

## Supporting safer use of antimicrobials with data-driven stewardship

Clinical Care Standards Excellence Award Recipient  
Antimicrobial Stewardship Team  
Canberra Health Services

A proactive audit program at Canberra Health Services is helping to strengthen antimicrobial stewardship (AMS) across the service – supporting prescribers to make better choices, and reducing the risk of antimicrobial resistance in the community.

### Driving improvements systematically

Antimicrobial resistance is a global health threat – and health services play a critical role in reducing its impact. At Canberra Health Services, the AMS team has been working to ensure antimicrobials are prescribed and used as safely and effectively as possible, in line with national guidelines.

‘Our work helps reduce resistance to antimicrobials – and reduces costs, too,’ explains Senior AMS Pharmacist Laura Triggs, who leads the AMS program in collaboration with medical lead Dr Kathryn Daveson and fellow AMS Pharmacist, Emma Whitney.

The team had been participating in the annual National Antimicrobial Prescribing Survey to monitor the effectiveness of its AMS program, but felt the need for a process that would provide more detail, more often. In 2023, they took their efforts to the next level by introducing a **monthly audit program**. Ward pharmacists collect the data, with support from the AMS team.

‘We still do the yearly survey, but the monthly audit is more informative and helps us provide more useful data to the divisions about what’s actually happening in their areas,’ says Emma.

The [Indicator Monitoring Tool](#) released alongside the 2020 update of the [Antimicrobial Stewardship Clinical Care Standard](#) (the Standard) made that process simpler.

‘The tool is an excellent way to audit all the different indicators that are relevant to our practice,’ says Laura.



‘And it pulls the data into really useful reports and graphs so rather than having to build all that ourselves, we can just input the data and generate the reports.’

### Tackling allergy misconceptions

The monthly audits confirmed the team’s understanding of where change was needed.

One of the priorities was to improve the accuracy of **allergy assessments and documentation** so patients wouldn’t be unnecessarily excluded from receiving the most effective antimicrobials.

‘The whole allergy area is moving very fast,’ says Emma. ‘A lot of people aren’t aware of the research showing that allergies to antibiotics are often overestimated.’

The team advocated for local policy changes that provide a clear structure for clinicians to undertake comprehensive allergy assessments. Where appropriate, this includes offering a low-risk oral test for the antibiotic. If the oral test is negative, the allergy can be removed from the patient's record – a process known as 'de-labelling' – opening the door to more effective treatment options.

The team also successfully proposed establishing a dedicated Antibiotic Allergy Service to manage testing and de-labelling across Canberra Hospital.

'The new service has given us a very structured way to review and document allergies,' says Laura. 'It means our medical teams are a lot more receptive to the idea of de-labelling.'

### Embedding safer prescribing practice

The audits also highlighted opportunities to improve **adherence to AMS policies** by ensuring staff consistently refer to the *Therapeutic Guidelines* or other appropriate local guidelines when prescribing.

The health services' transition to a centralised digital health record (DHR) system in 2022 made the task a little easier. With the new system in place, the team were able to embed prescribing protocols directly into the DHR workflow. Now, prescribers complete an on-screen order panel and if the information they provide aligns with the guidelines, the system instantly provides an approval code.

The DHR also made it easier to pinpoint areas of concern. One was the use of gentamicin – a highly effective antibiotic for certain bacterial infections, that some prescribers avoid due to concerns about toxicity risks.

'Surgeons sometimes weren't using first-line therapy like gentamicin because it's a high-risk medicine that requires monitoring,' explains Laura.

With research highlighting gentamicin dosing as a key challenge, the team expanded a therapeutic drug monitoring service and trained ward pharmacists to monitor gentamicin. The new process gives clinicians greater confidence to prescribe the antibiotic safely – ultimately improving care for patients.

### Addressing prolonged antibiotic use

Another area of focus was the use of antimicrobials to reduce the risk of infections after surgery, or 'surgical prophylaxis'. While short-term use is recommended, **prolonged surgical prophylaxis** – lasting 24 hours

or more – is inappropriate and increases the risk of antimicrobial resistance.

The team shared audit data with surgical units and collaborated on solutions. The results speak for themselves with prolonged antimicrobial use reduced by two-thirds in one year.

### Building for long-term AMS success

The team continues to improve the AMS infrastructure. Automated reporting on the Standard, direct to the Canberra Health Services 'safety and quality dashboard', is in development. This will give clinical divisions easier access to data so they can monitor trends and take timely action when issues arise.

Initiatives like the dashboard will support ongoing engagement, showing all staff how the audit program drives real improvements.

'The people collecting the data need to feel like what they're doing has a purpose,' says Emma, 'that it has value and will have an impact on patient care.'



### LESSONS LEARNED

#### Data is a learning opportunity

Whether the data tells a good story or a bad one, audits provide valuable lessons and help set priorities that will make a real difference to patient care.

#### Go beyond the basics

Don't settle for ticking boxes. The best quality improvement projects are the ones that explore emerging challenges and proactively deliver innovative solutions.

#### Close the feedback loop

Keep staff up to date on the outcomes of data-driven projects. Seeing real results helps build ownership and strengthen support for quality improvement.