



The Aged Care Infection Prevention and Control Guide

A supplementary resource for the **Australian
Guidelines for the Prevention and Control of
Infection in Healthcare** for aged care settings

Chapter 10

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

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Chapter 10: Antimicrobial stewardship in aged care

Key points

- **Antimicrobial stewardship (AMS) is an ongoing effort to reduce the risk of antimicrobial resistance (AMR) by improving the appropriate use of antimicrobial medicines in older people.**
- **AMR occurs when microorganisms such as bacteria, fungi and viruses possess or develop the ability to defeat the antimicrobial medicines used to kill them.**
- **Inappropriate use of antimicrobial medicines increases the chances of some microorganisms becoming resistant, leading to the antimicrobial becoming ineffective at killing the microorganism. This makes infections more difficult to treat, potentially increasing the exposure of the older person to antimicrobials with more toxic side effects and worse clinical outcomes.**
- **Older people receiving aged care services experience higher rates of infection and have a much higher overall rate of antimicrobial use compared to the general population.**
- **Infection prevention and control (IPC) interventions such as vaccination and appropriate management of invasive devices are important strategies to prevent infections, their spread and the subsequent need for antimicrobials.**
- **An AMS program is a group of strategies that promote the appropriate use of antimicrobial medicines. AMS programs should be tailored to the residential or community setting where care is provided.**
- **A successful AMS program requires a multidisciplinary team approach, in which relevant aged care workers contribute to AMS within their scope of practice and responsibilities.**
- **Frequent and regular communication between AMS team members about priorities, results of testing and monitoring and the use of relevant guidelines is a key feature of effective AMS.**

Antimicrobial resistance

Antimicrobial medicines such as antibiotics, antivirals, antifungals and antiparasitics are drugs designed to kill these microorganisms. AMR occurs when microorganisms change over time and no longer respond to medicines. This makes infections harder to treat and increases the risk of disease spreading, severe illness and death.

Resistance to antimicrobials occurs naturally when microorganisms change to protect themselves from a variety of different elements, such as antimicrobial medicines. A significant cause of increases in AMR is the inappropriate use of these medicines, and the spread of those resistant microorganisms and their defence mechanisms. More information can be found in **Chapter 3**.

Five things to know about AMR

- It is the microorganism, not the body or person, that is resistant to antibiotics and other antimicrobials.
- Infections caused by resistant microorganisms are difficult – sometimes impossible – to treat. In many cases, these infections require extended hospital stays, extra follow-up doctor visits, and the use of treatments that may be costly and potentially toxic.
- Simple things that everyone can do to protect themselves and others from infections include getting recommended vaccinations, practising good hand hygiene, keeping wounds clean and taking good care of chronic conditions.
- Antibiotics do not treat infections caused by viruses such as colds and flu, coronavirus (COVID-19), most coughs, bronchitis and sore throats. Taking antibiotics for these infections will not help.
- AMR can move across borders. It can spread through places like hospitals, farms, the community and the natural environment.

Antimicrobial resistance and aged care

If an older person gets an infection caused by a resistant microorganism, it can be difficult or even impossible to treat. The older person might require a long stay in hospital, alternative antimicrobial drugs that have more side effects, injections rather than oral antimicrobials, or palliative care due to the complexities and lack of availability of treatment in the community. If antimicrobials are not prescribed appropriately, their use increases the number of people who are colonised or infected with resistant organisms in health and aged care settings as well as in the community.

Older people generally have an increased risk of acquiring resistant organisms due to:

- The likelihood of poor health and a weaker immune system
- Frequent and/or prolonged hospitalisations leading to greater exposure
- Prolonged or frequent use of antifungals, antimicrobials, antivirals and antiparasitics
- The presence of wounds, ulcers or pressure injuries that are prone to infection
- Invasive medical devices, such as urinary catheters or suprapubic catheters, that are prone to infection
- Living where they are close to other people, such as in an aged care home.

Resistant microorganisms can multiply and spread to other people, and then these people can also develop antimicrobial-resistant infections. All aged care workers have a responsibility to prevent AMR and protect the use of antimicrobials.

Older people who receive aged care services experience higher rates of infection and have a higher overall rate of antimicrobial use than the general population. The [Aged Care National Antimicrobial Prescribing Survey \(Aged Care NAPS\)](#) has shown over time that the most common indications for prescribing antimicrobials in aged care are:

- Skin, soft tissue or mucosal infection (such as abscess, mucositis)
- Cystitis
- Non-surgical wound infection
- Tinea
- Cellulitis
- Conjunctivitis
- Pneumonia
- Genital candidiasis
- Medical prophylaxis
- Catheter-associated urinary tract infection (CAUTI)
- Other – urinary tract infection (UTI)
- Infective exacerbation of chronic obstructive pulmonary disease
- Other – eye
- Asymptomatic bacteriuria.

