Australian Commission on **Safety and Quality** in Health Care

# 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

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# Introduction

*The Aged Care Infection Prevention and Control Guide* (the Guide) supports the prevention and control of infections in all settings where aged care is provided. This Guide is a living document that supplements the Australian Guidelines for the Prevention and Control of Infection in Healthcare (AICGs) and is informed by resources developed by the Australian Commission on Safety and Quality in Health Care, the Aged Care Quality and Safety Commission, the Department of Health, Disability and Ageing (the Department) and the World Health Organization's infection prevention and control guidance.

The AICGs provide a nationally accepted approach to infection prevention and control (IPC). They focus on core principles and how healthcare organisations can reduce the impact of infection-related risks. They also provide a basis for workers and organisations to develop IPC guidelines, policies and procedures specific to local settings. Although the evidence that informs the AICGs is mostly based on acute healthcare settings, the principles of IPC are transferable and applicable to a variety of settings where aged care is provided.

Aged care services are used by many types of clients and in many types of settings. This Guide is designed to provide guidance on infection control for diverse client types and aged care delivery settings. As such, additional and complementary measures may be required for the care of people with specific conditions or needs (for example, disability or cognitive impairment) who may be receiving services in an aged care setting. This may require consideration of condition-specific and person-specific resources when delivering care.

The Guide is intended to support aged care organisations to meet the IPC-related requirements of the Aged Care Quality Standards and to minimise the risk of infection for older people and the workforce. The intended audience for this Guide is staff responsible for IPC in both residential and community aged care settings. However, this Guide may also support the aged care workforce and those providing care for older people to understand the basic principles of IPC and how to apply these principles using a risk-based approach. This Guide has been developed to help aged care organisations develop local policies and procedures to support IPC within their own organisation.

The development of this Guide was supported by a Reference Group that included members with expertise in aged care and IPC. The Reference Group advised on the initial scope of the Guide, including priority areas for review and recommendations.

## Existing guidelines

Aged care organisations and aged care workers should refer to relevant national guidelines, such as the Communicable Diseases Network Australia Series of National Guidelines to support the implementation of effective IPC measures. Decisions about IPC systems and practices should be informed by a thorough **risk assessment**, sound clinical judgement and discussions with people involved in care. This includes the older person, carers, families, aged care workers, the aged care organisation and other healthcare professionals.

For information about outbreak management for acute respiratory infections in residential aged care, aged care organisations should refer to the National Guideline for the Prevention, Control and Public Health Management of Outbreaks of Acute Respiratory Infection in Residential Aged Care Homes.

This Guide references Australian Standards relevant to IPC. A list of relevant Australian Standards can be found in **Appendix 1**. Australian Standards can be purchased from Standards Australia.

# Summary

Effective infection prevention and control (IPC) is central to providing high-quality aged care for all older people and a safe working environment for people who work in aged care settings. There is a known complexity to implementing IPC practices in aged care, especially when care is delivered in a communal or home environment. Since the COVID-19 pandemic, the implementation of IPC practices in aged care has become contentious, with many interventions resulting in extreme or prolonged restrictions, such as separation from loved ones and the unnecessary use of personal protective equipment (PPE). While it is important to aim to remove all risks associated with delivering an aged care service, this is often not possible. The aim of *The Aged Care Infection Prevention and Control Guide* (the Guide) is to promote a systematic, risk-based approach to IPC in aged care that ensures IPC practices are implemented using the hierarchy of controls, while also considering the impact on the older person's health and wellbeing.

In other words, the Guide is intended to assist aged care organisations in implementing IPC strategies informed by consideration of risks versus benefits for older people and workers. While the overarching aim is always to make the risk of infection as low as possible, other social and wellbeing factors must be considered so that IPC interventions and restrictions are not overly severe for older people, their family and carers.

This Guide is a supplementary resource designed to equip aged care workers, organisations, older people and carers with the tools and knowledge to apply a risk-based approach to IPC in aged care. The following key messages are included in this Guide.

## Risk assessment and management

Aged care settings differ in complexity and in local requirements, so risk assessment is essential to inform appropriate management, reduce infection risks and achieve a balanced approach to IPC. While it is important for organisations and aged care workers to aim to eliminate infection risks, this is often not achievable without affecting an older person's quality of life. This Guide promotes the hierarchy of controls model to support the development of IPC systems in aged care, and to identify effective strategies to prevent and control the risk of spreading infections. More information of the use of the hierarchy of controls is available from the Safe Work Australia Code of Practice, How to manage work health and safety risks.

This Guide explores the concept of risk acceptance, because aged care organisations must strike a balance between IPC practices and ensuring a high quality of life for older people. Recognising that it is often impracticable to completely eliminate risk, aged care organisations, older people, their carers, and the workforce should collectively accept a certain level of risk. Ensuring older people can always maintain essential visitor access is an example of how accepting a level of risk can uphold their quality of life.

# Person-centred care and wellbeing

Aged care services differ from acute care services because care is provided in an environment that is the older person's home. In aged care settings, the approach to minimising infection-related risks requires careful consideration of the quality of life of the older people to whom services are provided. That is, quality of life must be considered during risk assessment. Putting older people at the centre of IPC and enabling them to take part in their own care involves considering their needs in relation to mental health and social wellbeing at all levels of decision-making. These considerations should be **balanced** with maintaining an environment where care can be delivered in a manner that minimises the spread of infection and the impact on others receiving and providing care.

IPC-related risk assessments must ensure the rights of older people, as outlined in the Statement of Aged Care Rights, and worker rights (under the *Fair Work Act 2009*) are prioritised. This means protecting the rights of older people, while also ensuring the safety of the workforce.

# An IPC system suitable for aged care

All aged care organisations should set up an IPC system to prevent and manage infections effectively when they occur. An IPC system should include the core components (IPC-related guidelines and policies, audits and feedback, infection monitoring, and education and training) and include the key roles and responsibilities. This Guide acknowledges that there is no 'one size fits all' for IPC systems in aged care. Each system will need to be structured to reflect the service context, availability of resources, the older person's care needs and the workforce. The core components of an IPC system in aged care settings outlined in this Guide are based on information from the Australian Guidelines for the Prevention and Control of Infection in Healthcare and the World Health Organization's core components for IPC.

# STANDARD and transmission-based precautions

This Guide outlines the two types of precautions that should be used to prevent and control infections in aged care: STANDARD precautions and transmission-based precautions. STANDARD precautions are practices that must be used at all times, and include hand hygiene, the appropriate use of PPE, aseptic technique and waste management. Transmission-based precautions are extra precautions used alongside STANDARD precautions and are based on the ways that microorganisms or infections are spread. This Guide focuses on two broad types of transmission-based precautions: contact precautions and respiratory precautions. For most situations when an aged care worker is caring for a person with a respiratory infection, this Guide recommends that a surgical mask and eye protection are worn. In some unusual, infrequent, and higher-risk situations (for example, during aerosol-generating procedures), the use of a particulate filter respirator (PFR) may be appropriate instead of a surgical mask. This Guide recommends that the IPC lead(s) or people responsible for IPC be consulted before a PFR is used in aged care settings.

# Isolation

Isolation (this may be self-isolation in a home or community setting) is an effective method for reducing the spread of infections, especially in outbreak situations. However, prolonged periods of isolation can cause harm to the physical and psychological health of older people and can be challenging for older people with cognitive impairment. This Guide recommends that the decision to implement visitor restrictions (or encourage self-isolation in a home or community setting) should always be informed by a risk-based approach**.**

Employing a risk-based approach requires consideration of the hazards, the available controls, and the impacts of applying the controls. This includes impact on the risk of acquiring and spreading infections, as well as the potential impact on the mental, physical, and emotional state of older people.

This Guide uses the term ‘risk-based isolation’ to support aged care organisations and older people in understanding the benefits of isolation strategies, while also considering the risks that can result from prolonged periods of isolation. Isolation measures should only be implemented when they are necessary and when the benefit from the isolation is greater than the risk of harm, including psychological, emotional, and physical harm.

# Vaccination

This Guide strongly promotes vaccination for both aged care workers and older people. Being up to date with vaccination decreases the risk of serious illness for people of all ages, and also reduces the risk of transmission of infections to others.

A workforce screening and vaccination program in an aged care setting can significantly reduce the burden and transmission of vaccine-preventable diseases. Workforce screening programs aid in identifying workers with vaccine-preventable diseases and those at higher risk, which helps with IPC. Aged care organisations should establish processes to address seasonal and ongoing infection risks, such as influenza and COVID-19.

Unless required under state or territory public health regulation, vaccination should not be mandated. It should, however, be strongly encouraged, and programs that facilitate easy and timely access to vaccines should be put in place for both older people and aged care workers.

# Infection monitoring

Monitoring infections and IPC-related activities helps aged care organisations identify infection problems, the sizes of the problems, and the factors that may be contributing to the problems. This Guide promotes monitoring infections and IPC activities as a useful method to prevent and control infections in aged care. If implemented, infection monitoring should fit the needs and context of the service and be linked to a prevention strategy or a continuous quality improvement activity to drive change.

# Antimicrobial stewardship

Antimicrobial stewardship (AMS) is an ongoing effort to reduce the risk of antimicrobial resistance and improve the use of antimicrobial medicine for older people. Older people receiving aged care services experience higher rates of infection and have a higher overall rate of antimicrobial use compared to the general population. This Guide recommends that aged care organisations that prescribe, administer or oversee medication management maintain an AMS program to promote the appropriate use of antimicrobial medicines. AMS programs should be tailored to the residential, home or community setting where care is provided.

## How to use this Guide

This Guide is a resource and reference tool for aged care workers responsible for IPC in residential aged care services.

This Guide should be used to inform daily practice, as well as ongoing policy review and development, and assist aged care organisations in understanding how to meet their IPC obligations.

Key points are provided for each chapter. These points can be used as quick references at the point of care delivery or to inform educational activity in the aged care organisation.

# Chapter 1: Infection prevention and control in aged care

## Key points

- Governance is the structure, processes and culture affecting the way an aged care organisation is directed, administered and controlled.
- Clinical governance supports the delivery of safe, quality clinical care and good health outcomes for older people.
- Clinical governance and continuous quality improvement systems should be in place to support infection prevention and control (IPC) in all aged care organisations.
- An IPC system is an overarching program that details how an aged care organisation plans to prevent, reduce, and control infections.
- The structure of IPC systems for aged care will differ depending on the service context, the older person's care needs and the workforce. Overall, the core elements of an IPC system should include
    - policies and guidelines
    - audits and feedback
    - infection monitoring (for residential and centre-based aged care)
    - education and training.
- Processes for IPC systems in aged care should consider the key roles and responsibilities of the IPC lead (or the people responsible for IPC), management teams, the aged care workforce, the older person, national bodies, and local health service networks.
- To be effective, IPC systems in aged care require linkages with local health service networks including
    - local hospitals
    - public health units
    - primary health units
    - general practitioners and specialist medical practitioners
    - other specialist services, including allied health.
- An IPC system should be regularly evaluated to measure its effectiveness and ensure continuous quality improvement.

# Introduction

IPC is an important part of providing safe aged care services. Everyone providing care to older people in any aged care context, and anyone entering a residential aged care home, has a role and responsibility in preventing and controlling infection. This includes aged care workers, health professionals, families, visitors, contractors and carers. This chapter provides an overview of the elements of an effective IPC program in aged care settings.

## Governance and IPC

Governance is the **structure**, **processes** and **culture** within an aged care organisation that support the service to achieve good health outcomes for older people, and safe workplaces. A governance model should consider existing roles and responsibilities within the organisation, as well as their connections to national and jurisdictional bodies.

There are two primary types of governance that aged care organisations implement.

- **Corporate governance,** which relates to the systems by which an organisation is controlled and operates, and the systems by which it and its people are held to account.
- **Clinical governance**, which is implemented to support safe, quality clinical care and good health outcomes for older people. Clinical governance should oversee the provision of clinical care and include IPC. For more information on clinical governance, refer to the Aged Care Quality and Safety Commission (ACQSC) resources on **clinical governance** (for example, the Clinical Governance Standard).

# IPC system in aged care

An IPC system is an overarching program that details how an aged care organisation plans to prevent, reduce and control infections. All aged care organisations should set up an IPC system to prevent infections and manage infections effectively when they occur. IPC systems will differ depending on the size of the organisation, its context, the people it is delivering services to, and the complexity of services delivered. Regardless of setting, each aged care organisation should implement an IPC system as part of its clinical governance model to reduce the risks associated with infections.

All IPC systems should be structured on the basic principles of **risk management** and the **hierarchy of controls**, which are explained in **Chapter 5**.

The **core components** that make up the IPC system should include:

- IPC-related policies and guidelines
- education and training
- audits and feedback
- monitoring of infections (however, monitoring of infection is not a core component of an IPC system in home and community aged care organisations).

## Considerations

These components should be *considered* when developing an IPC system. The ability of an aged care organisation to implement these components effectively will depend on the setting and workforce availability, which is why careful consideration must be given to:

- staffing and service capacity (in context of the older person's needs)
- care environment
- equipment.



### Essential knowledge

As part of an IPC system, strategies for education, training, and emergency preparedness are required to prevent and control infections. Strategies should also be developed and maintained to promote the appropriate use of antimicrobials to limit the risk of antimicrobial resistance.

More information on STANDARD and transmission-based precautions can be found in **Chapter 6**.

More information on developing an antimicrobial stewardship system can be found in **Chapter 10**.

# The core components of an IPC system

## Guidelines and policies

If relevant to the services provided, aged care organisations should have, at a minimum, policies and guidelines in place for:

- STANDARD and transmission-based precautions, including the correct use of personal protective equipment (PPE)
- hand hygiene
- equipment reprocessing
- environmental cleaning
- waste management
- linen management
- sharps management
- workforce health and safety
- aseptic technique
- management of infectious people (including outbreak management for residential and centre-based aged care settings)

- workforce education and training
- continuous quality improvement.

These processes should be accessible to the workforce, reviewed regularly, and be monitored for compliance with established national and state and territory policies. **Guidelines and policies should always be relevant to the services provided by the organisation.**

# Education and training

## The workforce

Aged care organisations have a responsibility to provide access to ongoing education and training for their workforce. IPC education and training should be provided by the aged care organisation for all workers as part of their orientation and continuous education, as required to ensure workers have the skills, qualifications and competencies necessary for their roles. Each aged care organisation should maintain education and training policies that:

- define mandatory education and training requirements in relevant aspects of IPC, safety and quality, leadership and risk management for all members of the workforce
- support the provision of IPC-related education and training based on the requirements of the workforce
- evaluate the outcomes of education and training
- ensure that appropriate records are maintained of IPC-related education and training attended by each member of the workforce
- provide each member of the workforce with the opportunity (through performance review and development programs) to define their education and training goals and agree on opportunities to achieve these goals
- outline the expectations for those members of the workforce who are employed indirectly (for example, using contract arrangements) to ensure they have the required qualifications, training and skills to effectively perform their roles.

IPC-related training pathways should exist for all aged care workers, regardless of level or position, and be relevant and appropriate for the role of the worker. Training should be provided in a variety of formats, including:

- face-to-face training sessions
- mentoring and reflective discussions
- online learning modules
- audio and video content
- competency-based assessments.

Training and education programs should be regularly evaluated, and worker knowledge assessed to ensure that the program is effective.

For more information on IPC education, refer to **Chapter 6**.

## Practice point

### Rural and remote aged care

Regardless of size or location, all aged care organisations need a system to ensure that the workforce is trained and competent in preventing and controlling infections appropriate to their contexts. Aged care organisations in rural and remote settings often face unique challenges in delivering clinical care, including IPC. Challenges include isolated working environments and extreme weather. In some situations, services may be delivered outdoors and access to infrastructure, such as running water, may be limited.

The principles of IPC (including STANDARD and transmission-based precautions) are transferable and must be adapted to suit various environments. Understanding the location and attending the service prepared is essential, especially in unusual, isolated settings. For example, if an aged care worker is providing a wound care service in a home without access to running water, they should consider whether they have an adequate amount of alcohol-based hand rub (ABHR) and wound-cleansing products to ensure an uninterrupted service. An appropriate and clear plan for escalation of care (such as a telehealth service) can facilitate appropriate support if an infection is suspected or confirmed.

Overall, aged care organisations in rural and remote settings should ensure that workers are appropriately prepared with resources (see the IPC kit for home and community aged care organisations in **Chapter 6**) and adequate, tailored training that highlights the importance of risk assessment and management (see **Chapter 5**).

A list of key clinical guidelines and manuals commonly referred to in remote practice can be found on the National Aboriginal Community Controlled Health Organisation webpage.

## Resources

The ACQSC provides educational videos on hand hygiene (including helping others with hand hygiene, washing hands with soap and cleaning hands with sanitiser) for partners in care.

The Aged Care Learning Information Solution (Alis) has a series of online eLearning modules that can be used for training. These include:

- The basics of infection prevention and control in aged care
- The basics of infection prevention and control in aged care: Train the trainer
- Hand hygiene for non-clinical healthcare workers
- Hand hygiene for clinical healthcare workers
- Principles of infection prevention and control.

## The older person

The provision of education to older people and their family, carers and visitors is an effective way to reduce the spread of infection in aged care services and increase knowledge of IPC in the public. Providing basic and relevant training to older people, carers and family members empowers them to feel comfortable to ask questions about care and take part in IPC activities.

It can also promote sustainability of care in the community by teaching older people to manage their own care safely. Aged care workers should continually provide education to older people and carers on general IPC topics, such as hand hygiene, respiratory hygiene and cough etiquette.



### Practice point

#### Education for older people and carers

Older people living in the community may be responsible for their own care or have other people, such as family members, carers, friends or neighbours providing their care. Aged care organisations should be proactive in providing IPC-related education to primary carers to empower them to provide high-quality care. The type of education provided will differ depending on the care needs and the environment. For example, an older person who requires care for a chronic wound or suprapubic catheter may benefit from education on aseptic technique and hand hygiene, in addition to other basic elements of IPC, especially if they are managing these care needs themselves.

More information on education for the older person can be viewed in **Chapter 4** and on the ACQSC Infection prevention and control webpage.

# Audits and feedback

The purpose of implementing regular audits and feedback is to improve IPC practices and to identify what practices need to be improved. To be effective, auditing must be accompanied by feedback to ensure best practice is understood and followed. Auditing can be implemented on many IPC practices, including environmental cleaning, aseptic technique, hand hygiene and PPE. Audit results should be shared with the aged care worker being audited and others to encourage learning.

In addition to auditing individual practices, aged care organisations should ensure that the overall IPC system is regularly evaluated to assess whether objectives are being met and identify aspects that may need improvement. They should include measures to improve the culture of IPC and ensure services strive for best practice.

### Resources

**Auditing tools**

- National Hand Hygiene Initiative hand hygiene and product availability audit tools (Australian Commission on Safety and Quality in Health Care)

**Continuous quality improvement tools**

- Quality improvement tools (Clinical Excellence Commission)
- Learn about quality improvement (Safer Care Victoria)
- How to get started in quality improvement (BMJ)

## Monitoring infections

Monitoring of infections is not a core component of an IPC system in home and community aged care organisations; however, it should be considered for implementation, when possible.

This IPC component involves keeping close watch over the various types of infections that are spread through the delivery of care services. This involves collecting local data on common infections and undertaking interventions to reduce the spread of infections.

Aged care organisations can use this component to identify patterns of transmission so that strategies and practices can be implemented to reduce the rate and spread of infections. Monitoring infections helps aged care organisations identify whether there is an infection problem, the size of the problem and the factors contributing to the problem. This can also be done by collecting and monitoring data on vaccination rates, device-associated infections, and infections caused by multidrug-resistant organisms.

Overall, the process of monitoring infections will not change the rate or spread of infections unless it is linked to a prevention strategy (such as effective continence management to prevent urinary tract infections) or continuous quality improvement activity.

### Practice point

#### Monitoring urinary tract infections

A residential aged care organisation may choose to monitor older people diagnosed with a urinary tract infection (UTI) that is not associated with an indwelling catheter. The ACQSC has produced a resource that may assist with monitoring UTIs. The ACQSC To Dip or Not to Dip standardised audit tool provides a clinical definition for UTI diagnosis. In addition, facilities that participate in the Aged Care National Antimicrobial Prescribing Survey can use the audit tool provided for this purpose.

**Case study**

After a period of monitoring UTIs (by collecting and analysing data), the IPC team notices a high rate of UTIs within the service. The IPC team begins a process of auditing various IPC and clinical practices to find out what factors may be contributing to the high rate of UTIs. This process reveals critical gaps in how some workers manage continence and hygiene for older people, especially those in the dementia wing.

The IPC team has now successfully identified multiple issues that may be contributing to the high rate of UTIs. The IPC team initiates several improvement strategies (including retraining the workforce on continence and hygiene support, and on the appropriate use of dipstick tests) to reduce the rate of UTIs. Implementing these strategies means that the data collected will have been meaningful and used to improve practice. If the IPC team did not undertake any further investigations after collecting the data on UTIs or did not implement improvement strategies, then monitoring the infection rate would have served no purpose.

More information on monitoring infections and continuous quality improvement can be found in **Chapter 8**.

# Other considerations

## The care environment

Aged care services are delivered in many different environments, including homes, residential care homes, in the community and in centre-based facilities. More information on the types of aged care services can be found on the Department of Health, Disability and Ageing website. In this Guide:

- **residential and centre-based aged care** refers to any aged care service provided in a dedicated service environment, such as a centre-based facility or residential aged care home
- **community and home aged care** refers to aged care services offered in an older person's home, in the community or through a flexible care program.

## Residential and centre-based aged care organisations

All aged care organisations should consider the minimum requirements to prevent and control infections relevant to the care environment. This includes components for which minimum standards are set by legislation – for example, lighting, ventilation, access, heating and cooling. Residential aged care homes must be certified to determine if the building meets certain minimum building standards.

Aged care organisations must also be proactive in identifying hazards related to the built environment, including environmental contaminants and potential service disruptions relating to water supply, power supply, fires or delays in resource supply. These hazards must be integrated into existing risk registers and management systems, where appropriate. More information regarding risk management can be found in **Chapter 5**. Important considerations for the built environment, including design strategies that support good IPC, can be found on the Department of Health, Disability and Ageing Improving accommodation in residential aged care webpage.

## Community and home aged care organisations

Providing aged care services within a home or community environment poses unique challenges when identifying and managing risks in the environment where care is provided. Aged care workers may be exposed to infectious diseases when providing care services in a community or home setting through activities such as personal care; contact with blood and body fluids; handling contaminated equipment, linen, waste and household cleaning products; unsafe food handling and storage practices; and contact with mould, animals and animal excretions.

While it is difficult to control the immediate care environment during the provision of home and community aged care services, it is always best practice to do a first (and then regular) environmental risk assessment of the older person's home to identify any immediate hazards (such as poor ventilation) that may impede the provision of care and services. This is in addition to managing any potential work health and safety risks (such as pets or access issues) to the workforce providing care.

