

## AURA 2019: Antimicrobial use and appropriateness

[AURA 2019: Third Australian report on antimicrobial use and resistance in human health](#) provides data and analyses from the Antimicrobial Use and Resistance in Australia (AURA) Surveillance System, primarily from 2016 and 2017.

Analyses of data collected from the passive and targeted antimicrobial use programs that contribute to AURA have shown the following for hospitals, aged care homes and the general community:

### Hospitals

- In 2017, total antibiotic use in hospitals that participated in the National Antimicrobial Utilisation Surveillance Program (NAUSP) increased for the first time since 2013. The usage rate increased from 932.8 defined daily doses (DDDs) per 1,000 occupied bed days (OBDs) in 2016 to 956.8 DDDs per 1,000 OBDs in 2017
- In 2017, a national shortage of piperacillin–tazobactam had a considerable impact on patterns of antibiotic use in NAUSP contributor hospitals, including increased use of cephalosporins
- The overall rate of inappropriate prescribing in hospitals that participated in the National Antimicrobial Prescribing Survey (NAPS) has been static since 2013. In 2017, 23.5% of prescriptions assessed were found to be inappropriate
- In 2017, the most common indications for prescribing antimicrobials in NAPS contributor hospitals were surgical prophylaxis, community-acquired pneumonia, medical prophylaxis, urinary tract infections and sepsis
- In 2017, the proportion of prescriptions for surgical prophylaxis that extended beyond the recommended 24 hours dropped in NAPS contributor hospitals from 41.1% in 2013 to 30.5%
- Cefalexin and amoxicillin–clavulanic acid had the highest rates of inappropriate prescribing in NAPS contributor hospitals.

### Community - primary care

- In 2017, 41.5% ( $n = 10,215,109$ ) of the Australian population had at least one systemic antibiotic dispensed under the Pharmaceutical Benefits Scheme (PBS) or Repatriation Pharmaceutical Benefits Scheme (RPBS)
- After a steady increase in the rate of antibiotic dispensing under the PBS/RPBS between 2013 and 2015, there was a decline in 2016, and a further decline in 2017



- Approximately 50% of all antibiotic prescriptions were ordered with repeats; of those repeats, approximately half were filled within 10 days of the original prescription
- The rate of systemic antibiotic prescribing in participating MedicineInsight practices has declined steadily since 2010. However, antibiotics continue to be overprescribed compared with guideline recommendations
- A large percentage of patients from participating MedicineInsight practices were prescribed antibiotics for conditions for which there is no evidence of benefit, including influenza (52.2% of patients with this condition recorded) and acute bronchitis (92.4% of patients with this condition recorded).

### Community - aged care homes

- Almost 1 in 10 residents of aged care homes that participated in the [Aged Care National Antimicrobial Prescribing Survey](#) (AC NAPS) were prescribed at least one antimicrobial
- More than half of antimicrobial prescriptions in aged care homes that participated in the AC NAPS were for residents who had no signs or symptoms of infection
- Approximately one-quarter of prescriptions in 2016 and 2017 in aged care homes that participated in the AC NAPS did not include the reason for prescribing antimicrobials
- In 2016 and 2017, approximately one-third of antimicrobial prescriptions in aged care homes that participated in the AC NAPS were for topical use.

### Further information

For more on the AURA Project, please visit: [www.safetyandquality.gov.au/AURA](http://www.safetyandquality.gov.au/AURA)