Many of these conditions can be effectively prevented through hydration management and diet, maintaining skin integrity, basic hygiene and IPC practices such as hand hygiene. The Aged Care NAPS has also consistently shown:

- Prolonged duration of antimicrobial prescriptions (prescribed for longer than is recommended in the [Therapeutic Guidelines: Antimicrobial](#) and the [Australian Medicines Handbook](#)).
- Extensive prescribing of topical antimicrobials, especially clotrimazole
- Prescribing antimicrobials for conditions that do not require antimicrobials (for example, asymptomatic bacteriuria)
- Frequent prescribing of PRN ('as needed') antimicrobials is not appropriate because antimicrobials should always be prescribed for a defined length of time
- Continuous prophylactic antimicrobial therapy, especially for urinary tract infections
- Incomplete documentation of indication, review and stop dates for unconfirmed infections.

A number of these characteristics of antimicrobial prescribing are not consistent with evidence-based treatment guidelines.

Suspected UTIs are one of the most common reasons for prescribing an antibiotic in Australian aged care settings, even when it is not appropriate to prescribe an antibiotic. Appropriate use of antimicrobials including antibiotics can be increased by implementing the Aged Care Quality and Safety Commission [To Dip or Not to Dip](#) program.



Resources

The ACSQHC includes Aged Care NAPS data in the national reports it prepares every two years on antimicrobial use and resistance in human health. The latest report is [AURA 2023: Fifth Australian report on antimicrobial use and resistance in human health](#). An associated [factsheet](#) for aged care is also available.

The [Antimicrobial Stewardship Clinical Care Standard \(2020\)](#) provides guidance on delivering appropriate care when prescribing antimicrobials (ACSQHC).

The ACSQHC has a range of information about [AMS in aged care](#) available on its website, including a [factsheet about how to access Therapeutic Guidelines](#) for advice on evidence-based prescribing for all medicines, including antimicrobials.

The National Centre for Antimicrobial Stewardship (NCAS) coordinates the Aged Care NAPS, which can be used for monitoring antimicrobial use in residential aged care. Visit [NCAS](#) to obtain Aged Care NAPS reports and information about participation in the survey.

Using antimicrobial medicines only when necessary and in accordance with evidence-based prescribing guidelines will help keep older people healthy and will ensure these medicines remain effective.

The role of infection prevention and control in AMR

IPC practices are a key part of an effective response to AMR. Preventing infection reduces the need for antimicrobials and therefore the opportunity for microorganisms to develop resistance. Vaccination also contributes to reducing the risk of AMR because it can prevent infectious diseases and reduce the prevalence of primary viral infections, which are often inappropriately treated with antimicrobials.

Antimicrobial stewardship

AMS is a systematic ongoing effort to reduce the risk of AMR by reducing and improving the use of antimicrobial medicines. An AMS program is a group of strategies that aim to promote the appropriate use of antimicrobial medicines. AMS programs should be tailored to the setting in which aged care is provided.

AMS is more challenging in aged care homes than in acute care facilities such as hospitals. In aged care homes there are logistical challenges with provision and availability of medical care and pharmacy support, and with accessing external infectious diseases expertise and diagnostic facilities. Nursing staff have a significant role in infection management and AMS and should be supported by the aged care home management and be provided access to appropriate resources. These resources include:

- The ACSQHC fact sheet [Access to Therapeutic Guidelines](#)
- The ACSQHC [AMS Book](#), especially Chapter 16
- [The Australian Medicines Handbook](#)
- [Therapeutic Guidelines: Antimicrobial](#)
- [Therapeutic Guidelines – Antibiotic Prescribing in Primary Care: Summary Table 2024](#).

AMS in aged care requires a collaboration between aged care workers, different services, older people and visitors.

Table 28 outlines the components that should be included in an AMS program in both residential and centre-based aged care organisations and home and community aged care organisations.