## Home and community aged care

An environmental risk assessment (also known as a home or community risk assessment) should ideally be undertaken before the first home visit. The assessment aims to identify and assess all the relevant risks that are in the environment where care is to be provided. Environmental risk assessments should consider:

- **physical risk:** includes heat, cold, noise, electrical and fire; access to the home and the home environment; slips, trips and falls hazards; and the presence of pets
- **chemical risk:** includes potential chemical exposures, such as to cleaning products, cigarette smoke and odours
- **biological risk:** includes infections and exposure to blood and body fluids
- **psychosocial risk:** includes mental health, behavioural or cognitive health concerns of the older person and persons present during the provision of care.

The aim of conducting a risk assessment may not be to eliminate every risk identified, but to reduce the risk to both the older person and the aged care worker. More information on risk assessment and management can be found in **Chapter 5**.

To reduce or mitigate the level of risk, risk modification strategies should be considered, such as:

- maintaining processes for the appropriate management of both clean and soiled linen when access to a washing machine or dryer is not available; for example, by taking laundry to a local laundromat
- identifying methods to improve natural ventilation when an older person's home does not provide enough ventilation or emits strong odours
- identifying hand washing facilities within the home or community for workers
- providing aged care workers with ABHR, especially where hand washing facilities are not readily available or appropriate in a person's home
- ensuring aggressive pets are secured before the worker arrives
- suggesting the service occur at a different location if the home environment poses environmental or safety risks (such as hoarding or squalor). Possible locations may include the local shopping centre, park or a family member's home.

## Equipment

Aged care organisations should ensure that their workforce has access to the equipment needed to perform each IPC practice safely. For both residential and home and community aged care organisations this should, at a minimum, include:

- hand washing facilities with water, soap and clean paper towels at the point of care
- ABHRs at the point of care
- enough appropriate PPE as per work health and safety requirements
- puncture-resistant sharps containers
- containers and bags for segregating waste
- supplies necessary for cleaning and disinfection to maintain a hygienic care environment
- equipment to perform aseptic procedures.



### Home and community aged care

More information on an IPC kit for community care organisations can be found in **Chapter 6**. The IPC kit provides recommendations about the IPC-related equipment aged care workers should be provided with during visits.

## Workload, staffing and service capacity

All aged care workers should have suitable qualifications, experience or training to perform IPC practices relevant to their role. Maintaining an adequate and sustainable workforce is essential to preventing and controlling infections. Therefore, contingency planning is an essential component of workforce management plans. It is recommended (if possible) that there is at least one or two other aged care workers who have an in-depth understanding of IPC besides the IPC lead. These other aged care workers need to be willing to step into the IPC lead role, if required.

The aged care workforce is an important part of an IPC system. Aged care workers play a vital role in general clinical and care activities and therefore should be well supported to have a solid understanding of IPC principles. If the aged care workforce understands IPC and risk management, the IPC leads or people responsible for IPC will be better supported to drive good practice.

Every aged care organisation will have different management structures and workforces, and offer different services in different settings. This means every aged care organisation must develop an IPC system informed by a local risk assessment and incorporate the core components based on the risks and needs of the service.

### Home and community aged care

Home and community aged care organisations may not employ a registered nurse because the care services offered do not require that level of clinical knowledge (for example, personal care, social support or home maintenance). Despite this, there is still a risk of spreading infections when providing these care activities, and an IPC system should be established that considers the core components. Possible core components are listed below.

- **Policies and guidelines:** At a minimum, each organisation should have IPC-related guidelines and/or policies on STANDARD and transmission-based precautions, use of PPE, hand hygeine, equipment reprocessing, waste management and work health and safety.
- **Education and training:** All aged care workers should receive basic IPC training that is relevant to their role. This may include hand hygiene, PPE, environmental cleaning and linen management.
- **Audits and feedback:** The aged care worker(s) responsible for IPC should consider how IPC practices, such as hand hygiene, using PPE and cleaning can be effectively monitored and audited to ensure adherence to policies and guidelines. This may include competency assessments, occasional joint visits and surveys of both older people and the workforce. Analysis should consider how the results of monitoring and audits can be used to continually improve practice.
- **Surveillance:** The organisation should review their client list and the type of care provided to see whether monitoring infections or IPC-related activities (such as hand hygiene) can be implemented effectively. The provider should also consider monitoring workforce vaccination status.
- **Other considerations:** It is important to conduct environmental risk assessments before or during the first home visit to ensure all infection risks and hazards are identified (risks include poor ventilation, pets and unhygienic care spaces). Also, ensure that mitigation strategies can be developed, so that care can be provided in a way that is safe for both the older person and the aged care worker.

# Roles and responsibilities

IPC must be a priority at all levels of the service and included in education and training processes. Making it a priority at all levels sets up a culture in which IPC is everyone's business. Managers and those responsible for IPC in aged care services must effectively collaborate and involve older people, their family and carers, the workforce, local partners, and jurisdictional and national governing bodies as partners to effect change and achieve the best possible outcomes. Roles that are important for an IPC system to work effectively and drive a positive IPC culture are:

- management
- IPC lead(s) or people responsible for IPC
- the aged care workforce
- the older person and their carers.

## The management team

The management team should incorporate the IPC system into the annual business plan to ensure appropriate resources (both financial and human) can be allocated. Part of this will include ensuring appropriate IPC-related training for everyone in the workplace and ensuring that a contingency plan is in place for the IPC lead(s) or people responsible for IPC. This planning will ensure the program is effective and sustainable for the service. The management team should also support the IPC lead(s) or people responsible for IPC with regular discussions and feedback. The IPC system must be person-centred and uphold the rights of older people, as articulated in the Statement of Aged Care Rights, especially when complex situations must be managed – for example, an infectious outbreak in a dementia wing. The management team must regularly review monitoring and auditing data to ensure trends are identified and managed effectively.

## IPC lead(s) or people responsible for IPC

IPC leads are aged care workers who provide on-the-ground leadership and guidance around IPC. Depending on the size and type of aged care service, this leadership may include:

- supporting the inclusion of IPC within policy and procedures across the organisation
- providing communication to the workforce and older people on IPC issues and initiatives, as well as on relevant new local and national guidance
- IPC-related training and education for the workforce and older people
- identifying gaps in IPC-related practice or training and identifying opportunities for continuous quality improvement and learning
- conducting IPC-related monitoring and audits.

The *Aged Care Act 2024* strengthened IPC obligations. Registered providers in Categories 4, 5 or 6 must:

- have an appropriate IPC system for delivery of aged care services
- ensure that aged care workers use hygienic practices and take appropriate IPC precautions when delivering aged care services.

Registered providers in Categories 5 or 6 must:

- ensure that individuals, aged care workers, registered health practitioners and others are encouraged and supported to use antimicrobials appropriately to reduce risks of increasing resistance
- ensure that all infection risks are minimised and, if they occur, are controlled effectively.

Aged care providers must comply with all applicable registration conditions and the Aged Care Quality Standards. The degree to which providers conform with the Aged Care Quality Standards is tested regularly through the audit process.

The ACQSC's website has more information on the Standards and the registration categories.

Implementing an IPC lead (or leads) within an organisation, including roles and responsibilities, is covered in **Chapter 3**.

## The aged care workforce

There are many workforce roles in aged care, with varying responsibilities and levels of engagement in residential, centre-based, home and community care. Some provide direct care to older people. These include clinical coordinators, nurses, pharmacists, support staff, personal care workers, allied health professionals and assistants, nurse practitioners, general practitioners, geriatricians and other medical specialists. Other workers have non-clinical roles, such as cleaners, transport drivers, gardeners, chefs and volunteers. A multidisciplinary approach to IPC in aged care is important to provide comprehensive care for older people and ensure that everyone is trained appropriately in relevant IPC practices. Two-way discussions are required for clinical communication about IPC issues within the aged care workforce and with other service providers, such as non-emergency patient transport, ambulances, hospitals and community health services, and the older person's carers. These discussions should address the older person's infection status and necessary precautions, and any change in their immune status. This practice ensures continuity of care and promotes the safety of the older person, their carers, and healthcare workers across various settings. It should also include the older person's wishes for care.

IPC practices are incorporated into the daily practices of both clinical and non-clinical aged care workers. The type of IPC that must be implemented by each worker depends on the requirements of their role, the client population they work with, training provided and contractual obligations (for example, agency staff). Aged care workers should escalate any breaches of IPC they witness. Escalation should be carried out by other workers according to local policy. They should actively take part in monitoring, auditing and continuous quality improvement programs, as required.

# The older person and their carers

Older people and carers should be encouraged to be involved in IPC practices. Partnerships with older people and carers, also known as 'partners in care', should be comprised of many different practices – from communication and reflective listening, through to shared decision making, self-management support and care planning. Strategies to encourage older people and their families and carers to become partners in their own care, especially regarding IPC, can include:

- providing education on STANDARD precautions (such as hand hygiene)
- obtaining and documenting individual needs, preferences and goals
- encouraging and prompting older people to ask questions during care activities
- providing education on IPC-related topics to support self-management, such as appropriate cleaning methods or the management of an invasive device.



### Resources

ACQSC developed the Partnerships in care program to support older people and their family, friends or carers to build their knowledge and skills in IPC. Further resources to assist in providing IPC-related education to older people can be found in:

- the Australian Commission on Safety and Quality in Health Care IPC resources for consumers
- the Australasian College of Infection Prevention and Control's IPC consumer resources.

# Governing bodies

All approved aged care organisations must work within national, state and territory legislation requirements for the aged care system. The primary governing bodies in the aged care sector that provide IPC-related guidance and support are outlined in **Table 1**.

**Table 1** Governing bodies that provide IPC-related guidance and support

| Governing body | Role in health and aged care |
|---|---|
| **The Department of Health, Disability and Ageing** | The Department of Health, Disability and Ageing (the Department) is responsible for developing aged care legislation and policy, as well as the development of aged care-related programs that support older people to navigate and use services (such as My Aged Care). While the Department maintains the Aged Care Quality Standards, registered aged care organisations are regulated by the ACQSC. |
| **The Aged Care Quality and Safety Commission** | The ACQSC is the national regulator of aged care services. This role includes approving organisations for the delivery of residential, home and flexible aged care services, registration of quality assessors, accreditation, quality audits, monitoring the quality of care and services, complaints resolution, education, monitoring compliance, and imposing sanctions when needed. |
| **The Australian Commission on Safety and Quality in Health Care** | The ACSQHC supports health service organisations (such as hospitals and multi-purpose services) to provide safe, high-quality and sustainable health care by maintaining the National Safety and Quality Health Service Standards. While the ACSQHC maintains the healthcare standards, health service organisations are regulated by the state and territory health departments. |
| **State and territory health departments** | State and territory health departments are responsible for regulating and managing public hospitals, regulating and licensing private hospitals, providing oversight of local health networks, delivering public community-based and primary health services and delivering preventive services, such as immunisation programs. State and territory health departments usually work with the Department to ensure older people can get appropriate care. This care is often provided by government-funded services, such as Aged Care Assessment teams, Regional Assessment Services and Transitional Aged Care Programs. Some states and territories also deliver residential aged care services. |

ACQSC = Aged Care Quality and Safety Commission; ACSQHC = Australian Commission on Safety and Quality in Health Care

### Resources

Various legal requirements affect the provision of IPC and clinical care in health and aged care services. An aged care IPC system should be informed by these legislative requirements. The Aged Care Act 2024 is the principal legislation for government-funded aged care.

Organisations can view their most relevant state or territory specific IPC guidance using the ACQSC IPC location-based guidance tool.

## Local networks and support

Building partnerships and collaborative relationships in an aged care IPC system is essential to building a sustainable service that drives a strong culture of safe care supported by a multidisciplinary team with complementary expertise, knowledge and skills. The roles of various local networks and supports are outlined in **Table 2**.

**Table 2** Local networks and supports in health and aged care

| Local networks and support | Role in health and aged care |
|---|---|
| **Public health units** | The role of a public health unit (PHU) is to identify and prevent public health risks to the community through three main teams: communicable diseases, immunisation and environmental health. PHUs work closely with general practitioners, community services and hospitals, pathology laboratories, schools and childcare centres, local councils and aged care homes, and with other government agencies to protect public health. Aged care organisations should link with their local PHU to support preventive health interventions, such as delivering seasonal vaccinations and dealing with outbreaks of infectious diseases.<br>**Services provided by PHUs may differ between jurisdictions and local networks.** |
| **Local hospitals** | Hospitals deliver various acute care services to the community through inpatient and outpatient services. Some hospitals provide outreach services to residential and centre-based aged care services that aim to reduce hospitalisation and increase quality of care. |
| **Primary Health Networks** | PHNs are coordinating bodies that work directly with GPs and others to increase the efficiency and effectiveness of health services and improve the coordination of care between services or organisations. Aged care organisations should link with their local PHN to support standardisation of care for infectious diseases. |

| Local networks and support | Role in health and aged care |
|---|---|
| **General practitioners and other specialists** | GPs are the primary medical care professionals for older people living in both residential and centre-based aged care homes and those receiving care in the community. GPs are one component within a multidisciplinary care team that provides care to older people. This team may include a variety of health professionals, such as nurse practitioners, allied health, geriatricians, pharmacists, podiatrists and more. All these health professionals are important in maintaining quality clinical care to ensure infections are not just controlled, but also prevented when possible, and should work together collaboratively to achieve common goals for the older person. |
| **Other services** | The aged care sector is supported by a variety of other services including community-based health services, private pathology companies and pharmacies to assist in specimen collection, testing, medication management and quality use of medicines. These services are important for maintaining an AMS program and detecting infections quickly, both of which are essential to an IPC system. |

AMS = antimicrobial stewardship; GP = general practitioner; IPC = infection prevention and control; PHN = Primary Health Network; PHU = public health unit

# Continuous quality improvement

Continuous quality improvement (also known as continuous improvement or quality improvement) is the ongoing effort to improve an IPC system. When improving an IPC system, those responsible for IPC should use varied methods and strategies to ensure comprehensive and sustainable improvements are made.

The use of **multimodal strategies** can support organisations to ensure IPC systems are comprehensively reviewed and improved. A multimodal strategy uses multiple methods to implement and improve a practice change.

Using a multimodal strategy will include implementing changes to various areas in an organisation to improve practice effectively and sustainably. This may include system or administrative changes, implementing training and education for workers or older people, monitoring change and providing feedback, communicating the change, and implementing the change into practice.

Using a multimodal approach to improve an IPC system should generally consist of at least three of the five elements listed below, implemented together to guide improvement. The five elements for IPC multimodal strategies include:

1. **system changes** required to the built environment, equipment and other resources
2. **training and education** required to improve workforce knowledge
3. **monitoring and feedback** to assess the problem and communicate the outcomes
4. **reminders and communications** to promote the improvements
5. **a culture of safety** to encourage a workforce that values the intervention, with a focus on involvement of management, IPC lead(s) or people responsible for IPC.

## Practice point

### A multimodal approach to hand hygiene

If an aged care organisation is trying to improve hand hygiene practices using multimodal strategies, they may consider using three or more of:

- system changes, such as ensuring access to hand hygiene products and hand washing facilities
- training and education, such as regular online or face-to-face hand hygiene training
- monitoring and feedback, such as doing hand hygiene competency assessments and providing feedback to the aged care worker
- reminders and communications, such as sending online reminders on the importance of hand hygiene and using posters or fact sheets
- a culture of safety and leadership, such as management regularly reviewing IPC data, and IPC lead(s) or people responsible for IPC leading by example and creating a culture that values improvements to hand hygiene practices.

## Resources

- The ACQSC's IPC governance self-assessment checklist can assist in evaluating IPC systems.
- The ACQSC provides more information on the requirements of continuous improvement.
- See the WHO multimodal improvement strategy.

# Chapter 2: The basics of microbiology and infection prevention and control

## Key points

- Microorganisms include bacteria, viruses, fungi and some parasites, and these can all cause infections.
- Once a microorganism enters a person's body, either colonisation or infection can occur, where
  - colonisation means that the microorganism is present on or in the body without causing infection or disease
  - infection means that the microorganism has entered and multiplied in or on the body and the person shows signs of illness.
- The chain of infection is an important concept that helps to explain how an infection spreads.
- The aim of infection prevention and control (IPC) is to interrupt the chain of infection to stop the spread of infection.
- Microorganisms that are spread through aged care services are usually from human sources, such as older people, aged care workers and carers.
- Effective IPC in aged care settings is essential for the high-quality care of older people and a safe working environment for aged care workers, families and visitors.

## The basics of microbiology

Microorganisms exist naturally in animals, people and the environment, and can cause infection. Some microorganisms, such as certain types of bacteria, are beneficial and are part of the body's normal flora, providing protection and other health benefits, such as helping to digest food, prevent diseases and produce vitamins.

Normal flora refers to the collection of 'helpful' microorganisms. These usually cause no harm and are found in or on all people. These microorganisms are acquired soon after birth and continuously reproduce, multiply and change throughout a person's life. Under certain conditions, the normal flora *may* cause a harmful infection. This may occur when the body's defences are lowered (such as in some older people) or if skin or a mucous membrane is damaged (such as an acute or chronic wound), or if a person is immunosuppressed.

Antimicrobials are medicines used to treat and prevent infections. They include antibiotics, antivirals, antifungals and antiparasitic medicines.

### Essential knowledge

Microbiology is the study of living things that are usually too small to see without a microscope, such as bacteria, viruses, fungi and most parasites. These are called microorganisms (*micro* meaning small and *organism* meaning living thing).

Microbiologists study microorganisms and how they affect the health and safety of humans.

The microbiome is the collection of these microorganisms that live in or on the body, the environment or in animals.

A variety of terms may be used to refer to microorganisms, including ‘germs’, ‘pathogens’, ‘bugs’, ‘microbes’, ‘infectious organisms’ and ‘pathogenic organisms’.

### Practice point

#### The downside of antibiotics

Only use antibiotics when they are essential. An older person may be prescribed a course of antibiotics to treat a specific type of bacterial infection. But sometimes antibiotics disrupt the body’s normal gut flora (good bacteria), causing symptoms such as diarrhoea, and in some cases, complications such as *Clostridioides difficile* infection.

## Types of microorganisms

Table 3 outlines microorganisms that can affect the health and safety of humans and the antimicrobial treatments that may be used.

**Table 3** Types of microorganisms and antimicrobial treatments

| Microorganism | Description | Antimicrobial treatment |
|---|---|---|
| **Bacteria** | Bacteria can survive in many environments. They must enter the body to cause an infection. Therefore, bacterial infections can occur through a skin opening (wound or insect bite), the airways (bacterial pneumonia), the urinary tract (bladder and kidney infections), eyes, blood or dental injuries/diseases. | Antibiotics, also known as antibacterials, only work against infections caused by bacteria. They can be administered as oral, intramuscular or intravenous medicines. |
| **Viruses** | Unlike bacteria, viruses require a living host (such as a person, plant or animal) in which they can live, grow and multiply. Viruses are unable to multiply outside a living host. After entering a host, a virus enters and uses the host's cells to multiply. Examples of viruses include respiratory viruses (such as respiratory syncytial virus [RSV] and influenza), systemic viruses (such as measles, rubella, herpes and varicella-zoster), gastrointestinal viruses (such as rotavirus and norovirus) and bloodborne viruses (such as hepatitis). | Viral infections cannot be treated with antibiotics. Antivirals can be prescribed as oral, intramuscular or intravenous medicines.<br>There are vaccinations for many viruses. These offer a simple, safe and effective way to protect older people and aged care workers. |
| **Fungi** | Fungi are mostly found in the environment. Yeast, mildew, and moulds are types of fungi. There are millions of fungal species, but only relatively few species make people unwell. Anyone can get a fungal infection; however, they are more likely to cause infections in people with weakened immune systems, or who have received antibiotics. This may often include older people. Common types of fungal infections are vaginal candidiasis, nail infections, oral thrush and ringworm. | Antifungal medicines only work against fungal infections. Antifungals can be prescribed as oral, intravenous or topical medicines. |
| **Parasite** | A parasite is a larger organism than a bacterium, and lives on or in a host and gets its food from, or at the expense of, the host. Some are large enough to see. Examples of common parasitic infections are giardia, bed bugs, head lice, intestinal worms and scabies. | Antiparasitic medicines usually only work against parasitic infections. Antiparasitics can be prescribed as oral or topical medicine. |

# Antimicrobial resistance

Antimicrobial resistance (AMR) occurs when a microorganism cannot effectively be treated by an antimicrobial.

The self-defence processes that microorganisms develop against antimicrobials are known as ‘resistance mechanisms’. Microorganisms, such as bacteria and fungi, can carry genes that encode for a variety of resistance types. When microorganisms that are already difficult to treat acquire or develop the right combination of these resistance mechanisms, antimicrobial treatment may become ineffective.

All antimicrobial use contributes to the development of AMR, which is why unnecessary or inappropriate use of antimicrobials is especially concerning. The spread of resistant microorganisms (sometimes called *superbugs*) can be reduced by effective IPC practices.

Monitoring (also known as surveillance) of antimicrobial use and resistance in Australia has shown high rates of antimicrobial use, which are not consistent with treatment guidelines in aged care homes.



**Resources**

This Australian Government resource outlines the current challenges associated with antimicrobial use in aged care and presents actions for aged care workers and organisations to prevent and control AMR and ensure appropriate antimicrobial use.

More information on AMR can be found in **Chapter 10**.

# Multidrug-resistant organisms

Multidrug-resistant organisms (MROs) are microorganisms that can survive and cause infection when being treated with a variety of different antimicrobials that once effectively killed them. Infections caused by MROs cannot be effectively treated with antimicrobials. This may result in an older person needing hospitalisation for treatment. On occasion, these infections may be untreatable. MROs are challenging in a variety of healthcare settings, especially in aged care.

The most common types of MROs found in aged care services include:

- methicillin-resistant *Staphylococcus aureus* (MRSA)
- vancomycin-resistant enterococci (VRE)
- carbapenemase-producing *Enterobacterales* (CPE).

A local risk assessment should be conducted to determine the precautions needed for older people diagnosed with an MRO.

**If an older person is colonised with an MRO** but shows no signs or symptoms of infection (for example, all wounds are healed, and the older person is not on antimicrobial treatment) and can independently manage personal hygiene, the use of STANDARD precautions by aged care workers is suitable for ongoing management. The older person should be encouraged to clean their hands before entering a group activity or dining areas.

**If an older person is infected with an MRO** (for example, they have an infected wound site requiring antimicrobial treatment), STANDARD and contact precautions should be followed. This includes:

- performing hand hygiene and wearing aprons or gowns when providing care, and wearing gloves if likely to come in contact with blood or body fluids
- using dedicated or single-use equipment
- using a single room if possible and minimising unnecessary movement around the residential aged care homes
- ensuring consistent cleaning and disinfection of surfaces and shared equipment close to the older person, as well as surfaces and equipment likely to be touched by the older person and aged care workers
- ensuring that wounds are covered and wound dressings are changed regularly, and continence is managed to support the older person to participate in daily activities
- encouraging the older person and others to perform hand hygiene before and after group activities.

Isolation of the older person with an MRO should be avoided, because this is the older person's 'home' environment. The use of isolation to manage infection risk must always be balanced with the social, mental and physical wellbeing of the older person.

