

CASE STUDY

Cataract Clinical Care Standard

Changing practice around the inappropriate use of postoperative topical antibiotics

University Hospital Geelong
Barwon Health

Antibiotics, delivered as an intracameral injection during cataract surgery, are used to prevent infection (endophthalmitis). Postoperative topical antibiotics provide no additional benefit, and yet the practice remains deeply entrenched, contributing to antimicrobial resistance, unnecessary healthcare costs, and increased burden on patients who must manage their own postoperative care.

Barwon Health is one of the largest regional health services in the country, serving more than 350,000 people in an area extending west of Geelong, Victoria. The Antimicrobial Stewardship team at University Hospital Geelong resolved to address the inappropriate use of postoperative topical antibiotics in their service. The intervention was quick, simple and successful.

How was the change of practice introduced?

The Antimicrobial Stewardship (AMS) program had been operating at the hospital for several years and had successfully improved practice around antibiotic use in a number of priority areas. In 2018, the scope of the AMS program was extended to include outpatient prescribing.

- Antimicrobial Stewardship Pharmacist, Alicia Neels, arranged for a surgical pharmacist to undertake a Surgical National Antimicrobial Prescribing Survey (SNAPS) audit to assess any variations in antibiotic prescribing compared to national guidelines.
- Alicia and her team determined that a week's worth of data would be required for an accurate assessment of the hospital's practices.
- The SNAPS audit was carried out, and identified that inappropriate use of postoperative topical antibiotics was occurring, with high rates of prescribing that did not align with *Therapeutic Guidelines*.



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With Antimicrobial Stewardship, you have to say to your colleagues: 'Our gold standard is the Therapeutic Guidelines. If there's no evidence for this practice, if it's not mentioned in the data, can we review it?'

That's what happened here. After the SNAPS audit, we said to Ophthalmology, 'The Therapeutic Guidelines don't support the use of prolonged chloramphenicol eye drops after surgery – can it please be addressed?' And it was."

Alicia Neels
Antimicrobial Stewardship Pharmacist

- The results of the audit were shared at a meeting of the AMS Committee. The hospital's Head of Infectious Diseases was tasked with sharing that information with the Head of Ophthalmology, with the recommendation that the practice be discontinued.
- The Ophthalmology department subsequently took action, stopping the routine prescription of topical chloramphenicol (Chlorsig) for all post-cataract patients
- Within two months, the Pharmacy department observed a significant reduction in prescriptions for chloramphenicol eye drops. On checking with Ophthalmology, Alicia was advised that routine use of topical antibiotics after cataract surgery had ceased.

Outcomes

Three years after the SNAPS audit, inappropriate prescriptions of postoperative topical antibiotics such as chloramphenicol have significantly reduced.

Key enablers of the initiative

- **AMS Committee** AMS programs have been shown to decrease inappropriate antimicrobial usage, improve patient outcomes and reduce the adverse consequences of inappropriate antimicrobial use. The Barwon Health AMS Committee assessed and made recommendations for the use of antibiotics in line with national evidence-based guidelines as part of an ongoing, hospital-wide program of improvement.
- **Therapeutic Guidelines** The *Therapeutic Guidelines* (eTG) provide clear, evidence-based advice on the use of postoperative topical antibiotics, including after cataract surgery. With the eTG as their standard, Alicia and her team used the SNAPS auditing tool to assess whether there was a need to review prescribing practices at the hospital.
- **SNAPS audit** The ability to provide direct timely data and feedback using SNAPS (the surgical version of the National Antimicrobial Prescribing Survey (NAPS)) was a key tool for change. This is a standardised tool used by AMS programs to assess antimicrobial prescribing practices in a given setting. The SNAPS audit was carried out by a surgical pharmacist with in-depth knowledge of cataract surgery practices.
- **Consultant-to-consultant relationships** SNAPS audit results and recommendations from the AMS Committee were shared via a direct conversation between the Head of Infectious Disease and the Head of Ophthalmology.

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Issue

Inappropriate prescribing of postoperative topical antibiotics, contrary to the evidence-based advice in the *Therapeutic Guidelines*.

Solution

An audit of postoperative prescribing practices, with feedback and recommendations from the internal AMS Committee to Ophthalmology.

Barriers

- Historical practices
- Workforce behaviour change

Enablers

- AMS Committee
- Therapeutic Guidelines
- SNAPS audit and feedback
- Consultant-to-consultant relationships

Quality statements

8. Preventive eye medicines

Read more about the Quality Statements in the Cataract Clinical Care Standard:

safetyandquality.gov.au/cataract-ccs

Cataract Clinical Care Standard Case Studies

Explore more case studies:

safetyandquality.gov.au/defining-cataract-care-case-studies

- Improving referral processes to improve triage pathways for cataract patients
- Diverting assessment of routine patients to an upskilled nursing workforce
- Streamlining the patient journey with nurse-led postoperative care
- Improving cataract care pathways for Aboriginal and Torres Strait Islander communities

Resources

- **Antimicrobial Stewardship**
safetyandquality.gov.au/our-work/antimicrobial-stewardship;
safetyandquality.gov.au/ams-ccs
- **Therapeutic Guidelines** tg.org.au