Table 28: AMS program components

Program component	Description	RCB	HC
Program governance	Governance bodies are accountable for development of AMS policies and procedures, and for integrating AMS with the aged service's quality and safety functions.	✓	✓
The AMS team	A successful AMS program requires a multidisciplinary team approach, in which relevant team members contribute to AMS within their scope of practice and responsibilities.	✓	✓
Policies and prescribing guidelines	AMS policies and procedures are based on evidence-based guidelines for the management of infections.	✓	N/A
Monitoring	Monitoring for resistant organisms and antimicrobial sensitivities can help make antimicrobial choices more appropriate and practical. When antimicrobials are prescribed, ongoing monitoring from all clinicians is essential. The Aged Care NAPS is a standardised audit tool that can be used by all residential aged care services to monitor antimicrobial use. The survey can be completed by senior nurses, infection control professionals and pharmacists. Facilities may also use other tools for monitoring purposes.	✓	N/A
Audit and feedback	Prescribers such as general practitioners (GPs) and nurse practitioners can audit their prescribing practices to monitor whether their prescribing patterns are consistent with their peers and with evidence-based guidelines and protocols. Aged care organisations may also rely on audit and feedback to monitor and improve the use of antimicrobials in their service. This may be via committees such as their medication advisory committee, or via their IPC team.	✓	N/A
Education and training	Although a successful AMS program requires team members to perform designated roles in AMS, all staff in aged care services have a role to play in AMS. More strategies to support AMS education are described in Chapter 6 of Antimicrobial Stewardship in Australian Health Care (the AMS Book).	✓	✓
Preventing and managing infections	IPC aims to reduce the risk of older people acquiring preventable infections. Infectious agents can easily be transmitted during care and come primarily from interaction with other people – older people, carers, aged care workers and visitors.	✓	✓

AMS = antimicrobial stewardship; HC = home and community aged care; IPC = infection prevention and control; NAPS = National Antimicrobial Prescribing Survey; RCB = residential and centre-based aged care

More information on these strategies can be found in Chapter 16 of [Antimicrobial Stewardship in Australian Health Care](#) (the AMS book).



Home and community aged care

Home and community aged care organisations that are involved in the administration or management of antimicrobial medicine should focus on **program governance**, developing an **AMS team**, **education and training**, as well as on **preventing and managing infections**.



Resources

- The Aged Care Quality and Safety Commission has developed the [AMS self-assessment tool for residential aged care services](#) to help residential aged care homes measure AMS activities undertaken and their contribution towards an AMS program.
- The NSW Health [AMS toolkit](#) provides information, resources and continuous quality improvement tools to improve AMS programs in health care. The resources can be adapted to suit local needs to review, improve and support current practices.

The antimicrobial stewardship team

The size of the AMS team may depend on the size of the organisation. Managers, registered nurses, enrolled nurses, personal carers, general practitioners (GP), pharmacists, geriatricians, other visiting health professionals and older people may form part of the AMS team.

Pharmacists have a significant role in supporting AMS programs in aged care organisations. They can provide assistance with AMS governance, develop policies and processes, provide education and training, and support the implementation of audits and feedback. Aged care organisations should be proactive in working with local pharmacists within the community and local health services. Pharmacists will often have insights and data about how much and what types of antimicrobials are being used in residential care facilities.

The IPC lead(s) or the person(s) responsible for IPC for the organisation also play important roles in supporting the AMS program and care outcomes. This may include:

- Engagement with and support for development and implementation of AMS policies and processes
- Promotion of and support for effective IPC and personal and clinical care to prevent and control infections
- Facilitation of awareness, education and training in AMS for staff and older people (this may require liaising with internal or external experts).

Involving older people and carers

Informing older people and carers about antimicrobial use and involving them in decisions about appropriate antimicrobial use is an important component of an AMS program. Many older people and carers may be aware that AMR is a problem, but their understanding of the nature of the problem and the role that they can play in preventing AMR is often limited. Those who administer, prescribe or assist in the preparation of medicine should support older people and carers to understand the appropriate use of antimicrobials by listening to their concerns, preferences and expectations. When discussing antimicrobial use and AMR, the messages should be clear, concise, and consistent. Information should be provided to help manage symptoms associated with infections and to clarify whether medical attention should be sought. Providing information on treatment options, including evidence of effectiveness, and likely benefits and risks of harm can support engagement and shared decision making.



Resources

The ACSQHC provides [information for consumers about antimicrobial resistance](#) and guidance to [implement AMS in community pharmacies](#).

The Aged Care Quality and Safety Commission provides information about [antimicrobial stewardship](#).

More information can be found in Chapters 7–12 and Chapter 16 of the [AMS book](#) and Section 4.5 of the [Australian Guidelines for the Prevention and Control of Infection in Healthcare](#).

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