For information on MROs and transmission-based precautions, refer to **Type and duration of precautions for specific infections and conditions in aged care** in **Chapter 6**.



## Practice point

### Managing MROs in different settings

**In residential and centre-based aged care**, if an older person experiences symptoms of an infection, it is important that a general practitioner (GP) or nurse practitioner provides a clinical review (either face to face or via telehealth). They will then decide whether the older person requires further monitoring and investigation. An infection caused by an MRO will often only be identified after an antimicrobial medicine has been prescribed and has not been effective, or when microbiological testing is undertaken.

**In home and community aged care**, if an older person is showing symptoms of an infection, the aged care worker should notify the appropriate workforce member (this may be the person responsible for IPC, the care coordinator, manager, or other workforce member). a risk assessment can be undertaken to decide how services will continue to occur while reducing the risk of infection. Various information must be gathered for the risk assessment.

- What personal protective equipment (PPE) is needed?
- Are all workers trained in transmission-based precautions?
- Is there a need for more services to be put in place, such as wound or specialist catheter care?

# Colonisation and infection

When a microorganism enters a person's body, **colonisation** or **infection** can occur.

**Colonisation** means the microorganism is present on or in the body without causing infection or disease. If a person is colonised with a microorganism, it can be spread to other parts of their body or to other people, where it may develop into an infection. Although antimicrobial treatment is not recommended for colonisation, IPC practices, such as hand hygiene and appropriate use of PPE, are required.

### Practice point

#### What does a wound swab tell you?

Aged care workers will often come across the term colonisation on a microscopy, culture and sensitivity (MC&S) report after taking a wound swab. If a wound swab result is positive for a microorganism, but the older person is asymptomatic and the wound has no signs of infection, then the older person is colonised with the microorganism. If the wound is colonised, it may take longer to heal, however, the older person does **not** require antimicrobial treatment.

**Infection** means the microorganism has entered and multiplied inside the body and is spreading. A person with an infection is usually unwell. An infected person may or may not have symptoms, depending on their health and immune status, age and the severity (also known as virulence) of the microorganism. If a person is showing signs of being unwell, then careful consideration is needed to work out the appropriateness of using antimicrobials.

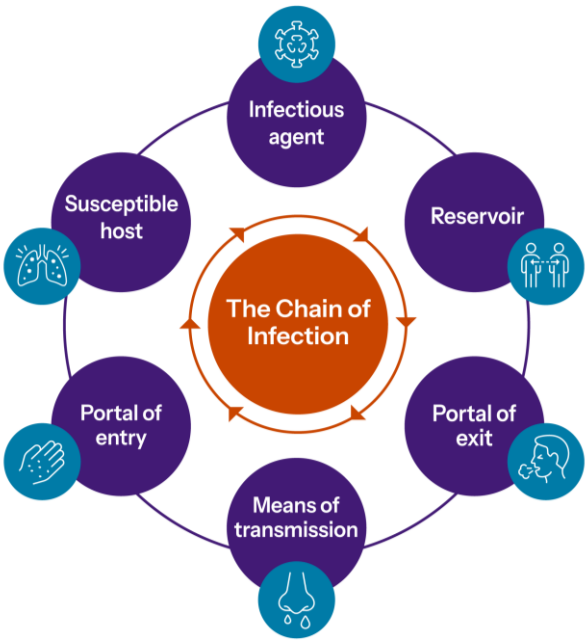
In aged care, infections may be acquired as a direct or indirect result of aged care services delivered in a residential, centre-based, home or community setting.

The risk of a person becoming infected depends on a variety of factors, including their health status and medical history.

# The chain of infection

The transmission of microorganisms occurs via a series of interlinked events called the *chain of infection*. For transmission of a microorganism to occur, there must be a:

- source (infectious agent)
- reservoir
- portal of exit
- means of transmission
- portal of entry
- susceptible host.



The six elements in the chain of infection are explained in **Table 4**.

**Table 4** The elements of the chain of infection

| Element | Description |
|---|---|
| **Source** | The source is the microorganism (such as bacteria, viruses, fungi and some parasites) causing the infection. This can be referred to by a variety of terms, including infectious agent, microbe, infectious organism or pathogenic organism. |
| **Reservoir** | The reservoir is where a microorganism lives. Microorganisms can live in a variety of environments, including people, animals, food, soil, water or on an object. |
| **The portal of exit** | The portal of exit is how a microorganism gets out of where they live. Microorganisms can leave the body via the mouth (by saliva, vomit, sneezes or coughs), wounds, and the gastrointestinal and urinary tracts (by faeces and urine). |
| **Means of transmission** | The means of transmission is how a microorganism is spread or travels between reservoirs. Microorganisms can spread through contact with contaminated surfaces, body fluids or blood, by ingestion, or by inhalation of respiratory particles. |
| **Portal of entry** | This refers to how a microorganism enters the host, which may be a person, animal or surface. Often, microorganisms enter a new host the same way that they exited the old host. Microorganisms can be acquired through absorption, inhalation or ingestion. |
| **Susceptible host** | The susceptible host is the person at risk of infection. Everyone is at risk of infection, but people at high risk of infection include those who are immunosuppressed, such as babies, children and older people. |

## Breaking the chain of infection

The aim of IPC is to interrupt the chain of infection to stop the spread of infection. Successful IPC involves implementing work practices that reduce the risk of the transmission of microorganism through a two-tiered approach, including:

- routinely applying basic IPC strategies, known as STANDARD precautions, to minimise risk to both older people and aged care workers – these strategies include hand hygiene, appropriate use of PPE, cleaning, and safe handling and disposal of sharps
- effectively managing microorganisms when STANDARD precautions may not be sufficient on their own – these specific interventions control infection by interrupting the mode of transmission (transmission-based precautions).

It is important that all aged care workers understand how infections are spread, how to use STANDARD and transmission-based precautions, and when to use these precautions to prevent or control the spread of infections.

Information about STANDARD and transmission-based precautions is in **Chapter 6**.

# The clinical progression of an infection

Infection is the result of a complex relationship between a host and a microorganism, as shown in the chain of infection. The clinical progression of an infection is also complex, as each person responds differently to each microorganism.

A person exposed to a microorganism may:

- never develop an infection
- become temporarily or permanently colonised but never become infected
- become infected but never develop symptoms or have only minimal symptoms
- become moderately unwell or very sick but recover, with or without complications
- become very sick and die.

The ways in which an older person responds after exposure to a microorganism will be determined by their immune status, age, health status (for example, underlying diseases such as diabetes, or if they are a smoker or have a complex wound), the type of the microorganism and the resistance of the microorganism. Older people living in residential aged care homes may be more vulnerable to acquiring all types of infections due to increased care needs, living close one another, and having shared living areas and bathrooms. In addition to the living environment, the risk of transmission is increased by cognitive deficits that limit the ability of some older people to comply with IPC interventions, such as hand hygiene, and behaviours such as wandering.

A person may develop immunity to the microorganism naturally, after exposure to a microorganism, or by previous vaccination (see **Chapter 4** for more information on vaccination). If immunity has developed, the next time the person is exposed to this microorganism, their body remembers and is better equipped to fight it off. After exposure to a microorganism, a person may also become an asymptomatic carrier, which means they show no signs of infection but can spread it to others.

Understanding how infections spread and knowing how and when to apply the basic principles of IPC (**STANDARD** and **transmission-based precautions**) is critical to the success of an IPC system. This responsibility applies to everybody involved in providing aged care services. This includes clinical and non-clinical staff, contractors, visitors, family members, carers, and the older person receiving care.

Because IPC must be implemented in various settings, a risk management approach is required to prevent and minimise harm from infections. A risk management framework means that the organisation identifies and assesses the risks unique to their service and implements IPC interventions based on the risk assessment.

The core components of an IPC system aim to reduce the risk of infections in aged care settings. **Chapter 5** provides more information on the hierarchy of controls, how to conduct risk assessments, and implementing risk-reducing strategies within an IPC system in aged care.

Involving older people and their carers is an essential component of IPC in aged care. Older people need to be appropriately informed and supported, based on their capacity, to help in reducing the risk of transmission of infections.

# Chapter 3: The IPC lead

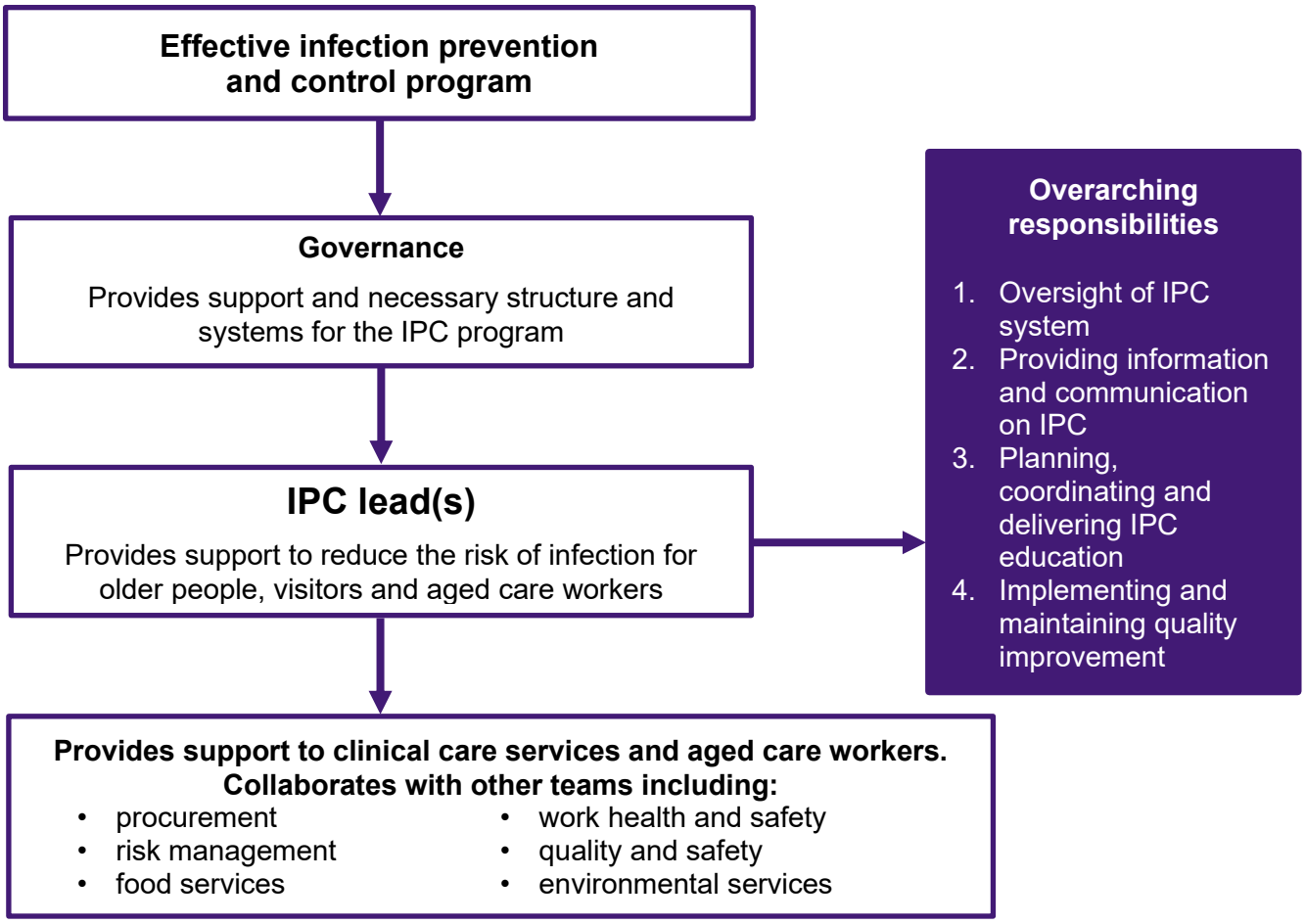
## Key points

- An infection prevention and control (IPC) lead is a key part of an effective infection prevention and control (IPC) program and helps strengthen IPC practices and outcomes. The IPC lead should lead the organisation to implement, monitor and continually improve IPC governance using a risk-based approach.
- An IPC lead is an individual or team of people who supports the provider's IPC capabilities. They are a nurse who has undertaken or is undertaking specialist training in IPC.
- Each provider should implement the IPC lead role in a way that suits their needs and considers contextual factors including size, location, services provided and the needs of the aged care workforce.
- An IPC lead should have oversight of the IPC system. This includes, but is not limited to, ensuring that IPC is considered in policies and procedures, ensuring access to personal protective equipment (PPE), and ensuring that outbreaks are prepared for and can be managed.
- The IPC lead should work collaboratively within the organisation – including working with work health and safety, procurement, food services, and environmental care services – to ensure IPC is considered at all points.
- An IPC lead may be responsible for IPC communication to the executive and leadership at aged care providers, aged care workers, older people and their families and visitors.
- The IPC lead should guide and support aged care workers in risk management including monitoring and evaluating the effectiveness of risk management strategies.
- An IPC lead should be supported to continue ongoing education and professional development to maintain and extend their own knowledge and the currency of their technical skills. Individuals supporting the IPC lead and the provider's IPC program should be encouraged to undertake more IPC-specific education.
- Each provider is responsible for ensuring that the IPC lead is supported at all levels and is embedded within the organisation's governance to ensure IPC is continuously supported and prioritised.

## The IPC lead in aged care

The *Aged Care Act 2024* and the Aged Care Quality Standards (the Standards) require all Category 4 to 6 aged care providers to maintain an effective IPC system that supports high-quality care. For residential aged care providers this includes processes to identify an IPC lead or an IPC lead team to oversee the provider's IPC system (**Figure 1**).

**Figure 1** The infection prevention and control governance hierarchy




This chapter gives providers guidance on implementing the IPC lead role, including appropriate duties and the organisational governance supports required for the role.

# Who can be an IPC lead?

An IPC lead can be an individual or multiple people within the provider or service. In this chapter, the term 'IPC lead' can refer to a person or a team of people responsible for undertaking this role. It is important for the IPC lead to have a local presence in each facility or service to support IPC implementation, evaluation and training.

There is a minimum professional requirement for individuals who take up an IPC lead role in aged care. They must be a nurse or nurses who have completed, or are in the process of completing, specialist IPC training, such as a Level AQF8 course. An IPC lead should:

- have a strong understanding of IPC principles, the corporate and clinical governance arrangements of the provider, and the Standards
- be able to effectively communicate IPC information to all stakeholders, including older people and their caregivers, aged care workers and organisation executive leadership and management in verbal and written formats.

## Resources

Training courses that meet the specialist IPC training requirements for IPC leads include:

- Foundations of IPC – Australasian College of Infection Prevention and Control
- Graduate Certificate in Infection Prevention and Control – Griffith University
- Master of Infection Prevention and Control – Griffith University
- Graduate Certificate of Infection Control – James Cook University
- Graduate Certificate in Nursing specialising in Infection Prevention and Control – Adelaide University.

The Standards do not specify how the IPC lead is implemented, which allows flexibility in the role's duties and how the role is staffed. Providers should consider what approach best supports effective IPC outcomes in their service, including contextual factors, such as size, location and the services provided.

## Practice point

### Approaches for implementing an IPC lead in residential aged care facilities

**Example 1: Provider A has services across Australia**

- They employ a national IPC lead that oversees all services.
- Each state and territory also has a state IPC lead that supports the services within that state and reports to the national IPC lead.
- Each residential aged care home has an IPC lead that supports the IPC work for that facility, provides onsite presence and reports to their state IPC lead.
- In the home and in community-based services provided by the organisation, IPC activities are carried out by three aged care workers who report to their state IPC lead.

**Example 2: Provider B has fewer than 10 services, all close to each other**

Provider B employs one IPC lead who oversees all services and spends equal time at each site.

**Example 3: Provider C divides its IPC lead role between two nurses who fulfil the IPC lead responsibilities**

- One nurse oversees IPC duties relating to oversight, reporting and communication with executive stakeholders and also holds the safety and quality manager role.
- The other nurse supports aged care workers in IPC including education, quality improvement and risk management.

## Home and community aged care

Home and community-based aged care providers should consider ways in which a worker or teams of workers can oversee the IPC system. These providers should have appropriate governance and management systems to meet the requirements for IPC in the Standards.

Home and community-based aged care services may not employ a registered or enrolled nurse as part of their workforce. In these circumstances, providers may consider using an external consultant or provider to deliver IPC advice and support.

Alternatively, home and community-based aged care services may use a team-based approach in which aged care workers, sometimes referred to as IPC support persons or workers, support the IPC program at the workforce level. This could include:

- individual aged care workers having distinct and separate roles and duties
- several aged care workers working together on the same duties.

The IPC support person (or persons) may have duties that are similar to those outlined for an IPC champion (more information about this role is provided below). Duties may include conducting audits; providing feedback; supporting education and awareness initiatives; and supporting or providing support communication about quality improvement initiatives and outbreak management strategies. Reporting responsibilities for the IPC lead would fall to executive management but should be integrated into clinical communication and care.

Regardless of the approach, there should be a clear understanding and expectations of the IPC lead's duties to ensure that an appropriate IPC system is in place.

## Resources

The number of hours an IPC lead spends on IPC-related work is not mandated and depends on the provider type and contextual factors.

Limited guidance exists; however, the World Health Organization's Minimum requirements for infection prevention control programmes provides recommendation for the staffing ratios for IPC leads in various settings. They suggest one full-time IPC lead for every 250 beds in tertiary and secondary care facilities.

# The IPC lead's roles and responsibilities

The activities of an IPC lead fall into the following categories:

- providing oversight of the provider's IPC systems
- providing information and education to older people, their family, friends, visitors, and aged care workers on IPC
- planning, coordinating, and delivering of IPC education and training across the workforce
- implementing and maintaining quality improvement activities related to IPC, including data collection and feedback exercises and reporting.

Other activities may be required of an IPC lead if the organisation is to have an appropriate IPC system in place. These other activities should be determined by the provider's governance and leadership, and allow for contextual factors, and legislative requirements, such as those outlined by the Department of Health, Disability and Ageing.



## Practice point

### IPC lead job description

**About the role**

The IPC lead strengthens and advances IPC practices within the organisation. You will be responsible for providing operational leadership to ensure high standards of IPC are maintained with the aim to create a safe environment for the older person, families, visitors and the organisation's workforce. The role will be supported by the organisation's governance and will work in partnership with other teams and departments within the organisation.

Duties within the role may include monitoring, evaluating and reporting on IPC risks and outcomes, and maintaining relevant accreditation standards for IPC.

**Key responsibilities**

- Providing expert knowledge and guidance on IPC measures, and the identification and management of diseases and complications related to IPC.
- Developing, implementing, evaluating and reporting on key IPC activities to meet the requirements of local, state and national protocols and guidelines.
- Conducting surveillance, investigations and audits and providing timely reports and feedback on the outcomes of these activities.
- Working collaboratively within the organisation to support management of organisational IPC risks, including outbreaks and contact tracing events.
- Working with clinical and non-clinical teams to identify, assess and mitigate emerging IPC risks.
- Assisting with coordination of vaccination programs for older people and the organisation's workforce.

**Qualities the successful candidate must have**

- Enrolled or Registered nursing qualifications and specialist IPC training.
- An understanding of relevant legislative requirements and Australian standards relating to IPC.
- Strong communication and interpersonal skills, with the ability to build effective relationships with clinical teams, management and key stakeholders.

The ability to analyse qualitative and quantitative data, review clinical outcomes, identify trends and implement quality and continuous improvement initiatives will be desirable.

## IPC oversight

The IPC lead has oversight of the provider's IPC program and provides leadership and direction to support IPC actions. They should be the point of contact for any issues relating to IPC for the provider. The IPC lead should work with other departments and teams, such as the work health and safety or procurement teams, to ensure IPC is considered and supported in all functions of aged care.

Oversight activities can include:

- ensuring IPC is considered in the development of clinical and non-clinical organisational policies and procedures, such as waste management, safe food handling management and staff health and safety (including vaccinations)
- leading the development and review of specific IPC policies and guidelines, such as hand hygiene and outbreak management
- developing and implementing IPC risk assessments and management strategies
- ensuring there is appropriate access to and supply of suitable PPE, and there are instructions for safe use, storage and disposal
- preparing and supporting the organisation in managing infectious disease outbreaks and being aware of relevant jurisdictional policies and contacts; this may include supporting aged care workers to do risk-based IPC interventions, notifying relevant stakeholders, including health services, about outbreaks, and carrying out actions to manage outbreaks
- supporting the implementation and maintenance of systems that monitor immunisation and infection rates in the organisation, and acting on this information for quality improvement
- providing oversight of the delivery of vaccination programs for older people and aged care workers, including cold chain management with internal or external providers
- supporting occupational exposure management within the service
- supporting the safe and appropriate use of antimicrobials, including education and initiatives for antimicrobial stewardship.

The IPC lead should develop strong collaborative relationships with external organisations and practitioners, such as local hospitals, public health units, jurisdictional IPC leads, general practitioners, external allied health professionals and pharmacists, to share relevant IPC and communicable disease information. The IPC lead also may use these relationships as a network to draw on for broader IPC expertise and advice. **Table 2** in **Chapter 1** outlines key local networks and supports for health and aged care, and how they may enable IPC practices in aged care settings.

# Communication

Communication is essential to keep stakeholders informed and enable proactive IPC systems. A variety of direct and indirect communication methods may be used to communicate IPC information to aged care workers, older people and their families and visitors. This can include verbally communicating IPC information, as well as using pre-existing organisational systems like emails, newsletters, resident meetings, webpages, intranets and social media sites. Staff meetings and huddles can also be used to convey IPC information.

The IPC lead may provide communication in four domains.

## 1. Corporate communication

- Provide formal reporting to committees and internal and external governance bodies, including work health and safety, or as part of Serious Incident Response Scheme (SIRS) reports. Reporting may include information to support priority and strategic actions that in turn support IPC activities. This information may include the reporting of audit results, infection and vaccination rates, and or serious incidences.
- Undertake formal reporting to regulators, including the Aged Care Quality and Safety Commission.
- Develop and provide communication on behalf of the provider on IPC for older people and their families and visitors, including internal vaccination programs. This may include promoting events like World Hand Hygiene Day, and showing older people and their families and visitors what they can do to prevent infection and identify infections early.
- Provide communication and education on IPC to the workforce.

## 2. Quality improvement and education

- Provide feedback to aged care workers as part of auditing processes, including giving both on-the-spot and retrospective feedback that is actionable.
- Provide ad hoc guidance and mentoring on IPC practices as part of clinical work (also known as ‘teaching on the run’).
- Educate aged care workers, older people and their families and visitors on practices that improve IPC and that contribute to quality improvement activities.
- Ensure that culturally and linguistically diverse IPC and vaccination information is available for aged care workers, older people and their families and visitors to support informed decision-making.

### 3. Risk and outbreak reporting

- Escalate as appropriate or notify relevant public health units about notifiable diseases.
- Contribute to communication activities for older people and their families and visitors during outbreaks, including what they can do to reduce transmission of an infection.
- Provide communication to aged care workers as part of outbreak response, including clear communication about IPC activities (including escalation and de-escalation activities) and use of transmission-based precautions.
- Participate in incident management reviews, including identifying and leading IPC-relevant action items.

