'S HOSPITAL, MONASH MEDICAL CENTRE CLAYTON, MONASH MOORABBIN HOSPITAL, PETER MACCALLUM CANCER CENTRE, ROSEbud HOSPITAL, ROYAL MELBOURNE HOSPITAL, SANDRINGHAM HOSPITAL, ST VINCENT'S PRIVATE EAST MELB, ST VINCENT'S PRIVATE FITZROY, ST VINCENT'S PRIVATE HOSPITAL KEW, ST VINCENT'S PRIVATE WERRIBEE, THE NORTHERN HOSPITAL, WERRIBEE MERCY HOSPITAL, WEST GIPPSLAND HOSPITAL, WESTERN HEALTH FOOTSCRAY, WESTERN HEALTH SUNSHINE

**WA:** ALBANY HOSPITAL, BENTLEY HEALTH SERVICE, BROOME HOSPITAL, BUNbury REGIONAL HOSPITAL, BUSSLETON HEALTH DERBY HOSPITAL, ESPERANCE HOSPITAL, FIONA STANLEY HOSPITAL, FREMANTLE HOSPITAL, GERALDTON HOSPITAL, HEDLAND HEALTH CAMPUS, KALGOORLIE HEALTH CAMPUS, KING EDWARD MEMORIAL HOSPITAL, KUNUNURRA HOSPITAL, MOUNT HOSPITAL, NARROGIN HOSPITAL, NORTHAM HOSPITAL, OSBORNE PARK HOSPITAL, ROCKINGHAM HOSPITAL, ROYAL PERTH HOSPITAL, SIR CHARLES GARDNER HOSPITAL, ST JOHN OF GOD BUNbury, ST JOHN OF GOD MIDLAND, ST JOHN OF GOD MT LAWLEY, ST JOHN OF GOD MURDOCH, ST JOHN OF GOD SUBIACO

The National Antimicrobial Utilisation Surveillance Program (NAUSP) is funded by the Commonwealth Department of Health through the Australian Commission on Safety and Quality in Health Care (ACSQHC). NAUSP is conducted by the Infection Control Service, Communicable Disease Control Branch, Department for Health and Ageing, South Australia. All individual hospital data contributed to this program will remain confidential. Aggregated data will be provided to all contributors, the ACSQHC and the Commonwealth.