### 4. Clinical communication

- Support the handover of IPC at transitions of care for the older people, including between aged care workers, or with other health professions, such as paramedics on transfer to hospital.
- Encourage the identification and documentation of IPC risk including IPC risk assessments in both residential and home and community-based aged care.
- Promote the inclusion of relevant IPC risks within safety huddles.
- Support the use of relevant care record management systems to allow easy visual identification of an older person's infection status or infection risk.

## Risk management

The IPC lead should support a risk-based, person-centred approach to IPC in the service. Risk management in IPC is covered in detail in **Chapter 5**.

An IPC lead may identify and mitigate organisational risks using the four-step risk management process and the 'hierarchy of controls' approach to risk management. An IPC lead should support and educate aged care workers on how to identify and report infection risks within their own workspace and activities. Fostering confidence in aged care workers to identify IPC risks and perform IPC activities can reduce the transmission of infections between aged care workers, older people and visitors. The controls should be reviewed frequently to ensure compliance and effectiveness in maintaining safety and in reducing transmission of infections.

## Practice point

### A norovirus outbreak

In the event of a norovirus outbreak an IPC lead may:

- support and educate aged care workers on how to identify, report and manage older people displaying symptoms of norovirus
- support aged care workers in applying the hierarchy of controls, including identifying and implementing suitable control strategies such as elimination or isolation of the risk, substitution of equipment or the use of PPE, to control the outbreak
- support aged care workers in ensuring the correct transmission-based precautions are applied and PPE is used; during a norovirus outbreak this would include a gown, gloves, a surgical mask and eye protection while the older person is symptomatic
- provide education to the aged care workforce on the importance of
  - changing PPE when moving from one older person to the next
  - performing hand hygiene
  - following the correct order for the application and removal of PPE to prevent cross-contamination
  - thoroughly cleaning shared equipment and common spaces
  - remaining home if they are symptomatic
- provide education to older people, and their families, friends and visitors, on reducing the transmission of norovirus
- communicate with aged care workers at huddles, provide updates to the management teams, and notify the relevant health authorities.

# Education and capacity building

The IPC lead may facilitate the IPC education and training of the provider's workforce. This training may incorporate existing resources such as the hand hygiene and IPC eLearning modules available on the Aged Care Learning Information Solution (Alis). Training may include safety talks and in-services on emerging IPC issues for the provider, as well as competency assessment to ensure currency of technical skills. Topics that are relevant to all aged care workers include standard and transmission-based precautions (**Chapter 4**), and clean, safe, and hygienic environments (**Chapter 6**).

IPC education and competency assessments should be tailored to the duties specific to the categories or duties of aged care workers, especially those in roles that have a high risk of infection transmission. For example, it would be appropriate for nursing and personal care workers to receive IPC education relating to good continence care; however, this education would not be relevant for staff working in in food preparation or cleaning roles. **Chapter 5** provides in-depth knowledge about IPC-specific clinical skills.

An IPC lead should complete IPC-specific professional development to maintain and extend their knowledge and the currency of their technical skills. Professional development activities can include, but are not limited to:

- reviewing updates of regulatory and legislative IPC requirements
- reviewing evidence-based IPC practices and standards
- participation in dedicated education IPC forums, discussion groups or communities of practice.



### Resources

Ongoing professional development activities for the IPC lead can include:

- the Aged care IPC webinar series and education resources (Australasian College for Infection Prevention and Control)
- infection prevention and control modules on the Aged Care Learning Information Solution, including
  - Principles of IPC
  - Hand hygiene for clinical healthcare workers
  - Risk management of infectious agents and infectious disease
  - Basics IPC in aged care training support resource
- Influenza in residential aged care and Fundamentals of infection prevention and control (Australian College of Nursing)
- Quality use of medicines: aged care module on antimicrobial stewardship (Australian Commission on Safety and Quality in Health Care)
- IPC tele-classes (Webber Training)
- Aged Care Connexion discussion board (Australasian College for Infection Prevention and Control).

An IPC lead also may work with IPC champions. IPC champions are aged care workers within different departments or roles that have an interest in, and are motivated to assist in, changing and improving outcomes for older people and fellow aged care workers. Champions may be personal care workers, allied health professionals, administrative workers or domestic care workers. Together with the IPC lead, IPC champions support others in the workforce to follow and implement IPC practices. Each service may distribute tasks and duties for IPC champions differently. **Table 5** provides examples of how an IPC champion can assist an IPC lead.

**Table 5** Options for distributing tasks to IPC champions

| Steps | Process |
|---|---|
| Identify an IPC topic and provide education or resources on the topic to improve workforce knowledge and capability. | Distribute the education and encourage the workforce to review the education.<br>Collect feedback or questions relating to the education content and provide to IPC lead to address.<br>Collect suggestions for additional topics relevant to the department including emerging and potential IPC issues within the service. |
| Monitor and analyse IPC audit data and information. | Complete relevant audits, including of PPE stock levels and expiry dates, and use of hand hygiene products.<br>Provide immediate constructive feedback on audits, if in line with audit type. |
| Develop and oversee quality improvement initiatives relating to IPC. | Encourage and support aged care workers to implement quality improvement initiatives for IPC, including raising awareness, reinforcing messages and providing practical support.<br>Provide practical feedback to the IPC lead on challenges and barriers relating to quality improvement initiatives. |
| Develop promotional material for IPC events, such as World Hand Hygiene Day and vaccination days. | Assist with facilitation of events and activities.<br>Generate interest, participation and awareness of events with other aged care workers, and older people, families and visitors. |

PPE = personal protective equipment

Advantages of using IPC champions include increased coverage of the workforce, including night and weekend shift staff, with whom the IPC lead may not interact often. IPC champions also may serve as a pathway for developing future IPC leads and creating workforce contingency. There is no minimum professional requirements or mandated training for IPC champions. However, it is strongly encouraged they complete additional IPC learning.

### Resources

IPC champions can complete additional IPC-specific training, such as:

- infection prevention and control modules on the Aged Care Learning Information Solution (Alis), including
  - The basics of infection prevention and control in aged care
  - Hand hygiene for clinical healthcare workers
  - Hand hygiene for non-clinical healthcare workers
  - Risk management of infectious agents and infectious disease
  - The basics of infection prevention and control in aged care – training support resource
- Short course in IPC in aged care settings (Australasian College for Infection Prevention and Control)
- Fundamentals of infection prevention and control (Australian College of Nursing)
- personal protective equipment donning and doffing videos (NSW Clinical Excellence Commission).

## Quality improvement

A continuous quality improvement approach should be implemented to improve IPC efforts and provide safe person-centred care. These should be driven by the needs of the provider, services, aged care workers and older people. They should consider existing systems and evaluate how well they are working. **Chapter 8** covers how to monitor infectious diseases and IPC activities in aged care using a continuous quality improvement approach.

An IPC lead should oversee and drive these activities in conjunction with the broader workforce and various stakeholders. These may include older people, families and carers, aged care workers, volunteers and advocates for the older person. At a minimum, all stakeholders should be informed about IPC activities, the intended outcomes, and how progress will be monitored and evaluated. Clear communication and transparency is needed to manage expectations, improve adherence and foster trust. An open and inclusive approach contributes to a culture that prioritises safety by reducing infection risks for all and supports sustainable behaviour change.

The IPC lead should implement strategies and processes to encourage and receive ongoing feedback from aged care workers, older people, families and visitors regarding IPC activities. Feedback may identify opportunities for improvement, highlight practical challenges or provide insight into how quality improvement initiatives affect workflow, quality of life, an individual's dignity, or the rights of older people. Actively seeking and responding to feedback supports person-centred care and a safe workplace culture, and ensures IPC measures are effective, proportionate and embedded into everyday practice.

Meaningful data collection and analysis should be used to identify improvement opportunities and assess whether intended outcomes are being achieved and should not be used to attribute fault. The IPC lead may be responsible for overseeing the collection, analysis and reporting of data. Sharing relevant findings with staff and stakeholders supports learning, strengthens engagement, and contributes to ongoing quality improvement. If monitoring shows limited improvement, the activity should be reviewed and refined in line with a plan–do–study–act cycle. If early improvements are not evident, this may indicate that behaviour change has not yet been embedded and may require more support or adaptation. If improvements are achieved, monitoring should continue to ensure change is sustained.



**Practice point**

### IPC monitoring and data collection

IPC monitoring and data collection should be integrated within routine practices to drive sustainable quality improvement. This may involve use of direct and indirect measures of IPC activity and engaging expertise outside of the IPC lead role. This may look like:

- working with the procurement team to monitor IPC stock and product usage levels (such as alcohol-based hand rub and PPE)
- integrating cleaning frequency into the domestic care teams' cleaning audits to ensure cleaning frequency aligns with the recommendations
- extracting information on infection risks from the Serious Incident Response Scheme (SIRS), internal risk management reporting systems and Work Health and Safety reports.

## Support for the IPC lead role

A robust and proactive IPC system requires engagement of the IPC lead at all levels of the aged care organisation. The organisation's board, executive, and clinical and corporate leadership teams should all oversee and support the organisation's IPC program and the IPC lead role, including:

- identifying responsibilities appropriate for the IPC lead
- providing clear distribution of IPC duties across the workforce, including to those in existing leadership roles as appropriate, and ensuring the workforce is aware of how the duties are shared
- including the IPC lead within governance and reporting structures
- supporting the ongoing education of the IPC lead
- organising and providing systems-level access to relevant reporting systems, such as the Australian Immunisation Register and National Notifiable Diseases Surveillance System
- implementing structures and processes to enable other departments and programs of work to cohesively support and work with the IPC lead
- having clear communication pathways for disseminating information to aged care workers, older people and their families and visitors.

## Governance

Ideally, the IPC lead should have a direct, clear and established reporting line to the governing body. This will allow effective communication and timely escalation of IPC risks and emerging issues. The IPC lead also should be involved in the provider's peak committees including risk and audit, clinical care, medicines safety, operations and management, and work health and safety. The IPC lead role should be included within the terms of reference for these committees. This will maintain the committee's and provider's accountability and ongoing commitment to IPC.

The provider should have policies and procedures in place that detail the workforce's responsibilities relating to IPC, including those responsibilities specific to the IPC lead. At a minimum, policies and procedures should clearly articulate IPC responsibilities for the IPC lead and the workforce related to:

- risk management
- outbreak management
- cleaning and reprocessing
- procurement processes for equipment and PPE
- maintenance and safety of equipment
- laundry and waste
- staff health, including vaccination and vaccine-preventable diseases
- communicating infection/infectious status at handover at transitions of care
- occupational exposure
- antimicrobial stewardship.

## Reporting

Each provider should have systems and process in place to enable IPC reporting, when appropriate, by the IPC lead or other aged care workers. As part of this reporting function, the IPC lead may be responsible for providing or analysing data and providing commentary on the data, including identifying areas for improvement, and reinforcing positive achievements in IPC behaviour or practice changes.

Providers should have internal systems and processes that enable IPC reporting and support the provider's IPC activity. This may include having a risk management system that records and tracks IPC risks and escalates risks to the IPC lead, and a system for tracking quality improvement initiatives and their outcomes. Providers should ensure the provider or the IPC lead has access to the Australia Immunisation Register to monitor older people's and aged care workers' vaccination compliance and status, note upcoming vaccinations and record any vaccinations given. This will support initiatives relating to vaccine uptake and compliance, and reduce the rates of vaccine-preventable diseases, such as those listed on the National Immunisation Program Schedule like influenza (flu) and pneumococcal disease.

## Practice point

### Reporting requirements

The following mandatory reporting requirements in aged care in Australia include IPC elements:

- Quality indicators for residential aged care – quality indicators measuring the quality of care including incontinence-associated dermatitis
- Quarterly financial report – includes information on the expenses of preparing for or managing an outbreak within residential aged care facilities
- Serious Incident Reporting Scheme – reportable incident reporting relating to neglect or abuse of the older person. Although infections are not a reportable incident, IPC practices or infections may be relevant contributing factors, findings, or contextual information
- Notifiable diseases – infectious diseases that pose public health risks and must be reported to the Australian Government.

States and territories may have additional reporting requirements for infectious diseases beyond those in the National Notifiable Diseases Surveillance System. Contact your relevant public health unit for more information on what and how to report:

- New South Wales Public Health Unit
- Victoria Public Health Unit
- Queensland Public Health Unit
- South Australia Public Health Unit
- Western Australia Public Health Unit
- Tasmania Public Health Unit
- Northern Territory Public Health Unit
- Australian Capital Territory Public Health Unit.

Care records and the relevant policies and procedures for documentation should support the easy identification and documentation of infection status and IPC risks. This can include the use of risk assessment forms in home and community-based aged care, or alerts within electronic health records. Providers also should consider policies and process for communication at transitions of care to keep infection risks at the forefront of care. This should include emphasising the importance of infection risk being included in the background of an ISBAR handover during internal and inter-hospital transfers and transfers between facilities.

# Chapter 4: Infection prevention and the wellbeing of older people

## Key points

- Infection prevention and control (IPC) involves both responding to infections when they occur and delivering comprehensive care to prevent infections.
- IPC must be balanced with achieving a good quality of life for all older people.
- Infection prevention focuses on the interventions that reduce the likelihood of an older person acquiring an infection, as well as reducing the impact that acquiring an infection will have on the older person.
- Preventive health strategies for older people should focus on education and promotion of several topics.
    - Immunisation: Older people often have a decreased immune response, which means they may not be able to fight off infections easily or develop natural immunity. Vaccination (or vaccine-induced immunity) is one of the most effective strategies to reduce the risk of infection.
    - Skin care: Maintaining healthy skin is essential for older people to prevent wounds, such as skin tears, pressure injuries and incontinence-associated dermatitis, that can lead to openings for microorganisms to enter and cause infections.
    - Mental health: It is important to consider both mental health and IPC requirements to ensure a balance between the safety and wellbeing of the older person. Isolation, especially for prolonged periods, is detrimental.
    - Diet, nutrition and hydration: Poor nutrition can lead to weight loss and lowered immunity. Both are significant and often associated with various health risks, including an increased incidence of infection and longer recovery times.
    - Oral care: Taking care of teeth, dentures and gums is essential in preventing oral infections.
    - Falls prevention: Falls can indirectly increase an older person's likelihood of developing an infection due to complications from the injury that occurred from the fall.
    - Maintaining psychosocial health and wellbeing during outbreaks: Isolation measures should only be implemented for the minimum duration that is clinically necessary, and visitor access should always be maintained.
    - Palliative care: Generally, visiting for older people at or approaching the end of life should be accommodated and should not be time limited.
    - Participation in advance care planning: A form of proactive, preventive care planning with the aim of meeting the older person's wishes about future treatment and their quality of life and wellbeing has many benefits.

# Infection prevention

An effective IPC system should aim to keep older people and the aged care workforce safe, prevent infections and maintain the quality of life of older people.

**IPC involves both responding to infections when they occur and delivering comprehensive care to prevent infections.**

Older people are often highly susceptible to acquiring infections because they are likely to have multiple comorbidities, impaired immune function, age-related anatomical and functional changes, and frequent hospitalisations. Infection prevention should focus on supporting older people to maintain and improve their physical and mental health, so that their immune system is better equipped to fight off infections if they occur. Preventive health strategies for older people should focus on education and promotion of:

- immunisation
- skin care
- mental health
- diet, nutrition and hydration
- oral care
- falls prevention
- maintaining psychosocial health and wellbeing during outbreaks
- palliative care
- participation in advance care planning.

These preventive health strategies should be considered as part of routine care and education for the older person and not necessarily just as a component of an IPC system.

## Immunisation

Immunity means that a person has developed **antibodies** and **enhanced white cell activities** that help to fight off a specific infection. Active immunity means that if this person encounters the same infection in the future, their immune system should recognise it and immediately produce the antibodies needed to fight it. There are two types of active immunity: natural immunity and vaccine-induced immunity. A person may develop **natural immunity** when they have been exposed to a disease through developing an infection. **Vaccine-induced immunity** occurs through a vaccination triggering an initial immune response, by giving the immune system a memory boost after having fought off the infection previously, or by enhancing the effects of previous vaccination. No matter how, once someone develops active immunity, their body will better remember the microorganism causing the infection and be able to fight it off more efficiently in the future.

Older people often have a decreased immune response as they age, which means they may not be able to fight off infections as easily or develop **natural immunity**. Immunity can decrease with time so some older people may no longer be immune to something they once had good immunity to. Vaccination (or vaccine-induced immunity) is one of the most effective strategies to reduce the risk of infection. Vaccine-preventable diseases are diseases that can be prevented by vaccination. Adults over the age of 50 years are at increased risk of some vaccine-preventable diseases and of serious complications from these diseases, even if they are otherwise healthy.

It is important that aged care organisations encourage older people to remain up to date with recommended vaccinations, including boosters, as per the National Immunisation Program Schedule and the Australian Immunisation Handbook. This includes:

- **measles, mumps and rubella (MMR)** – for those born during or after 1966, it is especially important to provide education on MMR vaccines, if they have not already received them
- **herpes zoster (shingles)** – the occurrence of herpes zoster increases with age, as does the incidence of serious complications
- **influenza** – influenza-associated death rates are highest among older adults and Aboriginal and Torres Strait Islander people. It is important to encourage older people to receive an influenza vaccination every year, because the strain passing through the community changes each season
- **pneumococcal disease** – pneumococcal disease is more common in older adults and is included on the National Immunisation Program Schedule for adults over 70 years of age
- **COVID-19** – check the Australian Immunisation Handbook for current guidance on COVID-19 vaccinations
- **Respiratory syncytial virus (RSV)** – check the Australian Immunisation Handbook for current guidance on RSV vaccinations
- **booster doses** – immunity to some diseases can decrease over time, and the older person may need booster doses of some vaccines.

## Skin care

The skin serves as one of the body's first lines of defence against infections. Age-related changes and chronic conditions place older people at an increased risk of skin breakage and wound development. Maintaining healthy skin is essential for older people to prevent wounds, such as skin tears, pressure injuries and incontinence-associated dermatitis that can lead to infections due to a breach in the skin's barrier. Age-related changes to the skin can include reduced sweat and oil production, reduced immune system response, thinning of the skin, and decreased antimicrobial protection. Developing and implementing individualised skincare plans with the older person and/or their carer can help to prevent wounds and infections. Skin care plans should focus on several factors.

- **Positioning:** Support older people who are immobile or who remain in the one position for an extended length of time to change their position regularly. This may be through encouragement, reminders, physical assistance or through transfer devices.
- **Environment:** Make sure that the older person's environment is free from clutter and hazards that may result in a fall or skin tear. Care should always be taken around bed rails, wheelchair footplates, transfer devices and walkers.
- **Protective pressure-relieving devices and clothing:** Older people should have access to equipment that can prevent damage to the skin such as a pressure-relieving mattress, support pillows and heel wedges. Some types of clothing may also provide more protection for the skin – for example, long sleeves, long pants and enclosed footwear.
- **Nutrition:** The older person should be supported to maintain sound nutrition and hydration.

- **Skin moisture:** Incontinence is one of the most common causes of skin breakdown. Incontinence-associated dermatitis occurs when the skin becomes damaged because of poorly managed incontinence. Continence management plans should be developed and should consider the use of appropriate pads or pull-ups, changing of pads or pull-ups after soiling with faeces or urine, the use of barrier creams and specialist referrals to reduce incontinence-related skin damage.
- **Skin care:** Encourage the older person to avoid extremely hot water on the skin and topical lotions or soaps that cause the skin to dry out. Instead, encourage the use of emollient lotions to protect the skin, always drying the skin properly after showers, applying pH-neutral moisturiser at least twice daily, using protective dressings when required and maintaining fingernails and toenails.
- **Medication management:** Regularly refer to a general practitioner (GP) or pharmacist to conduct medicine reviews, particularly noting medicines that may impact the skin, continence or nutrition. Suspected allergies to medicines should be investigated by an appropriately-skilled healthcare professional.
- **Referrals:** Refer the older person to specialised healthcare professionals, such as a physiotherapist, podiatrist, occupational therapist, dietitian, clinical immunology/allergy specialist, dermatologist or geriatrician for further consultation if required.

## Mental health

It is important to consider both mental health and IPC requirements to ensure a balance between safety and the wellbeing of the older person. Older people often experience a variety of risk factors that increase the chances of their mental health declining. These may include issues such as chronic health conditions, chronic pain, adverse effects from medicines, loss of relationships or independence, loss of work, social isolation, changes in living arrangements, admission to hospital, and experiencing grief or loss.

Detailed care, risk assessment and planning must be undertaken when implementing any isolation precautions as part of IPC. Isolation measures should only be implemented after a comprehensive risk assessment has been conducted and isolation is deemed an essential intervention. Isolation should never be prolonged and should only be implemented for the minimum time that it is clinically necessary. Any isolation is likely to contribute to a deterioration in many older people's mental health and feelings of wellbeing.

Maintaining mental health is a lifelong challenge that must be prioritised by both the older person and the aged care organisation. There are many interventions that can improve mental health and wellbeing, such as staying in touch with family and friends, getting involved in the local community, participating in enjoyable activities, and keeping healthy by eating well and exercising. Spending time outside is also an undervalued, inexpensive way to improve mental health and overall wellbeing for older people. When outside, a person is less likely to acquire infections or to transmit infection to others.

It is important that aged care workers are trained to notice signs and symptoms of mental health decline so that it can be recognised early. Once identified, an appropriate assessment by a doctor or other healthcare professional is required, along with a management plan and support from family members or carers.

## Diet, nutrition, and hydration

The ageing process can affect the ability of older people to maintain the most appropriate level of hydration and nutrition. The consequences of poor nutrition or hydration are significant and often associated with many health risks, including an increased incidence of infection and longer recovery times, which are already issues for many older people. Poor nutrition in older people often leads to weight loss, malnutrition and reduced immunity, which then cause older people to be even more susceptible to infections and other poor health outcomes.

Many medical, environmental and socioeconomic factors can contribute to poor nutrition in older people. These include poor oral health, poor social or mental health, cognitive impairment, physical dependency, polypharmacy, dysphagia, diarrhoea, constipation and an overall reduced appetite. It is important that each issue is addressed to manage or prevent poor nutrition in older people. Aged care organisations should consider implementing several strategies to prevent and manage malnutrition, such as:

- increase social engagement and support (through group activities, outings, centre-based day care or social support)
- provide regular prompts through home visits or phone calls to encourage or remind about oral intake
- engage with a dietitian or other expert to assess nutritional needs and recommend appropriate interventions such as nutritional supplements
- document fluid intake
- facilitate case management or care coordination – for example, by arranging community meal programs and connecting individuals with relevant community services.

Many medical, environmental and socioeconomical factors can contribute to dehydration in older people. These include medication, acute illness, swallowing difficulties, age-related changes that reduce thirst, cognitive impairment, reduced functional capacity that reduces their ability to obtain or drink water, self-restriction to avoid using the bathroom, and heat exposure. It is important that each factor is addressed to manage and prevent dehydration in older people. Aged care organisations should consider implementing several strategies to prevent and manage dehydration such as:

- making sure fluids are always available and within easy reach
- provide support for older people to consume fluids
- engage an occupational therapist or other expert to identify strategies and supports to optimise hydration such as assistive devices
- document fluid intake and fluid output and if any changes are occurring
- identify any risks of dehydration and undertake an assessment to identify cause or contributing factors and implement strategies to resolve the issue.

## Oral care

Maintaining good oral health involves daily care of the older person's teeth, dentures and gums, and arranging regular dental check-ups with a dental practitioner in line with their individual needs. Good oral health is essential to prevent oral infections. Poor oral health can contribute to poor overall health, including a higher risk of cardiovascular disease and pneumonia. Oral health generally declines over a person's lifetime and can lead to gum disease, tooth decay and tooth loss. These conditions can lead to pain, reduced function and long-term physical and psychological effects. Tooth decay and tooth loss can contribute to poor nutritional intake due to difficulties chewing and swallowing, which reduces wellbeing and quality of life. Keeping the mouth clean helps prevent orally derived local and system infections. Good oral health in an older person can be maintained by:

- encouraging regular oral hygiene twice per day, including
    - brushing teeth (if present), gums and tongue with a pea-sized amount of fluoride toothpaste
    - brushing dentures twice a day, using mild liquid soap/denture cleaning solution and water, and using soft bristled toothbrush moistened with water to clean gums, tongue and/or implant studs
    - placing cleaned dentures in a clean, dry environment overnight to reduce yeast growth and plaque accumulation
    - avoiding leaving dentures in water or soaking solutions unless advised by a dental practitioner
- using appropriate fluoridated toothpaste, as prescribed or recommended by dental practitioners to reduce the risk of oral health problems for those deemed high risk
- ensuring dentures are removed from the mouth after eating, and both dentures and the mouth are rinsed following eating to reduce risk of retained debris
- treating ulcers and sore spots three to four times a day with warm normal saline mouth washes and/or mouth swabs, and ensuring adequate pain relief until healed (ulcers that are painful or last more than seven days should be reviewed by a dentist or healthcare professional as soon as possible)
- maintaining oral comfort and reducing dry mouth during end-of-life care
- cleaning and drying toothbrushes, denture brushes and denture containers after use to reduce cross-infection.

Aged care workers should choose appropriate personal protective equipment (PPE) for oral care activities and consider the risk of being exposed to saliva or blood.

Some existing health conditions also can affect an older person's ability to perform oral care independently. If an older person refuses to receive support with oral care, a short-term alternative may include applying oral care products, such as wiping fluoride toothpaste or chlorhexidine with a mouth swab or gloved finger over gums and teeth.

For more information about oral health for older people, see these resources from the Aged Care Quality and Safety Commission (ACQSC).

For more information about IPC for dental practitioners and staff, refer to the Australia Dental Association's Guidelines for Infection Prevention and Control.

## Falls prevention

A fall can result in serious complications for an older person, including fractures, head injuries, wounds, reduced mobility, an extended length of stay in a hospital or other facility and carer stress. Indirectly, falls can increase an older person's likelihood of developing an infection due to complications from the fall, such as pneumonia when lying flat during recovery from surgery.

The key components of a successful fall prevention strategy include:

- using falls screening assessment tools
- assessing balance and mobility
- encouraging participation in exercise programs or independent exercise
- developing preventive strategies for older people with cognitive impairment and an increased risk of falls
- managing incontinence
- identifying inappropriate footwear, foot pain or other foot problems
- investigating the reasons for falls so that preventive measures can be put in place
- using allied health professionals for specific environmental or equipment needs and training
- conducting an environmental review to identify hazards in the home or residential environment
- encouraging regular medication reviews
- considering other strategies, including using hip protectors, supplementation, osteoporosis management, vision assessment and malnutrition screening.



**Practice point**

### Promoting mobility and physical health

In a residential aged care home, the IPC lead(s) should consider the risk to older people's physical health and mobility. Prevention strategies, such as planned time outdoors (either supervised or unsupervised) to engage in exercise programs or short walks, promotes physical health and helps reduce the risk of falls.

## Maintaining psychosocial health and wellbeing during outbreaks

An outbreak occurs when there are more cases of infection with the same organism than would normally be expected in one area or period. It may include two or more linked cases of the same illness.

Outbreak responses vary depending on the infection. Outbreak management plans should be readily available, based on local policy, and developed in consultation with the IPC lead(s) or people responsible for IPC, aged care workers, older people, management and other relevant parties.

Older people diagnosed with or suspected of having an infection may require isolation to prevent or contain outbreaks. Isolation measures should only be implemented for the minimum duration that is clinically necessary, and the older person's psychosocial health and wellbeing should be supported by maintaining visitor access for them.

For information about risk-based isolation, implementing risk-based isolation, and the complexities of risk-based isolation, see **Chapter 6**.

## Essential visitors during outbreaks

During an outbreak, IPC practices must be balanced with the psychosocial needs of older people, respecting their individual rights to autonomy, and the rights of others within the home where they live. IPC practices and measures do not override the ongoing need for organisations to facilitate safe visiting arrangements. Generally, all older people living in residential aged care homes, including those isolating, should have access to at least one essential visitor. Essential visitors are different from general visitors, and include the following.

- **Partner in care:** This refers to a person who has a close and continuing relationship with the older person and provides regular routine care and companionship.
- **Named visitor:** If an older person does not have a partner in care, they may nominate one person to be a named visitor.
- **Visitors at end of life:** Visiting older people who are at or approaching the end of life should be accommodated for anyone and should not be time limited.

Essential visitors who visit frequently (three or more times a week) should be provided with basic IPC training, including the use of PPE, by the aged care organisation.

## Shared responsibility

Visitors should always follow safety measures and contribute to IPC measures as much as possible. The responsibility for safe visiting is shared among older people, the aged care organisation, governments and visitors. Visitors are expected to participate in screening and adhere to requirements, such as not visiting when unwell or symptomatic, treating workers with respect, and following basic IPC practices, such as hand hygiene. Visitors who refuse to comply with reasonable screening and IPC measures may be denied access to the home according to its policies or obligations under public health directions.

Similarly, aged care workers have the right to work in a safe environment and should be treated respectfully by visitors. Aged care providers should support workers in implementing the Sector Code for Visiting in Aged Care Homes and ensure transparent and timely communication. Workers should receive assistance in managing challenging conversations related to visiting and requirements, such as vaccination, noting that vaccination should not be mandated for visitors (unless required by a public health directive). Clear guidance on accessing support and reporting any issues with the implementation of the Sector Code for Visiting in Aged Care Homes should be provided to all workers.

## Palliative care

Palliative care aims to improve the quality of life for older people by identifying and addressing their physical, psychosocial and spiritual healthcare needs, along with managing pain and preventing suffering. In aged care settings, this care is not limited to end-of-life situations, it can be provided at any stage of a terminal illness. Older people receiving palliative care may also experience infections (such as urinary or respiratory tract infections) or require isolation during outbreaks. Organisations need to be prepared to offer appropriate clinical care and emotional and psychosocial support at all times. Generally, visiting for older people at or approaching the end of life should be accommodated and should not be time limited.

## Advance care planning

Advance care planning is a form of proactive, preventive care planning and can avoid unwanted treatments (such as antibiotics), unnecessary use of resources (such as transfer to hospital) and exposing aged care workers to infections. Creating an advance care plan (ACP) involves discussions with the older person (depending on capacity) or with the appointed guardian or family member(s) to identify their values, beliefs, and preferences for treatment. For infections, this may include their desire for antibiotic treatment and how this treatment should be administered – for example, intravenous therapy, which may require transfer to hospital.

In residential and centre-based aged care settings, ACPs have been shown to decrease avoidable emergency presentations and hospital admissions among older people. In residential and centre-based aged care, registered nurses and nurse practitioners are in key positions to engage in ACP discussions due to both the face-to-face contact they have with older people and their families, and their social and clinical skills. The GP should be engaged in this process to support the nurse to provide clinical recommendations about the limitations of care, including transfers to hospital, invasive medical procedures, the use and role of antibiotics, symptom management and resuscitation orders.

Home and community aged care organisations are also well placed to support the development of an ACP as the older person receiving care is more likely to be able to engage in these discussions. Home and community aged care organisations should engage GPs and aged care workers to support older people to start thinking about an ACP. If an older person has an ACP, it is important that the aged care organisation is aware so that they can support the older person’s wishes for treatment of infections, including not receiving antibiotics or being vaccinated.

## Resources

**Resources for immunisation**

- Immunisation for adults (Department of Health, Disability and Ageing)
- Vaccination for healthy ageing (infographic) (Department of Health, Disability and Ageing)
- The National Immunisation Program Schedule provides a series of recommended vaccinations to be given at specific times throughout a person's life (Department of Health, Disability and Ageing)
- The Australian Immunisation Handbook provides clinical guidelines for health and aged care workers about using vaccines safely and effectively (Department of Health, Disability and Ageing)
- The Australian Immunisation Register is a national register that records vaccines given to all people in Australia (Services Australia)

**Resources for skin care**

- Incontinence-associated dermatitis and pressure injury (ACQSC)
- Skin and ageing (Department of Health Victoria)
- Identifying and preventing skin problems (Department of Health Victoria)

**Resources for mental health**

- Caring for someone with a mental health condition (My Aged Care)
- Gardens and outdoor spaces (Department of Health Victoria)
- Mental health of older adults (World Health Organization)

**Resources for diet, nutrition and hydration**

- Food, nutrition and dining: resources for workers (ACQSC)
- Eating well: A nutrition resource for older people and their carers (NSW Health)
- Nutrition and older adults (Nutrition Australia)

**Resources for oral care**

- Oral health care for adult inpatients (Australian Commission on Safety and Quality in Health Care; ACSQHC)
- Supporting daily oral health care in residential aged care (ACQSC)
- Oral health and dental care in Australia (Australian Institute of Health and Welfare)
- Guidelines for Infection Prevention and Control (Australian Dental Association)

## Resources

**Resources for falls prevention**

- Falls prevention (ACSQHC)
- Falls Guidelines for Australian Residential Aged Care Services (ACSQHC)

**Resources for maintaining psychosocial health and wellbeing during outbreaks**

- National Guidelines for the Prevention, Control and Public Health Management of Outbreaks of Acute Respiratory Infection in Residential Aged Care Homes (Australian Centre for Disease Control)
- Sector Code for Visiting in Aged Care Homes (Council on the Ageing )
- Wandering (Dementia Australia)

**Resources for palliative care**

- End of Life Directions for Aged Care (ELDAC)

**Resources for advanced care planning**

- Advance Care Planning Storyboard and user guide (ACQSC)
- Advance care planning for residential, home and community-based aged care organisations (Advance Care Planning Australia)

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# Chapter 5: Risk assessment and management in infection prevention and control in aged care

## Key points

- Risk assessment and management is essential in reducing the spread of infections, while also maintaining a balanced approach to infection prevention and control (IPC).
- While it is important to aim to reduce all infection risks, this is often not achievable without impacting on an older person's quality of life. IPC-related risk assessments must consider all risks, including infection-related risks, as well as the rights of the older person and the rights of the workforce.
- There are four primary steps involved in risk management: identifying a hazard, assessing the risk of harm, controlling the risk, and reviewing the effectiveness of controls.
- Aged care settings differ in complexity and in local requirements, so risk management must be tailored to the local context.
- The hierarchy of controls is a work health and safety (WHS) model that supports the design of IPC systems. It involved a multilayered approach to strategies that prevent and control the risk of spreading infections in aged care.
- Because most infection risks cannot be completely eliminated, a level of risk will usually need to be accepted. This is known as 'risk acceptance' and is an important element of risk management in aged care. It is achieved by open discussion and planning.
- Each IPC system should address risk management for the
    - older person
    - care environment
    - aged care worker
    - delivery of care
    - equipment
    - visitors and carers.

# What is risk management?

Risk management is an ongoing process that involves identifying what the risk is, assessing the impact of the risk, and reducing, controlling and monitoring the risk. For the purpose of this Guide, risk management is an ongoing and proactive process aimed at identifying and responding to risks that impact IPC in aged care. The Work Health and Safety Act 2011 requires aged care employers to have systems and processes in place that help identify hazards and assess and control the risks for older people, carers, family members, visitors and members of the workforce, so far as is reasonably practicable. This means doing what is possible in each situation to maintain WHS and the continuity of service.

The diversity of aged care settings means that a tailored approach to risk assessment is required for each service and setting. It is usually easier to manage risks in residential and centre-based aged care settings, due to the level of control the organisation has over the environment, than in aged care organisations offering home and community-based care.

Risk acceptance is also discussed in this chapter. Aged care organisations can rarely be able to eliminate all risks, and therefore a level of risk will need to be accepted by the organisation, the older person and their carers, as well as the workforce. For example, older people should always be able to maintain visitor access (using the essential visitor mechanism), even when isolating. This is an example of how a level of risk can be accepted in a way that maintains quality of life.



## Practice point

### A practical example of how risk can be minimised

Consider an activity that people do every day, such as driving a car. There are significant and known risks to driving a car, such as the potential for injury or death to the driver, passengers or pedestrians. When a person decides to drive a car, they accept these risks because interventions (for example, road rules, seat belts) are in place to reduce the risks, and because driving a car has many benefits.

Is there still a chance that you may get injured or injure someone else when driving a car?

Yes.

This shows how people often assess risk and weigh up the benefits against the risk of harm.

This same concept should be applied to IPC in aged care. The aged care workforce is constantly assessing and managing risks every day, both actively and sometimes without realising it. Risk-reducing strategies in IPC can include hand hygiene, appropriate use of personal protective equipment (PPE), aseptic technique, cleaning, and managing sharps safely. All of these reducethe risk of spreading infections from one person to another.

**Aged care services can be complex and involve numerous risks. However, the management of these risks must always be considered in the context of the care being delivered and maintaining a good quality of life for older people. There will always be an element of risk in the delivery of aged care services.**

# The basics of risk management

Risk management in an aged care context is the basis for preventing and reducing harm arising from an infection. Every aged care organisation must be able to measure the risks in its own context and develop its own risk management plans and strategies. Therefore, organisations must regularly conduct infection prevention risk assessments and ensure that all aged care workers understand their responsibilities in managing these risks.

The key concepts used in risk management are described below.

- **Hazard:** A hazard is a situation or thing that has the potential to harm a person.
- **Risk:** A risk is the possibility that harm (death, injury, illness) might occur when exposed to a hazard.
- **Risk control**: Risk control means taking action to eliminate or control the risks, so far as is reasonably practical. Controls should be constantly reviewed and measured to evaluate their effectiveness.

Risk assessments should be undertaken to understand what could happen if someone is exposed to a hazard, and the likelihood of this occurring. A risk assessment can help determine the severity of the risk, the effectiveness of current control measures, what action is required to control the risk and how urgently action should be taken.

There are four primary steps involved in risk management and they are defined in Table 6.

**Table 6** Four steps in risk management

| Steps | Process | Example |
|---|---|---|
| **Identify the hazard** | What are the real or potential hazards that could cause harm? | Microorganisms that may colonise or infect older people, aged care workers or others |
| **Assess the risk** | What are the risks that something happening will have a negative impact?<br>Assessing the risk considers what harm could happen if someone or something is exposed to these hazards, and how likely it is that they will be exposed. | Infections, occupational exposures and sharps injuries |
| **Control the risk** | What actions can be taken to control the risks? | STANDARD and transmission-based precautions |
| **Review the controls** | How effective are the controls that are in place and how can they be modified as required to ensure the ongoing safety of everyone? | Regular reviews of the effectiveness and the ongoing need for PPE and other interventions used to reduce the spread of an infection<br>Audits of the use of hand hygiene products or the use of PPE and provide education to aged care workers whose practice can be improved |

PPE = personal protective equipment

A successful approach to risk management occurs on many levels within an aged care organisation. Table 7 describes the risk management approaches used for different levels.

**Table 7** Risk management approaches used at specific levels within an aged care organisation

| Level | Risk management approach |
|---|---|
| **Organisation-wide** | Providing support for effective risk management through an organisational risk management policy, educating workers, following up outcomes, monitoring and reporting. |
| **Wing or section of an aged care home or part of a community aged care organisation** | Embedding risk management into all local policies to ensure risks are considered in every setting. |
| **Individual** | Considering the risks involved in carrying out specific procedures, assessing the necessity of a procedure as part of clinical decision-making, and attending education sessions (for example, hand hygiene or putting on and removing PPE). |

PPE = personal protective equipment

Managers and the workforce have different roles, responsibilities and obligations, and so must assess and manage risk differently. For example, managers provide support to control local risks by developing a local risk management policy, providing feedback and education, and by managing an effective incident management system, such as the Serious Incident Response Scheme (SIRS). Workers may be required to consider risk in clinical practice such as the necessity of each care activity or clinical procedure, and how the risk associated with performing each procedure or activity can be reduced.



## Practice point

### Using the hierarchy of controls to minimise the risk of norovirus

In a residential aged care home, an older person may begin to experience symptoms such as watery diarrhoea, abdominal cramps, nausea and loss of appetite. These symptoms should alert workers to consider whether an infection is present.

In this situation, aged care workers should complete a risk assessment and implement the highest level of transmission-based precautions (combined RESPIRATORY and CONTACT) until the cause of the symptoms is identified. After a clinical review and stool test, norovirus infection may be confirmed. If so, care workers should update the risk assessment and implement CONTACT and RESPIRATORY (droplet) precautions.

The risk of norovirus spreading to other older people or workers may be higher if any of the following are identified:

- the infected older person is cognitively impaired and unable to adhere to basic IPC practices
- the older person shares a room or an ensuite bathroom with other older people, increasing the likelihood of transmission through shared facilities.

Because the older person is actively infectious until diarrhoea and vomiting resolves, these risks may be reduced using a combination of risk management strategies.

## Risk management strategies

### Isolation

Isolation strategies (as outlined below) must be balanced against the needs for workers to have visibility of the infectious older person, the psychosocial wellbeing of the older person, and the safety of other older people and workers.

- Move them to a single room until these symptoms are no longer present. Consider social distancing interventions if a single room is not an option. The IPC lead(s) may suggest aged care workers ask those older people sharing the room to spend their day in other areas of the facility while socially distancing and wearing appropriate PPE (for example, a surgical mask), or may ask their families/carers to allow them to go home for the day. The risk of exposure of older persons, and others, to the infectious person should be considered and reduced when possible.
- Consider allocating a separate bathroom for the infectious older person to use (including a dedicated commode if needed).
- Consider physical barriers in the shared room, such as privacy curtains, to minimise close contact.
- Keep the room door closed when feasible to prevent unnecessary entry.

### Environmental controls

- Improve environmental cleaning through increased cleaning and changing products as indicated, especially in shared spaces, to prevent the spread of infection.
- Ensure that cleaning staff are well trained and equipped to deal with the specific needs of cleaning under these circumstances.

### Use of work processes, guidelines or education to reduce the risk

- Ensure all care workers are up to date with IPC training, emphasise the importance of hand washing, and encourage other older people to participate in hand hygiene.
- Consider continence management if diarrhoea causes incontinence.

### Use of PPE

- Wear appropriate PPE including gloves, gowns and surgical masks, as necessary, to prevent infection transmission. PPE should be worn by aged care workers and visitors to the infectious older person for contact and droplet precautions.

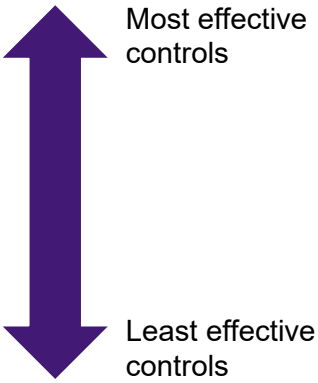
### Reviewing the controls

- Review and evaluate the effectiveness of the control measures that have been implemented continuously and make adjustments to reduce the risk of spread of infection.
- Reduce the risk of psychosocial decline for the older person with the infection, visiting by family and carers can be continued in combination with the above strategies.

# The hierarchy of controls

The hierarchy of controls is a model used in WHS management that provides a step-by-step approach to managing risk by ranking controls (or strategies) in preferred order of action. The hierarchy of controls helps aged care organisations simplify risk management. It also supports an IPC system to prevent and control the risk of infection relevant to the context of each service. See the hierarchy of controls below.

1. Eliminate the hazard – this is the most effective and sustainable way to control risk.
2. Replace the hazard (also known as substitution).
3. Isolate the hazard (also known as isolation).
4. Use environmental interventions (also known as engineering controls).
5. Use work processes, guidelines or education to reduce the risk (also known as administrative controls).
6. Use PPE to reduce the risk – this is the least effective way to control risk.




The most effective way to control risk is to **eliminate the hazard** and associated risk. Unfortunately, in most situations with infections, this is not possible (consider the driving practice example referred to earlier). **If it is not reasonably practicable to eliminate the hazard**, then the risk of the hazard causing harm must be reduced as far as reasonably possible by using multiple controls to provide layered protection.

Other than elimination (which is often not possible), other organisation-level approaches to reducing risk are replacing the risk with a safer alternative, environmental interventions, and isolating the risk so that the fewest people possible are exposed to the hazard.

Implementing administrative interventions, such as work processes, guidelines and education, and using PPE, are considered individual-level controls, because they rely on human behaviour and supervision to be effective and reduce risk. These controls are more effective when implemented in a multilayered approach. For example, implementing PPE as an individual control to reduce the risk of an existing infection will not provide the same level of protection as when PPE is implemented in combination with other controls, such as risk-based isolation, environmental interventions to improve airflow, and education and policies relating to PPE use.

IPC leads or people responsible for IPC may consider the following questions.

- Can the hazard be eliminated? (If the answer is no, continue down the hierarchy.)
- Can the hazard be replaced? (If the answer is no, continue down the hierarchy.)
- Can the hazard be isolated to reduce the level of risk? (Whatever the answer, continue down the hierarchy to ensure all possible strategies are considered to achieve the lowest risk possible.)
- Can environmental interventions be implemented to reduce the level of risk? (Whatever the answer, continue down the hierarchy to ensure all possible strategies are considered to achieve the lowest risk possible.)
- Have work processes, guidelines or education been implemented to reduce the risk? If not, can they be implemented?
- Lastly, will PPE help to further reduce the level of risk?

# Applying risk management to IPC in aged care

**Efforts should always be made to eliminate a hazard. Replacing**, **isolating** and **reducing** a hazard are strategies that are critical for managing infection risks. Most risks can be managed while also maintaining a person-centred approach to care. See Table 8 for examples of IPC risk mitigation strategies relevant to each of the controls for IPC systems.

> Reducing all risks associated with delivering an aged care service is important, but the approach must be balanced with achieving good quality of life for every older person receiving care.

**Table 8** Steps and strategies for IPC hazard and risk management

| Step | Explanation | Risk-reduction examples |
|---|---|---|
| **Eliminate the risk** | Elimination removes the infection risk entirely | • Quickly managing spills to eliminate the risk of exposure to blood and body fluids<br>• Disposing of sharps correctly, immediately after use to prevent sharps injury<br>• Using telehealth to eliminate exposure to infections |
| **Replacing the risk with a safer alternative** | The safer alternative minimises infection risks | • Replacing reusable equipment that is difficult to clean with single-use equipment<br>• Introducing safety-engineered sharps devices for injections to prevent sharps injury<br>• Administering aerosolised medicines via spacers instead of nebulisers to prevent exposure to respiratory infections |
| **Isolate the risk from people** | Physical separation from the risk makes it less likely | • Using placement strategies, such as using single rooms for older people with respiratory infections<br>• Increasing the distance between beds<br>• Inserting physical barriers, such as privacy screens, for those with respiratory infections |
| **Reduce the risks through environmental (engineering) controls** | A physical or mechanical process, like a barrier, can reduce infection risk | • Using ventilation, including controlling airflow, temperature and humidity, to reduce and control the spread of respiratory infections<br>• Redesigning work areas to limit the number of aged care workers in specific zones<br>• Limiting the number of aged care workers who attend care for certain people in the community (for example, if an older person has influenza, consider stopping non-essential services) |

| Step | Explanation | Risk-reduction examples |
|---|---|---|
| **Reduce exposure to the risk using work processes, guidelines or education (administrative controls)** | Improved work processes, guidelines or educational programs reduce risk or prevent exposure to risk | • Designating an organisational lead or team to oversee the IPC system<br>• Complying with the current version of the Australian Guidelines for the Prevention and Control of Infection in Healthcare<br>• Preparing outbreak management plans that comply with the current version of the National Guideline for the Prevention, Control and Public Health Management of Outbreaks of Acute Respiratory Infection in Residential Aged Care Homes<br>• Providing IPC training to all aged care workers<br>• Encouraging aged care workers and older people to have recommended vaccinations as per the current edition of the Australian Immunisation Handbook and current jurisdictional requirements<br>• Using workforce vaccine-preventable disease screening programs<br>• Having policies and guidelines that outline local requirements for STANDARD and transmission-based precautions<br>• Educating older people in the community about social distancing |
| **Use of PPE** | PPE provides a physical barrier; however, its effectiveness depends on a variety of factors | Providing:<br>• access to enough PPE relevant to the infection risks in the aged care setting<br>• training programs about when and how to use PPE correctly<br>• fit checking for users of particulate filter respirators<br>Ensuring aged care workers:<br>• wear appropriate PPE as per STANDARD and transmission-based precautions<br>• perform hand hygiene before putting on and after removing PPE items |

IPC = infection prevention and control; PPE = personal protective equipment

## Risk acceptance

IPC-related risk assessments must consider the rights of the older person (under the Statement of Aged Care Rights) as well as the rights of the workforce (under the Fair Work Act). As infection risks cannot necessarily be eliminated while respecting the rights of the older person, a level of risk will need to be accepted by all parties. To achieve this acceptance, open discussion is required with the older person, their carers, and the relevant workers about the type and level of risk to them and other people, as well as the risk-reduction strategies that will be implemented to control the risk. This is known as **risk acceptance**. Although risk acceptance is not a risk-reduction strategy, it is an important element of risk management in the provision of care services in which risk elimination is rarely achievable.

### Resources

Dignity of risk is a concept often referred to in aged care. It means that older people have the right to make decisions about their care and services, even if these decisions involve some element of risk. The Aged Care Quality and Safety Commission provides more information about dignity of risk:

- What is dignity of risk? (consumer resources)
- What is dignity of risk? (video).

## Risk management in complex settings

Aged care organisations that deliver care services in the community encounter a variety of people and home environments. Many older people live with the complexities of ageing as well as various challenges relating to their mental, cognitive, physical or social health. Care must be provided to all older people while protecting both the aged care worker and the older person.

### Environmental risk assessment

An environmental risk assessment (also known as a home or community risk assessment) aims to identify and assess all the relevant risks that are in the environment where care is to be provided. Environmental risk assessments should consider access to the home, bathrooms and kitchens within the home, falls hazards, biological hazards, harmful chemicals (including smoking), poor ventilation, animals, plants, mental health or cognitive health concerns, fire and electrical hazards. Identified risks should be used to inform the risk management process, including developing risk-reducing strategies. In home and community aged care services, the environmental risk assessment is ideally completed before the first service so that risk-reducing strategies can be considered and implemented before services start.

More information on environmental risks can be found in **Chapter 7**.

## Home and community aged care

An aged care organisation might need to provide a service to an older person who is hoarding in their home. Hoarding can result in accessibility issues and might attract pests, such as rats and insects. This is a risk because it can be dangerous for the aged care worker and the older person. Some examples of how the aged care organisation may use the hierarchy of controls to deliver the service safely are provided below.

1. **Can we eliminate the hazard?** No. The older person collects things because of a mental health condition. An organisation cannot stop the older person from doing this, but can help manage it.

2. **Can the hazard be replaced?** The organisation could consider providing care in a safer part of the home or referring to another service to help reduce the amount of hoarded material. If the house is not safe, the organisation might consider other ways to provide care or find a more specialised service.

3. **Can the aged care worker be isolated from the hazard?** Care can be provided in another location, such as a shopping centre, park or the home of a family member.

4. **Can the home be made safer?** The organisation could work with the older person to make the home safer. This could include pest control, making clear paths to important areas, like the kitchen and the bathroom, and opening windows for fresh air.

5. **Can the organisation change the way the aged care worker performs their job?** The organisation should make a detailed plan for how to provide care safely. This may include education for the aged care worker around hoarding behaviours, or developing a detailed care plan that includes an escalation pathway if the aged care worker identifies a new risk or concern during the service.

6. **Can the care worker wear PPE?** Wearing PPE can help keep the care worker and the older person safe from infections and other hazards. STANDARD precautions, including the use of PPE when appropriate, should be implemented for all types of care (for more information on STANDARD precautions, refer to **Chapter 6**).

To assist in conducting an environmental risk assessment, home and community aged care organisations can review:

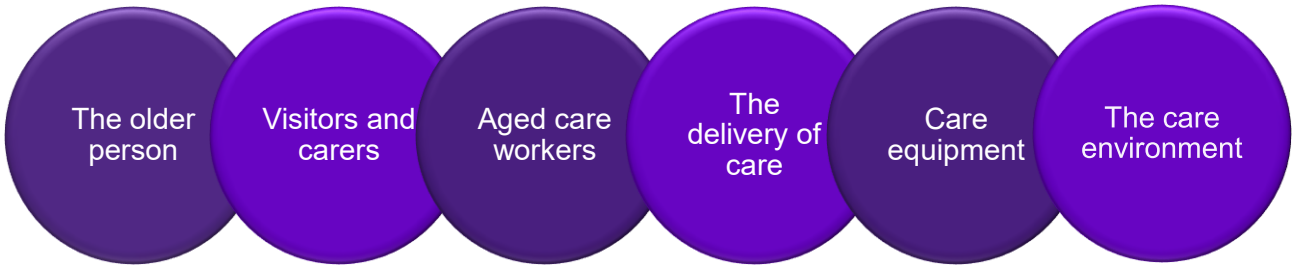
- the Aged Care Quality and Safety Commission risk assessment and management in the home resource to identify risks associated with providing home care services
- the Queensland Government resource: A guide to working safely in people's homes.

# Risk-reduction strategies in IPC

### Essential knowledge

Risk management is the basis for IPC systems to deliver a safe environment, good health outcomes for older people, and reduce the development of multidrug-resistant organisms (see Chapter 2).

Identifying and managing risk for an entire organisation or a large workforce can be an overwhelming task. Viewing risk in terms of groups or parts of an organisation makes risk assessment and management easier. In an aged care service, organisations need to consider managing risk in relation to the older person, their carers and families, the aged care workforce, the delivery of care, care equipment and the care environment.




## The older person

Older people are at a higher risk of acquiring an infection. Increased opportunities for the spread of infections can occur when the older person:

- has an **underlying health condition**, often with comorbidities
- has **invasive devices** that require ongoing care and management
- lives in a **communal environment** such as a residential aged care home.

**To assess the risk of an older person acquiring an infection, consider the following questions.**

- What is the older person's medical history, including underlying health conditions? (For example, recent hospitalisation, medicine with immunosuppression properties, diabetes.)
- Has the older person travelled overseas or interstate recently? Consideration should also be given to those who have recently travelled on a cruise ship or have travelled interstate if there are identified community outbreaks or increased transmission of infections.
- Is the older person up to date with recommended vaccinations?
- Does the older person have **new** symptoms that suggest they may have an infection? (For example, behavioural changes or fever). Symptoms related to a chronic condition (such as an ongoing cough related to chronic obstructive pulmonary disease) should be documented so that these symptoms are not confused with an acute infection.

- Does the older person have an invasive device inserted? (For example, a urinary or suprapubic catheter.)
- What are the processes for communicating relevant details of an older person's infectious status during transitions of care, such as new admissions, transfers to hospital or between care homes? (For example, documentation or an electronic medical system that alerts the aged care team that the older person has an infection.)

## Visitors and carers

IPC practices and measures do not take the place of the ongoing requirement for organisations to facilitate safe visiting arrangements. Visitors and carers should be informed about how they can help prevent the spread of infections. To support this, aged care organisations can provide educational resources for visitors and carers to help manage gaps in information. Older people living in residential aged care homes, including those isolating because they are infectious, should always have access to at least one essential visitor (see **Chapter 4**).

To assess infection risk in the care environment of **residential and centre-based aged care settings**, consider the following questions.

- Does every older person, including those who are isolating, have access to an essential visitor?
- Are visitors and carers who attend the home frequently provided training in basic IPC practices, such as the use of PPE and hand hygiene?
- Are restrictions for visiting certain areas needed to reduce infection risks? If so, how is the older person's risk of mental, physical and cognitive deterioration from social isolation addressed?
- Is information available for visitors and carers about current infection risks, infectious diseases and vaccinations? Residential and centre-based organisations should consider the roles of the organisation, aged care workers and the visitors in the Sector Code for Visiting in Aged Care Homes.
- Is information about IPC available in locally used languages, other than English?

To assess infection risk in the care environment of **home and community aged care settings**, consider the following questions.

- If an older person living in the community is unwell, can the organisation help to support the older person or carer to manage the infection safely at home? (For example, by increasing frequency of services or daily phone checks.)
- If carers or family members are involved in direct care, are they provided with information, training and support to deliver care safely?

## Aged care workers

Aged care workers can be exposed to microorganisms in several ways, including through contact with an infectious older person or because of a blood or body fluid exposure. Aged care workers who are in an infectious state may put older people at risk of infection.

To assess **infection risk for aged care workers**, consider the following questions.

- Does the aged care organisation conduct workforce screening (for vaccine-preventable diseases) and promote the benefits of vaccination?
- Are all aged care workers assessed for their individual risk of exposure to vaccine-preventable diseases, or other infections, during their work?

- Does the organisation have appropriate IPC education and training in place?
- Is a range of PPE available and easily accessible? Does the organisation provide suitable PPE for different tasks and roles? (For example, personal or clinical care, cleaning, social support.)
- Are safety-engineered sharps devices used by the organisation to reduce sharps-related injuries to workers?
- For residential and centre-based aged care organisations, does the organisation have an annual influenza program in place?

Aged care workers living with a bloodborne virus, including hepatitis B, hepatitis C and HIV, must be managed in accordance with the CDNA National Guidelines for healthcare workers on managing bloodborne viruses. Affected workers can be identified and managed through a workforce screening program (see **Chapter 9**).

## The delivery of care

While delivering care, aged care workers should assess for risks and decide how activities can be performed safely. Some activities carry a higher risk of spreading infections than others. The use of STANDARD and transmission-based precautions (see **Chapter 6**) will help reduce most infection risks. However, other factors should also be considered when assessing infection risk in the delivery of care.

To assess **infection risk in the delivery of aged care services**, consider the following questions.

- What type of activity is being performed? (For example, wound dressing, personal care, cleaning.)
- Where is the care being delivered? (For example, in a residential and centre-based aged care home, community centre or older person's home.)
- Is the older person known to be colonised or infected with a specific microorganism?
- Are cognitive or behavioural factors present that may increase the risk of the older person spreading an infection?
- What other activities are happening in the area where the service is provided? (For example, cleaning, wound care, invasive device management, cooking or food preparation.)
- What equipment or resources are available for the care activity? (For example, appropriate PPE, condition and cleanliness of the equipment.)
- What actions can be taken to reduce the risk of spreading infections during the care activities? (For example, hand hygiene, aseptic technique, transmission-based precautions or reprocessing reusable equipment.)

## Care equipment

All new and existing equipment used for care and procedures should be regularly assessed for potential infection risks. Existing care equipment may become damaged over time or be difficult to clean. These factors can increase the risk of transmission of infection and must be planned for and managed.

To assess **infection risk during use of care equipment**, consider the following questions.

- Does the organisation have a process for assessing new products and equipment before purchasing? Do the processes ensure the products have been approved through regulatory mechanisms such as the Therapeutic Goods Administration?
- Does the organisation have an environmental cleaning program as part of the larger IPC system that focuses on cleaning, servicing, repairing and replacing equipment?
- How is reusable equipment cleaned? (Such equipment includes hoists, blood pressure cuffs, thermometers and so on.)
- Are aged care workers trained to reprocess/clean reusable and general care equipment?
- How are equipment and stock stored?
- Is there a process in place to manage recalls and alerts for products and equipment?
- If required, do reprocessing practices comply with current Australian Standards for reprocessing?

See **Chapter 7** for more information on cleaning and disinfection of reusable equipment.

### Resources

When managing common infections and diseases in aged care, the following resources can be used in combination with a local risk assessment to determine management strategies:

- the Australian Commission on Safety and Quality in Health Care Australian Guidelines for the Prevention and Control of Infection in Healthcare
- the Australian Government Department of Health, Disability and Ageing resource Managing infectious respiratory diseases in aged care.

In addition, Communicable Diseases Network Australia have developed the Series of National Guidelines that provide nationally consistent advice and guidance on notifiable diseases.

## The care environment

A care environment is the space in which the aged care service is provided. This may be the older person's home in the community, or a centre-based or residential aged care home. The level of infection risk posed by the care environment varies according to the purposes for which it is used, and the design and structure, which influence the ease with which the space can be cleaned. Other important factors are the amount of care provided in that environment and the type of equipment used to care for the older person. More information on environmental risk assessments can be found in **Chapter 7**.

To assess infection risk in the care environment of **home and community aged care settings**, consider the following questions.

- What processes are in place to guide the reprocessing of new and existing equipment, devices, and products that are used multiple times or taken to multiple homes?
- When the aged care worker is not providing care, who is responsible for cleaning the environment? How can this person (whether it be the older person, their carer, a friend or family member) be educated about the appropriate methods for cleaning to reduce the risks of infections?
- Are all aged care workers trained in environmental and reusable equipment cleaning, use of PPE, spill management, laundry management and other IPC practices?
- What cleaning products are available in the older person's home? Are the aged care workers providing care trained to use these products?
- Are there issues in the older person's home that might increase the risk of infection or harm for the aged care worker? For example, mould, poor ventilation, access issues or exposed electrical wires.

To assess infection risk in the care environment of **residential and centre-based aged care settings**, consider the following questions.

- What policies and guidelines are available for maintenance, repair and upgrade of building, equipment, furnishings and fittings?
- What processes are in place to evaluate and respond to infection risks for new and existing equipment, devices and products?
- Who is responsible for and trained in environmental cleaning and reprocessing of reusable equipment, use of PPE, spill management, laundry management and other IPC practices?
- Are aged care workers trained in environmental and equipment cleaning, use of PPE, and IPC?
- Are there suitable cleaning and disinfection products?
- Are there local issues that might increase the risk of infection, such as building renovation or communicable disease outbreaks?
- What are the policies for managing the water supply to reduce the risk of waterborne infections?

**For more information on risk management, refer to Section 2.3 of the Australian Guidelines for the Prevention and Control of Infection in Healthcare.**

# Chapter 6: Standard and transmission-based precautions

## Key points

There are two types of precautions that should be used to prevent and control infections in aged care: STANDARD precautions and transmission-based precautions.

- STANDARD precautions are practices that must be used at all times and include
  - hand hygiene
  - the use of appropriate personal protective equipment (PPE)
  - aseptic technique
  - waste management
  - respiratory hygiene and cough etiquette
  - environmental cleaning
  - the safe use and disposal of sharps
  - appropriate handling of linen management
  - reprocessing of reusable equipment.
- Transmission-based precautions are used in addition to STANDARD precautions to reduce further transmission opportunities that may arise due to the specific route of transmission of a particular microorganism.
- This Guide focuses on two broad types of transmission-based precautions
  - CONTACT precautions
  - RESPIRATORY precautions.
- Transmission-based precautions should only be used for limited periods of time until signs and symptoms of the infection have resolved, or according to recommendations of persons responsible for infection prevention and control (IPC).
- Prolonged periods of isolation (as an IPC intervention) can cause harm to the physical and psychological health of older people. The intervention should only be implemented, if necessary, for short periods of time, and after a comprehensive risk assessment.

# Infection prevention and control precautions

Precautions are steps taken to prevent or decrease the risk of infection. In health and aged care settings, the workforce, older people, carers, families and visitors must take precautions to keep everybody safe and minimise the spread of infections.

There are two types of **precautions** used to prevent and control infections in aged care.

- **STANDARD precautions** are the minimum IPC practices that must be used at all times, for all older people, in all situations to reduce the spread of infections. They **must be used regardless of whether a person has an infection**.
- **Transmission-based precautions** are used **in addition to STANDARD precautions** when an older person is suspected to have or is diagnosed with an infection. There are **three types** of transmission-based precautions. Each type of precaution requires different levels of PPE to be worn to prevent the infection from spreading.

> Understanding how an infection spreads and knowing when to apply STANDARD and transmission-based precautions are critical to preventing and controlling the spread of infections.

# STANDARD precautions

STANDARD precautions are basic practices that aged care workers used every day to prevent and control infections. STANDARD precautions include:

- hand hygiene
- use of appropriate PPE
- aseptic technique
- waste management
- respiratory hygiene and cough etiquette
- environmental cleaning (Refer to **Chapter 7**)
- reprocessing of reusable equipment (Refer to **Chapter 7**)
- safe use and disposal of sharps
- appropriate handling of linen.

> STANDARD precautions should be used by all aged care workers, regardless of whether an older person has a suspected or confirmed infection.

It is essential that STANDARD precautions are always applied because:

- there is a risk of transmission of infection between people, especially from infected to uninfected people
- people may be infectious before signs or symptoms are recognised, or before laboratory tests are confirmed
- there is a risk of transmission of infection from microorganisms in the environment, including environmental surfaces and equipment
- there may be an increased risk of transmission associated with specific procedures and practices.

# Hand hygiene

Hand hygiene is one of the most effective interventions to reduce the risk of infections in aged care. Hand hygiene is a general term referring to any action to clean the hands and includes:

- applying an alcohol-based hand rub (ABHR) to the surface of hands (rubs can be liquids, gels or foams)
- washing hands with a soap solution and water.

All aged care organisations should implement and maintain a hand hygiene program within their IPC system. A hand hygiene program should aim to provide comprehensive education and training for the workforce, older people and carers and should cover:

- hand hygiene product selection and placement
- appropriate hand hygiene technique
- the 5 Moments for Hand Hygiene in aged care
- hand hygiene audits and feedback
- skin care.

## Product selection

Both soap and ABHR products are necessary for hand hygiene in aged care settings.

**Alcohol-based hand rubs:** These are sometimes referred to as ‘hand sanitisers’. One advantage of ABHRs is that they are easily accessible at the point of care. Always choose products that are:

- effective against a variety of microorganisms
- easy to use and provide skin antisepsis
- safe to use on the skin (fragrance, colour, texture and ease of use can impact acceptability and potential side effects)
- approved by the Therapeutic Goods Administration as a hand hygiene product.

Acceptance of ABHR by aged care workers is a crucial way to improve hand hygiene practice. Even where emollient agents (a type of moisturising cream that is oil based, so it prevents water loss and keeps the skin hydrated for longer) are present in the product, ready access to a moisturising skincare product is essential. The ABHRs, soaps and moisturising lotions selected for use should be chemically compatible to minimise skin reactions and to ensure that the decontaminating properties of the hand hygiene product are not deactivated.

**Plain soap and water:** Soap and water should be used when hands are visibly dirty, after toileting, and when caring for older people with specific infections (such as *Clostridioides difficile* or norovirus) or when ABHRs are not readily available.

There are two types of soap solutions.

- **Non-antimicrobial soap (plain soap):** Plain soaps **help to physically remove** microorganisms through the rubbing of the hands combined with soap as a wetting agent. Although plain soaps have little or no antimicrobial activity, hand washing removes a very large proportion of infectious microorganisms (including viruses, bacteria and fungi) through the physical action. Plain soaps are sufficient for general social contact and for cleaning of visibly soiled hands. They are also used for physically removing some organisms, such as *C. difficile* and norovirus.
- **Antimicrobial soaps:** Antimicrobial soaps are used to decontaminate hands. However, the use of antimicrobial soap is not recommended because it is associated with skincare issues, and it is not necessary for use in everyday aged care practice.

Neutral hand-wipe products may be considered in situations where there is not ready access to soap and water, such as in community care settings.

Wet hands can more readily acquire and spread microorganisms, so proper drying of hands is an integral part of routine hand hygiene. Single-use paper towels are the most effective way to dry hands and reduce the risk of the transmission of microorganisms.

Use of ABHR can give rise to risks to aged care workers and older people – for example, ingestion by an individual with an alcohol addiction. However, in nearly all situations, the overall benefits far outweigh the risks. A risk assessment should always be undertaken before use and placement of ABHR, and a management plan should be put in place. An ABHR management plan is especially important for areas where care is provided to older people with cognitive impairment or mental health issues who may be at risk of intentional self-harm by ingestion.



### Resources

The Risk assessment for use of alcohol-based handrubs in healthcare facilities (National Hand Hygiene Initiative) can help persons responsible for product selection and placement to develop management plans.

## Product placement

### Residential and centre-based aged care

Having ABHR available at the point of care improves hand hygiene compliance. ABHR should be easily accessible – generally within arm's reach of where care is taking place – and, if care is being provided in a residential or centre-based aged care setting, ABHR should be placed in consistent locations throughout the facility.

ABHR dispensers act as visual cues for hand hygiene practice. Aged care workers generally best understand the workflow in their area and should assist with decisions about placement. Several locations are ideal for the placement of ABHRs in residential or centre-based aged care settings. Dispensers may be:

- attached to dressing trolleys, linen and personal laundry delivery trolleys, medication management trolleys and food delivery trolleys
- in high staff traffic areas, such as work bays, pan rooms, medication rooms and entrances
- in clinical and care areas
- in public areas such as waiting rooms, reception areas and near lift doors in high-traffic areas.

Signage about the appropriate use of ABHR should be prominently displayed in all residential and centre-based aged care facilities. ABHR dispensers should preferably not be placed next to sinks, because this can cause confusion about which hand hygiene technique to use.

### Home and community aged care

Home and community organisation aged care workers should be provided with their own ABHR product and identify the locations of appropriate hand washing facilities if available, and have these outlined in the older person's care plan.



#### Home and community aged care

Aged care organisations that deliver services in the community should provide workers with appropriate products to perform safe and effective hand hygiene. Before delivering services in the community, an environmental risk assessment should be conducted to identify appropriate hand wash basins in the older person's home that will be accessible to the worker during provision of care services. The availability of soap and paper towels for workers to wash and dry their hands should also be considered.

Access to hand basins, hand hygiene products, hand hygiene wipes, towels (paper or otherwise) and other facilities required for hand hygiene, such as clean water, may be limited in home and community settings. In these situations, ABHR or a suitable alternative product should be available, even when a hand basin is available.

## Technique for hand hygiene

Effective hand hygiene relies on **appropriate technique** as much as on the selection of the **correct product**. Using the wrong technique (such as not washing hands for long enough) can mean that washing hands or using an ABHR will not effectively remove or kill the microorganisms on hands. Key factors in effective hand hygiene and maintaining skin integrity are described in **Figure 2**.

**Figure 2** Key factors in hand hygiene and maintaining skin integrity



Making sure hands are washed (rubbed) for the recommended length of time

Making sure every part of the hands is exposed to the solution

Rubbing the solution into the hands to create friction

Making sure hands are completely dry after performing hand hygiene

### Practice point

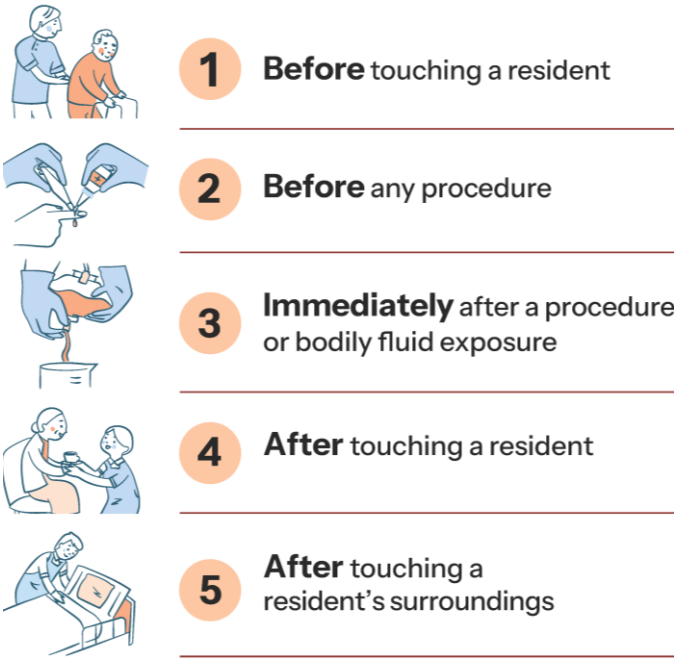
#### Using UV light to assess hand hygiene effectiveness

A fluorescent gel or powder and a UV light can show aged care workers the effectiveness of their hand hygiene technique. The gel and powder contain plastic simulated microorganisms, and the lamp illuminates them to test the effectiveness of hand hygiene practices. The activity involves asking aged care workers to rub gel or powder onto their hands like lotion, then asking them to wash their hands. The IPC lead(s) or people responsible for IPC can then examine their hands under the UV light to show what areas have been missed (these areas will glow) and the effectiveness of their hand hygiene technique.

## The 5 Moments for Hand Hygiene

The ‘5 Moments for Hand Hygiene’ was developed by the World Health Organization and describes performing hand hygiene:

- before touching a person
- before any procedure
- immediately after a procedure or bodily fluid exposure
- after touching a person
- after touching a person’s surroundings.




It provides aged care workers with a simple way to remember when to perform hand hygiene when providing care to older people. This helps prevent the spread of infection, and limit contamination of the care environment. Practising hand hygiene at the right time reduces the risk of cross-contamination.

In addition to the 5 moments, hand hygiene should be performed in many situations.

**Before:**

- putting on gloves
- starting or leaving work
- eating or handling food or drinks
- using a computer keyboard, tablet or mobile device in a care environment.

**After:**

- removing gloves
- hands have become visibly soiled
- eating or handling food or drinks
- visiting the toilet
- using a computer keyboard, tablet or mobile device in a care environment
- handling laundry, equipment or waste
- blowing, wiping or touching nose and mouth, or smoking.

### Resources

For more information, refer to the 5 Moments for Hand Hygiene in aged care poster and fact sheet (Australian Commission on Safety and Quality in Health Care [ACSQHC] and the National Hand Hygiene Initiative).

## Other aspects of hand hygiene

To enable optimal hand hygiene, IPC policies and guidelines should cover the following.

- **Skin integrity:** Intact skin is a natural defence against infection, and cuts and abrasions reduce the effectiveness of hand hygiene practices. Breaks in the skin are ways for microorganisms to enter the body. To reduce this risk, any break in the skin (such as cuts and abrasions) for an aged care worker should be covered with a waterproof dressing.
- **Fingernails:** The type and length of fingernails can affect the effectiveness of hand hygiene. Artificial or false nails have been associated with higher levels of microorganisms. Studies have also demonstrated that chipped nail polish may support the growth of microorganisms on the fingernails. Fingernails should be kept short and clean, and artificial fingernails and nail polish should not be worn.
- **Bare below the elbow:** Aged care workers should be encouraged to wear short-sleeved clothing, as this ensures their hands can be cleaned effectively. This concept is known as 'bare below the elbow'. When providing direct care, some aged care workers may wish to cover their forearms due to religious, cultural or safety reasons. These workers must ensure they are wearing clothing with sleeves that can be pushed back securely when they are engaged in direct care activities and performing hand hygiene.
- **Jewellery:** Although there is little evidence concerning the impact of jewellery on the effectiveness of hand hygiene, rings and wrist jewellery can interfere with the techniques used to perform hand hygiene. The World Health Organisation consensus recommendation is to strongly discourage the wearing of watches, rings and other jewellery when providing care. If jewellery must be worn in the care environment, it should be limited to a plain band (for example, a wedding ring) and this should be moved about on the finger when performing hand hygiene.

## Audits and feedback

It is important that hand hygiene compliance is monitored, and feedback is provided to the workforce as part of continuous quality improvement. A variety of methods can be used to monitor hand hygiene compliance in aged care settings.

- **Product availability audit:** This method assesses the availability of hand hygiene products. Hand hygiene compliance is not possible if suitable products are not readily available. It is recommended that product availability audits are conducted regularly (for example, monthly). Areas of concern identified in an audit should be addressed immediately. The Product Availability Audit tool can be used or modified for local use.
- **Product availability feedback survey:** The Product Availability Staff Feedback form can be adapted for local use to seek feedback from aged care workers about availability of hand hygiene products in their organisation or service. It is recommended that this survey is conducted regularly (at least annually).
- **Feedback survey for older people and carers:** A survey can be conducted to seek feedback from older people and carers on their experience of hand hygiene in an aged care service. The feedback survey can be used or modified for local use.

### Skin care

The main type of skin irritation associated with hand hygiene is irritant contact dermatitis. Symptoms include dryness, irritation, itching and sometimes cracking and bleeding. Damaged skin can lead to an increased risk of acquiring or spreading infections. Allergic contact dermatitis is rare and represents an allergy to one or more ingredients in a hand hygiene product. Generally, ABHR causes significantly less skin reaction or irritation than hand hygiene with plain or antiseptic soaps, and their use can often improve skin integrity. Appropriate use of hand lotion or moisturisers added to hand hygiene preparations is important for maintaining skin integrity, encouraging adherence to hand hygiene practices, and ensuring the health and safety of aged care workers.

All aged care workers should be educated about the risk of irritant contact dermatitis and other skin damage. Use of hand cream and emollient hand cream should be encouraged after performing hand hygiene before a break or leaving a shift. If skin irritation occurs, then hand hygiene technique should be reviewed. If the irritation persists or if it caused by a specific soap, antiseptic or alcohol-based product, the manager, IPC lead(s) or people responsible for IPC and the work health and safety team should be consulted.



**Resources**

The Occupational Dermatology Research and Education Centre aims to reduce the incidence and impact of occupational contact dermatitis in Australia, through research and education about work-related skin disease.

# Personal protective equipment

## What is PPE

PPE refers to the variety of barriers (including aprons, gowns, gloves, masks, protective eyewear and face shields) used alone or in combination to protect aged care workers, family members, carers and older people from acquiring or spreading infections.

Different types of PPE provide different levels of protection. Therefore, aged care workers need to consider what type of protection they require when selecting PPE.

## When to wear PPE

If there is a risk of being exposed to blood or body fluids, aged care workers must determine the type of exposure and the level of risk. They should consider which part(s) of their body, such as their hands, body, uniform, eyes, mouth and nose or face, may be exposed, and select the appropriate PPE to protect the site(s). When selecting items of PPE, an aged care worker should consider:

- if the **mouth or nose** may be exposed – consider whether a **mask** should be worn
- if the **face (mouth, nose and eyes)** may be exposed – consider whether a **face shield** should be worn

- if the **eyes** may be exposed – consider whether **protective eyewear (goggles)** or a **face shield** should be worn
- if the **hands** may be exposed – consider whether **gloves** should be worn
- if the **body or uniform** may be exposed – consider whether a **gown** should be worn
- if the **body** or **uniform (excluding arms)** may be exposed – consider whether an **apron** should be worn.

In addition to the sites of exposure, an aged care worker should consider the type(s) of body fluids involved (for example, blood, urine, mucus), and whether the older person has an infection.

If the older person is suspected of having or is diagnosed with an infection, then the aged care worker should consider the following and wear the appropriate PPE according to transmission-based precautions.

- What is the type of infection? (For example, influenza or gastroenteritis.)
- How does the infection spread? (Through the contact or respiratory routes or a combination of routes?)
- How much contact will the aged care worker have with the older person?
- Is it safe for the older person to remain in the facility or their home?

If the way the infection is spread is not known, it is important that the IPC lead(s) or people responsible for IPC conduct a risk assessment to identify which PPE is required to reduce the risk to the aged care worker. The IPC lead(s) or people responsible for IPC may want to discuss the risk with a medical or nurse practitioner, or the local public health unit, to determine the most appropriate level of protection. Until the infection is confirmed, aged care workers should implement the most protective level of transmission-based precautions relevant to the symptoms to minimise the potential spread. See the section on **Transmission-based precautions** for more information.



## Practice point

### Selecting what PPE you need

An aged care worker taking an older person's blood pressure will mostly likely not require any level of PPE because the risk of being exposed to body fluids is very low. If an aged care worker is going to provide assistance with oral care or assist an older person to have a shower, there is a risk of splashes or sprays of body fluids. Before starting a task, the aged care worker must assess the level of risk involved in the activity and consider factors that will increase the likelihood of exposure to body fluids. These factors include direct or near contact with wounds, broken skin, genital areas, anus, eyes, nose or mouth, and the infection status of the older person.

This assessment may include whether the older person can assist in their own personal care or requires full assistance, and whether they exhibit aggressive behaviours during personal care, perhaps due to cognitive impairment.

## Where to wear PPE

PPE is designed and issued for a specific purpose in a protected environment or zone and should not be worn outside that area. In a residential aged care home, this may be an older person's room or an entire wing. In the community, this may be an older person's home, a room within the home, or during a care activity, such as wound care, toileting or showering.

PPE provided for aged care workers in these areas must be removed before leaving the area. Even where there is a low risk of contamination, PPE that has been in contact with older people should not be worn outside the designated area. To reduce the risk of spreading infections between older people, PPE should be removed and, if necessary, replaced before attending to another person's care. This includes when providing care in a room where people are grouped together (also known as cohorted); PPE should be changed when moving between people in these rooms if there is no risk to the aged care worker.



**Practice point**

### How to know when or if PPE should be removed

All aged care workers must learn how to assess the level of risk so they can decide when or if PPE needs to be changed.

For example, if an aged care worker is providing care to four people in the same room and one older person has a confirmed scabies infection (spread by contact or touching), then the aged care worker should use CONTACT precautions (gown and gloves) for the care of that person. The PPE should be discarded, and hand hygiene should be performed before moving on to care for the next person in the same room.

If an older person in a four-bed room has confirmed influenza (spread through respiratory particles), then the aged care worker should change their apron and perform hand hygiene between caring for each person in the room, and leave their mask and eyewear/face shield (if worn) on until they leave the room. If the mask and eyewear/face shield become contaminated, the aged care worker should leave the care area to remove their PPE and apply new PPE. This is because there is a risk to the aged care worker of inhaling the infectious particles in the air if they change their mask and eyewear/face shield in the room.

## Types of PPE

### Aprons and gowns

Aprons or gowns should be worn by aged care workers (see **Table 9**) when:

- there is an increased risk that close contact with the older person, or equipment, may lead to contaminating skin, uniforms or other clothing with infectious material
- there is a risk of contamination with blood, body substances, secretions or excretions (except sweat).

The type of apron or gown required depends on the level of risk, including the anticipated level of contact with infectious material and the potential for blood and body fluids to penetrate through to clothes or skin. Gowns and aprons used in care areas should be resistant to fluid.

Gowns and aprons should be changed between caring for different older people. Removing aprons and gowns before leaving the designated area (such as an older person's room) prevents possible contamination outside the care environment.

Aprons and gowns should be removed in a manner that prevents contamination of clothing or skin. The outer (contaminated) side of the gown or apron is turned inward and rolled into a bundle, then discarded into the appropriate waste bin.

**Table 9** Types of aprons and gowns and their characteristics

| Type | Recommended use | Characteristics |
|---|---|---|
| **Aprons** | Worn for general use when there is the possibility of sprays or spills or exposure to blood or body fluids during low-risk procedures. Worn during CONTACT precautions when contact is likely. | • Fluid resistant<br>• Single use<br>• Disposable |
| **Gown** | Worn to protect the aged care worker's exposed body areas and prevent contamination of clothing with blood, body fluids and other potentially infectious material. | • Fluid resistant<br>• Usually single use<br>• Disposable<br>• Choice of sleeve length depends on the risk to the aged care worker's arms of exposure |
| **Long-sleeved gown** | Worn when there is a risk of:<br>• contact between the aged care worker's skin and an older person's broken skin<br>• extensive skin-to-skin contact (for example, lifting a person with scabies)<br>• contact with bloody and body fluids that are not contained (for example, vomiting).<br>Worn when there is the possibility of extensive splashing of blood and body fluids. | • Fluid resistant<br>• Single use<br>• Long sleeves so that clothing and upper body areas are protected<br>• Worn in combination with gloves and other PPE where indicated |

PPE = personal protective equipment

## Face and eye protection

The mouth, nose and eyes are easy routes for microorganisms to enter the body and cause infection. Face and eye protection reduce the risk of exposure of aged care workers to splashes and sprays of blood and body fluids and respiratory particles (Table 10). Procedures that generate splashes or sprays of blood and body substances require either a face shield or a mask worn with protective eyewear.

Single-use or reusable face shields may be used with surgical masks, as an alternative to protective eyewear (goggles). A face shield that extends from chin to crown can provide protection to other parts of the face as well as the eyes. If aged care workers wish to use prescription protective eyewear, the eyewear must meet the relevant Australian Standard (AS/NZS 1337.6:2012).

## Surgical masks

Surgical masks are loose-fitting, single-use items that cover the nose and mouth. They are used to keep splashes and sprays from reaching the mouth and nose of the person wearing them. They also reduce the risk of being infected with microorganisms spread via the respiratory route. If they can be tolerated, surgical masks can be placed on older people who are coughing; this will limit potential spread of infectious respiratory secretions from the older person to others.

When using surgical masks:

- replace surgical masks when they become soiled or wet, or have been worn for four hours
- masks should never be reapplied after they have been removed
- masks should not be left dangling around the neck
- touching the front of the mask while wearing it should be avoided
- perform hand hygiene upon touching or discarding a used mask.

## Particulate filter respirator (also known as N95/P2 masks)

A particulate filter respirator (PFR) is a type of mask that protects a person by filtering very small particles out of the air the person is breathing. Different types of respirators provide different levels of protection. The descriptions N95 and P2 are commonly used specific labelling claims about the level of protection provided by the PFR. The Therapeutic Goods Administration website describes the requirements for P2 and N95 respirators.

In the aged care setting, PFRs are only required in high-risk situations such as when assisting with an aerosol-generating procedure for an older person diagnosed with or suspected of having a respiratory infection (see **Transmission-based precautions**). Examples of aerosol-generating procedures include administration of a nebulised medicine and suctioning. Other use of PFRs should be based on a risk assessment (see **Chapter 5**).

Fit testing and checking are recommended to support the use of PFRs.

## PFR fit checking

For a PFR (P2/N95 respirator) to offer the maximum amount of protection, the wearer should be properly fitted and trained in its safe use. PFRs are designed to help reduce the risk of exposure to respiratory contaminants such as particles, gases and vapours. If a PFR is required, aged care workers should perform a **fit check** each time they use a PFR.

**Fit checking** is performed by the aged care worker by gently inhaling and exhaling. For instructions on how fit checking should be performed, refer to Section 3.2.4 of the Australian Guidelines for the Prevention and Control of Infection in Healthcare.

A risk management approach should be applied to ensure that aged care workers in high-risk areas are trained in appropriate fitting of PFRs and in how to perform a fit check at the point of use.

## Fit testing

Fit testing requires a more complex system to be in place than is needed for fit checking. There are two types of facial fit testing – qualitative and quantitative.

**Qualitative** fit tests are fast and simple but can be influenced by the wearer.

**Quantitative** fit tests require the use of specialised equipment, which is used by a trained operator.

For more information on the requirements for fit testing, refer to Section 3.2.4 in the Australian Guidelines for the Prevention and Control of Infection in Healthcare, Australian Standard 16975-3:2023 and Safe Work Australia.

**Table 10** Types of face and eye protection and their characteristics

| Type | Characteristics | Recommended use |
|---|---|---|
| **Surgical mask** | • Loose-fitting mask that covers mouth and nose<br>• Single use<br>• Can be worn by aged care worker, older person or visitor and family member | Worn when there is a risk of splashes or sprays that can reach the mouth or nose of the person wearing them.<br>Worn when there is a risk of spreading or being infected with microorganisms by the respiratory route. |
| **PFR mask** | • Snug fitting mask that creates a seal against the face to protect the mouth and nose<br>• Filters very small droplets out of the air<br>• Single use | Worn when completing aerosol-generating procedures (suctioning or administering nebulised medication) for a person with a suspected or confirmed respiratory infection. |
| **Protective eyewear** | • Protects eyes only<br>• Can be single use or reusable<br>• Worn in conjunction with mask<br>• Can be worn over prescription eyewear | Worn where there is a risk of splashes or sprays of blood of body fluids to the eyes. |
| **Face shield** | • Extends from crown to chin to protect all parts of face, including eyes<br>• Can be single use or reusable<br>• Worn in conjunction with mask<br>• Can be worn over prescription eyewear | Worn where there is a risk of splashes or sprays of blood or body fluids to the face or eyes. |

## Gloves

The need for gloves is based on careful assessment of the task to be carried out. Gloves should be used to prevent contamination of aged care workers' hands when direct contact is anticipated with blood or body fluids, mucous membranes or non-intact skin, or when touching potentially contaminated equipment and environmental surfaces. Gloves (other than utility gloves) should be treated as single-use items and discarded after each use (Table 11). Hand hygiene should always be performed before putting on gloves and after removing them.

The material of the gloves must be considered because it affects glove effectiveness.

- **Latex gloves** are preferable for clinical procedures that involve more than brief contact with the older person. However, sensitivity to latex may occur and must be documented. A local policy is required on using alternative glove types when older people or workers have latex allergies.
- **Synthetic** gloves (for example, nitrile) are used for procedures and care activities involving high risk of exposure to bloodborne viruses and where increased protection is needed.
- **Vinyl gloves** are not recommended for the clinical care of older people.

**Table 11** Selection of glove type

| Glove | Indications for use | Examples |
|---|---|---|
| **Non-sterile gloves** | • Potential for exposure to blood, body fluids or substances<br>• Contact with non-intact skin or mucous membranes<br>• Anticipated contact with chemicals and chemotherapeutic agents | • Emptying a urinary catheter bag<br>• Management of minor wounds<br>• Handling chemicals, such as cleaning agents and wipes |
| **Sterile gloves** | • Potential for exposure to blood, body fluids or substances<br>• Contact with susceptible body sites or invasive devices | • Urinary catheter insertion<br>• Complex wound dressings |
| **Reusable utility gloves** | • Non-clinical activities<br>• Can be decontaminated for reuse (according to the glove manufacturer's directions) | • Cleaning the environment or cleaning and disinfecting care equipment |

When used correctly, gloves are a vital part of PPE. However, gloves are often overused and if used improperly can be a factor in transmitting infections between older people. There are many occasions when gloves are not needed and hand hygiene is completely effective in protecting aged care workers and the older people they care for from microorganisms.

**Gloves should be ON when:**

- in contact with blood or body fluids, non-intact skin or mucous membranes
- in contact with chemical hazards, such as disinfectants and cytotoxic materials
- hands are thoroughly dry (after washing or ABHR) to reduce the risk of dermatitis.

**Gloves should be OFF when:**

- they are suspected to be, or are damaged
- there is no contact with blood or body fluids, non-intact skin or mucous membranes
- between care activities
- it is necessary to perform hand hygiene
- contact with chemicals has ended.

### Sustainable glove use

Overusing gloves increases the amount of unnecessary waste generated, leads to missed opportunities for hand hygiene and increases the risk of occupational dermatitis for aged care workers. Before putting on a pair of gloves, consider the following questions.

- What is the reason for wearing the gloves? (Is there a risk of blood or body fluid exposure or exposure to an infectious disease such as gastroenteritis?)
- What type of gloves do you need?
- Will wearing gloves protect the older person, the aged care worker or the environment from infections?
- Would preforming hand hygiene be equally effective or better at reducing cross-contamination?

## Extended PPE use

The extended use of PPE items can increase the risk of cross-infection for aged care workers and increase the risk of environmental contamination. Decisions about extended use of PPE must be made in consultation with the IPC lead(s) or people responsible for IPC. Inappropriate use of PPE (for example, wearing PPE outside the work setting) may lead to increased risk of the spread of infection and a public perception of poor practice. To reduce the risk of transmission of microorganisms, PPE must be used appropriately. Appropriate PPE use also supports environmentally sustainable practices.

**For more information on STANDARD precautions and PPE, refer to Section 3.1 of the Australian Guidelines for the Prevention and Control of Infection in Healthcare.**

# Aseptic technique

Asepsis is the absence of all microorganisms. Aseptic technique is a set of practices used to protect the older person from contamination and the introduction of microorganisms during clinical procedures. More information on clinical procedures can be found in **Chapter 11.**

Many of the work practices that form STANDARD precautions, including hand hygiene and PPE, are required for aseptic technique. Aseptic technique is commonly used in aged care when invasive clinical procedures are performed – for example, urinary catheter management and insertion, and wound care.

Aseptic technique is used during these procedures to protect the key parts of equipment (for example, the forceps during wound care) and key body sites (the wound bed) and to prevent the introduction of microorganisms during the procedure. Aged care workers who perform aseptic technique must undergo training and a practical assessment to ensure they are competent to complete each step.

Carers who need to perform aseptic technique should receive training from an experienced registered or enrolled nurse who is competent in performing standard aseptic technique.

## The five essential principles of aseptic technique

Aseptic technique can be achieved in residential and community settings by applying the five principles of aseptic technique and modifying practice to mitigate infection risks.

1. **Sequencing:** preparing, performing, and completing the procedure in a safe and planned way.

   Sequencing involves a series of actions that ensure each procedure is performed in a safe and appropriate order (**Table 12**). When performing a task that requires aseptic technique, the aged care worker should consider how the procedure will be completed to reduce any risk of infection.

2. **Environmental control:** Many factors that can occur during a procedure may increase the risk of infection and of harm to the older person. These factors include
   - other activities occurring in the nearby environment that may increase the risk of contamination during the procedure (for example, bed-making, dusting and cleaning)
   - whether the environment is a controlled setting (for example, a residential and centre-based aged care setting) or an uncontrolled setting (for example, an older person's home)
   - the condition of the work area, surface and equipment used for this procedure (for example, is the equipment clean? Is it a hard surface?)
   - any fans or open windows that can cause air turbulence and contamination of the aseptic field. If practicable, these factors should be removed (for example wait until cleaning has finished, close windows) or otherwise controlled to reduce the risk of contamination and infection transmission.

**Table 12** Sequencing for aseptic technique to reduce the risk of infection

| Step | Considerations |
|---|---|
| **Perform a risk assessment** | • Are there environmental factors that increase the risk for this procedure?<br>• Is the procedure technically difficult or an emergency?<br>• Will this procedure require a standard or surgical aseptic technique?<br>• Is there a risk of infection transmission or a contamination risk with this procedure?<br>• What skills and knowledge are required to perform this procedure?<br>• What PPE is needed for this procedure?<br>• What action is required to mitigate these risks? |
| **Pre-procedure preparation** | • Select the correct equipment; check the condition, integrity and expiry date of each item required for the procedure.<br>• Plan each step of the procedure to avoid a break in asepsis.<br>• Inform the older person about the procedure and obtain consent.<br>• Prepare the older person for the procedure. |
| **Performing the procedure** | • Set up the equipment immediately before performing the procedure.<br>• Maintain STANDARD precautions including hand hygiene, glove use and use of other PPE as appropriate.<br>• Perform the procedure in a safe, logical order.<br>• If sterility is breached, immediately stop and start steps again. |
| **Post-procedure practices** | • Remove gloves and perform hand hygiene.<br>• Provide support to the older person having the procedure.<br>• Pack away equipment and dispose of waste.<br>• Document the outcome of the procedure, including any breaches in asepsis, any corrective actions taken at the time of the procedure to minimise infection risks, and if multiple attempts were required to complete the procedure (such as the number of attempts to insert a catheter). |

PPE = personal protective equipment

3. **Hand hygiene:** The 5 Moments for Hand Hygiene should always be followed. In addition to the 5 moments, there are critical moments before, during and after a procedure that require aseptic technique when hand hygiene should be performed. These moments are
    - before and after setting up an aseptic field
    - immediately before putting on gloves (if gloves are required)
    - immediately after completing the procedure and after removing gloves
    - immediately after cleaning up and disposing of equipment and waste.

    Hand and wrist jewellery must be removed before both the procedure and performing hand hygiene so that the worker is 'bare below the elbows'. If gloves become contaminated or torn during a procedure, they must be removed, hand hygiene must be performed, and new gloves applied. New gloves are needed if hands become very sweaty or get wet inside the gloves.
4. **Maintenance of aseptic fields:** The aged care worker should ensure that the aseptic field, the key parts, and key sites are always protected. The aged care worker should always
    - prepare the key site with the correct solution – for example, cleanse with normal saline or other suitable solutions
    - set up an aseptic field – for example, by using a basic dressing pack
    - use sterile equipment (this will usually be single use)
    - maintain the aseptic field, including protecting the key site and all key parts used for the procedure
    - use the most suitable technique for the type of procedure – for example, a non-touch technique if suitable or use sterile gloves if you need to handle sterile equipment and touch the key site.
5. **PPE:** PPE is important for protecting both the older person and the aged care worker during aseptic procedures. The aged care worker should consider the following points.
    - What PPE is required to protect the older person, the aseptic field and the aged care worker during the procedure?
    - Is protective eyewear, a face shield and/or a surgical mask required?
    - Can this procedure be performed with non-sterile gloves or are sterile gloves required?
    - Is a sterile gown or plastic apron required to protect the older person, aseptic field, and the aged care worker?
    - What is the correct sequence for putting on and removing PPE?

## Home and community aged care

How to apply the five principles of aseptic technique in a home and community setting

There are a variety of risk factors that aged care workers, especially those working in rural and remote settings, will experience when providing care in home and community settings. Many of these, such as a lack of space or sanitary facilities, are unpredictable and influence how aged care workers can perform clinical procedures. These types of environmental risks often require quick thinking and adaptation of existing IPC skills, especially when performing clinical procedures that require aseptic technique.

Aged care workers performing aseptic technique in these settings should **be trained how to**:

- conduct an environmental risk assessment and manage the identified risks
- apply and adapt the five principles of aseptic technique to the unique challenges of home and community settings.

An environmental risk assessment aims to identify, assess and reduce the risks of transmitting infections when performing a clinical procedure. When assessing the risk of performing a clinical procedure in a home environment, various factors should be considered. These include the general airflow of the room; animals and pets; the mental, behavioural or cognitive health of the older person; and other hazards, such as limited access and exposed electrical cords.

This risk assessment may be conducted at the older person's home, but also by contacting the older person before the visit and asking about the environment. Contacting the older person before the visit can help to determine whether it is safe to attend the visit and what items will be needed to perform the procedure safely.

The aim of conducting an environmental risk assessment is to reduce the risk associated with performing the clinical procedure. After the risks are identified and assessed, strategies should be implemented to reduce the risk by using the hierarchy of controls.

In a home environment, it may not always be possible to achieve aseptic technique because of environmental risks or other hazards. A risk assessment should always be conducted before performing a clinical procedure to determine whether it can be safely completed. This risk assessment should consider the environmental risks along with the clinical risks of not performing the procedure, and how the procedure will be completed if it cannot be performed in the home setting.

Refer to **Appendix 2** for how to apply and adapt the five principles of aseptic technique to the unique challenges of home and community settings.

## Aseptic technique in aged care

In aged care settings, aseptic technique should be used when a procedure or medical device enters one or more of the body's normal defences, such as the skin, mucous membranes or body cavity. For example, this may happen while:

- performing wound care
- inserting a urinary catheter
- accessing an indwelling device.



### Resources

For more information, refer to the ACSQHC's resources to support implementation of aseptic technique.

Refer to **Tables 13** and **14** for a detailed step-by-step guide on how to perform aseptic technique during wound care in a residential or centre-based setting, and in a home or community care setting, respectively. Wound care procedures are highly variable.

**Table 13** Aseptic technique for wound care in residential and centre-based aged care settings

| Step | Aseptic technique for wound care – residential and centre-based aged care setting |
|---|---|
| 1 | Clean hands and then clean the trolley surfaces. Clean the surfaces according to organisation policy to reduce the risk of contamination of the aseptic field. |
| 2 | Gather the dressing pack and equipment, place them on bottom shelf. Because hands are contaminated when gathering equipment, gather all equipment before performing hand hygiene again. Gathering equipment at this point also allows the trolley to dry properly and saves a little time. |
| 3 | Perform hand hygiene immediately before assembly of the aseptic field drape and equipment to promote asepsis. |
| 4 | Open the pack, place the drape on the top shelf and position the waste bag. |
| 5 | Assemble the equipment and place it on the top shelf of the trolley, protecting the key parts. |
| 6 | Put on non-sterile gloves. Non-sterile gloves are indicated because Steps 7 and 8 do not involve the touching of key sites or key parts. |
| 7 | Prepare the older person for the procedure by explaining the steps involved and ensuring they are in a comfortable position. Position a paper towel or drape under the wound. This will promote asepsis and help protect the surrounding environment from contamination. |
| 8 | Remove the dressing, expose the wound and dispose of the dressing into waste bag. Disposing of the dressing here limits the movement of contaminated waste, helping to protect the wider clinical or community environment. |

| Step | Aseptic technique for wound care – residential and centre-based aged care setting |
|---|---|
| 9 | Remove non-sterile gloves and perform hand hygiene. Steps 7 and 8 are ‘dirty’ procedures and hand hygiene at this point will promote asepsis. |
| 10 | Put on sterile gloves. Although not essential for some small, minor dressings, sterile gloves at this stage will help promote asepsis of the wound. Sterile gloves are essential at this stage if the wound requires direct touching with gloved hands. |
| 11 | Clean the wound to help protect it from colonisation or infection. |
| 12 | Dress the wound to help protect it from colonisation or infection. |
| 13 | Dispose of the equipment, waste and gloves. Folding the used equipment and waste into the aseptic field drape and disposing of it in the attached waste bag will minimise the movement of waste and protect the wider working environment. |
| 14 | Clean the trolley surfaces. |
| 15 | Perform hand hygiene. This will help break the chain of infection. |

**Table 14** Aseptic technique for wound care in a home and community aged care settings

| Step | Aseptic technique for wound care – home and community aged care setting |
|---|---|
| 1 | Conduct an environmental risk assessment of the older person’s home to determine the most appropriate area to perform the procedure.<br>There are many challenges when performing an aseptic procedure in the community. If possible, the procedure should be performed:<br>• on a hard, flat surface (such as a table or chair) so that the area can be easily cleaned<br>• away from pets and children and areas where there is turbulent airflow (such as from an open widow)<br>• in a quiet room where there will be minimal disruptions<br>• away from food, drinks and other chemicals.<br>It is important to note that it may not always be possible to achieve aseptic technique in a home or community setting because of environmental hazards (for example, hoarding, squalor, pets) or behavioural concerns (such as cognitive impairment and mental health). A risk assessment should always be conducted before performing a procedure to check that it can be safely completed (for both the aged care worker and the older person).<br>This risk assessment should consider the environmental risks along with the clinical risks of not performing the procedure, and how the procedure will be completed if it cannot be performed in the older person’s home. |
| 2 | After completing the risk assessment and identifying a safe area to perform the procedure, clean hands and then clean the designated workspace. Clean the surface according to organisation policy to reduce the risk of contaminating the aseptic field. |
| 3 | Gather the dressing pack and the equipment and place them near the designated workspace. |

| Step | Aseptic technique for wound care – home and community aged care setting |
|---|---|
| **4** | Perform hand hygiene immediately before opening the dressing pack to promote asepsis. |
| **5** | Open the pack, place the drape on the designated workspace and position the waste bag between yourself and the older person. |
| **6** | Assemble the equipment and position it on the designated workspace, protecting key parts. |
| **7** | Put on non-sterile gloves. Non-sterile gloves are indicated because Steps 8 and 9 do not involve the touching of key sites or key parts. |
| **8** | Prepare the older person for the procedure by explaining the steps involved and ensuring they are in a comfortable position.<br>Position a paper towel or drape under the wound. This will promote asepsis and help protect the surrounding environment from contamination. |
| **9** | Remove dressing, expose wound and dispose of dressing into waste bag. Disposing of the dressing here limits the movement of contaminated waste, helping to protect the wider clinical or community environment. |
| **10** | Remove non-sterile gloves and perform hand hygiene. Steps 8 and 9 are ‘dirty’ procedures and hand hygiene at this point will promote asepsis. |
| **11** | Put on sterile gloves. Although not essential for some small, minor dressings, sterile gloves at this stage will help promote asepsis of the wound. Sterile gloves are essential at this stage if the wound requires direct touching with gloved hands. |
| **12** | Clean wound to help protect the wound from colonisation or infection. |
| **13** | Dress wound to help protect the wound from colonisation or infection. |
| **14** | Dispose of equipment, waste and gloves. Folding the used equipment and waste into the aseptic field drape and disposing of it in the attached waste bag will minimise the movement of waste and protect the wider environment. This waste will need to be disposed of into a clinical waste receptacle. |
| **15** | Clean the designated working space. |
| **16** | Perform hand hygiene. This will help break the chain of infection. |

# Waste management

## Residential and centre-based aged care

Waste should be disposed of at the point of generation, if practicable, into an appropriate container to prevent contamination of the environment. Waste bins should be leakproof, with lids that close to prevent spillage and, if required, be lockable. All waste must be stored and transported safely. Waste storage areas should have lockable doors, and be located away from public spaces, the care environment and food preparation areas. Ideally, processes should be in place to transport waste in a manner that avoids transport through public areas, clean clinical spaces and food preparation areas. This may involve the use of dedicated lifts or corridors for waste transportation. Organisations should also have processes in place for the regular removal of all types of waste, including by engagement of licensed waste services. Waste should be disposed of according to local waste management plans and jurisdictional requirements.

## Home and community aged care

All waste should be handled using STANDARD precautions to avoid self-contamination and contamination of the environment. Depending on jurisdictional and local requirements, waste in the community may be managed differently. Aged care organisations should check local requirements and provide advice and appropriate equipment to the workforce based on these requirements.



### Resources

There is currently no national definition of clinical waste in Australia, so aged care facilities, including community aged care services, must comply with relevant state or territory legislation and regulations on the management of clinical and related wastes. Useful resources include AS 3816:2018 – Management of clinical and related wastes, and resources produced by the Waste Management and Resource Recovery Association of Australia, including the Industry Code of Practice: Managing Biohazardous Waste (Including Clinical and Related Wastes).

Aged care organisations should develop their own policies on waste management for their services.

## Waste segregation

Waste generated in a care environment must be handled with care. Aged care workers should be trained on how to segregate (or separate) waste and to always use STANDARD precautions when handling waste. When handling waste, aged care workers:

- should wear PPE, such as gloves and an apron, to protect themselves from contamination with microorganisms
- should perform hand hygiene after contact

- may need to use transmission-based precautions in addition to STANDARD precautions, depending on the risk of exposure to infectious material in the waste.

There are four primary different categories of waste generated in aged care.

- **Clinical waste** includes any waste that may cause injury, infection or offence. Examples include
  - anatomical waste
  - clinical waste and pathology waste
  - radioactive waste
  - cytotoxic waste
  - pharmaceutical waste.
- **Clinical sharps waste** includes any sharp items including needles, sutures and glass vials. More information can be found in the **Management of sharps** section of this chapter.
- **General waste** is the most frequently generated waste, and includes most items used in the clinical and non-clinical setting.

  **Other waste** includes organic food material, oils, liquids and food packaging. Like other forms of waste, the various waste materials should be segregated and stored appropriately – for example, organic food waste must be stored away from food storage and preparation areas and in a way that does not attract vermin and insects.

Regardless of where waste is generated (for example, in association with medicines use or in storerooms or routine care areas), the same principles should be used to classify the waste by category.

### Sustainable waste management

Effectively managing waste in aged care provides opportunities to reduce operational costs and environmental impacts as well as reducing infection risks for aged care workers and older people. Aged care workers can contribute to sustainable waste management by only using disposable equipment and PPE when necessary, and correctly classifying waste so that it can be safely disposed of or recycled.

# Respiratory hygiene and cough etiquette

Respiratory hygiene and cough etiquette should always be applied as part of STANDARD precautions. Covering sneezes and coughs prevents infected people from dispersing respiratory secretions into the air. Hands should be washed with soap and water after coughing, sneezing or using tissues, and after contact with respiratory secretions or objects contaminated by these secretions.

Older people, carers, visitors and aged care workers should always be encouraged to:

- cover their nose and mouth when coughing or sneezing
- use tissues
- dispose of tissues as soon as possible after use

- cough or sneeze into their inner elbow rather than their hand if tissues are not available
- perform hand hygiene after coughing or sneezing, and after having contact with respiratory secretions and contaminated objects or materials.

Aged care workers should also support older people who need assistance with containment of respiratory secretions. Those who are immobile will need hand hygiene facilities and a place to throw away tissues (for example, a plastic bag) readily at hand.

**Any aged care workers with respiratory symptoms should not attend work until their symptoms have resolved or they are no longer infectious.**

**For more information, refer to Section 4.2.2 in the Australian Guidelines for the Prevention and Control of Infection in Healthcare.**



### Practice point

#### Aged care worker with influenza-like illness

Influenza and other respiratory viruses can be easily spread in aged care settings to older people, their carers and other aged care workers.

If an aged care worker presents to work with respiratory symptoms (for example, a cough, runny nose, headache or sore throat), the worker should be advised to go home and take sick leave until their symptoms have resolved. If the worker cannot leave immediately (for example, while waiting for a replacement to arrive), they must adhere to respiratory hygiene, cough etiquette and hand hygiene, and put on a surgical mask.

If the worker stays at work while symptomatic and in the acute phase of their illness, there is a high risk that other workers will become unwell, leading to increased sick leave, which in turn will hamper care services. There is also a high risk that older people and their carers will become unwell. Older people often have compromised immune systems, putting them at a higher risk of severe infection or the need for hospitalisation to manage their infection.

# Management of sharps

Using sharp devices can expose aged care workers to the risk of injury and potential exposure to bloodborne microorganisms, including hepatitis B virus, hepatitis C virus and HIV. While sharps injuries can occur in any setting, they most often occur:

- during use of a sharp device on a person receiving care
- after use and before disposal of a sharp device
- during appropriate or inappropriate disposal of sharp devices.

## Types of sharps

**Hollow-bore needles** (those used to collect body fluids or inject medicines) are needles that have a hollow or empty centre, allowing fluids or substances to pass through them (**Table 15**). They are of particular concern, especially those used for blood collection, because they are likely to contain residual blood and are associated with an increased risk of spreading bloodborne viruses during sharps incidents. These types of needles come in various sizes (gauges) – the larger the size or gauge, the more fluid or medicine the needle can hold.

**Solid-bore needles and sharps** are those that are not used for injections or fluid collection, such as suture needles and glass vials. These types of sharps have also been involved in sharps incidents.

**Table 15** Examples of sharps associated with sharps injuries in aged care settings

| Hollow-bore sharps | Solid-bore sharps |
|---|---|
| • Disposable needles and syringes | • Glass vials |
| • Steel-winged (butterfly) needles | • Suture needles |
| • Multi-sample blood collection needles | • Scissors |
| • Aspiration needles | • Nail clippers |
| • Injector pen needles | • Broken glass |

## Reducing the risk of sharps injuries

Eliminating workplace hazards and risk is a basic principle of all work health and safety legislation in Australia. To limit the risk of sharps injuries, aged care organisations should use the hierarchy of controls to develop interventions that prevent sharps injuries. See **Chapter 5** for more information on risk management and the hierarchy of controls.

### Safety-engineered devices

Many types of devices have been designed with built-in safety features that reduce the risk of sharps injury. Examples include needles with guards, sliding sheaths, shields, blunted tips and retracting needles. Safety-engineered devices can be classified into two broad categories.

- **Passive safety devices** are single-handed devices in which the safety device activates automatically with no extra action being required by the aged care worker – for example, a retractable spring-loaded safety syringe. Passive safety devices should always be preferred.
- **Active safety devices** require manual activation of the safety feature – for example, needles with guards.

### Safe handling of sharps

All aged care workers should take precautions to prevent injuries caused by needles and other sharp instruments or devices during and after a procedure and when cleaning used sharps (such as nail clippers). Safety devices should be considered, when appropriate, to minimise risk of injury to aged care workers. Standard measures to avoid sharps injuries include handling sharp devices in a

way that prevents injury to the person using the sharp and to others who may encounter the device during or after a procedure.

Aged care organisations should have a sharps safety program that includes consideration of notifiable incidents as defined in Section 38 of the Work Health and Safety Act 2011.

## Disposal of single-use sharps

Any person who uses a disposable sharp instrument or piece of equipment must be responsible for its safe management and immediate disposal after use. Older people who use sharps, such as those who self-manage medicines, should have access to a suitable sharps container at the point of use or a safety-engineered device. After they are used, single-use syringes and needles and other sharp items should be placed in an appropriate sharps container. These containers should be clearly labelled, puncture-proof and leakproof, and conform to Australian Standards AS 23907:2023 or relevant international standard (for example, ISO 23907-2:2019). The containers should be located at the point of use or, if this is not possible, as close as practicable to the use area.

## Sharps management in residential and centre-based aged care settings

In residential care settings, sharps containers must be appropriately placed so that they are at an accessible height for the aged care worker but out of reach of others to prevent hands and fingers entering the disposal unit – always consider older people with cognitive impairment. They should also be placed in a secure position or mounted on the wall to prevent tipping. Placement of wall-mounted units should be away from general waste bins to minimise the risk of incorrect disposal. Numerous safety devices are available to help with safe removal and disposal of sharps. Local sharps management protocols and procedures should be developed.

## Sharps management in home and community aged care settings

In community settings, such as within a person's home, sharps that are used when delivering care should be safely disposed of into a sharp's container. The container must be closed, securely stored and transported within a compartment in the car, and separated from the driver, in line with work health and safety requirements. The container should be transported to a hospital, community health centre or multi-purpose service for final disposal. Aged care organisations should equip aged care workers with a sharps container that complies with the relevant Australian Standard (AS 23907:2023).

Each local council has different options and requirements for sharps disposal. It is important that aged care workers encourage older people who are self-managing sharps to dispose of them in a strong plastic container (using either an Australian Standard-compliant sharps container or a puncture-resistant plastic container with a screw top). Aged care workers can advise the older person about safe and accessible options to dispose of their sharps in their local community. Options may include public hospitals, participating pharmacies and community sharps disposal bins. If an older person is unsure of the appropriate way to dispose of their sharps, the aged care organisation should assist with education.

**For information on environmental cleaning and reprocessing reusable equipment, refer to Chapter 7.**

# Handling of linen

## Handling of linen in residential and centre-based aged care

Aged care organisations should have documented policies on the collection, transport and storage of linen. All used linen should be handled with care to avoid dispersal of microorganisms into the environment and to avoid contact with aged care workers' clothing.

### Storage, transportation and handling of linen

Clean linen used in a residential or centre-based aged care facilities should be stored in a dedicated space. This space should be separate from storage spaces for dirty or used linen and should be designed to protect the clean linen from contamination by aerosols, dust, moisture and vermin. Clean linen can be stored on trolleys covered with clean covers or stored in clean cupboards with the doors closed to protect it from contamination. Used linen should be stored in a separate area, away from clean linen and the care environment.

Aged care workers should always use STANDARD precautions when handling used linen. For example, hand hygiene must be performed after all contact with used linen, regardless of whether the linen is visibly soiled. Workers may need to use transmission-based precautions in addition to STANDARD precautions if there is a risk that the linen is contaminated with a highly infectious microorganism or blood or other body fluids.

Clean linen that has been moved from a clean linen stock area to a small trolley (for bed-making) should not be returned to the storage area if unused. If unused, this linen should be discarded into a linen bag to prevent contamination of the clean stock of linen. Trolleys used to transport linen to and from the care environment should be cleaned after use. Separate transport trolleys should be used for clean linen and dirty linen.

When changing used linen, workers should take a linen bag to where they are working to avoid carrying the used linen through the care environment. This reduces the risk of exposure to microorganisms for other aged care workers and the care environment. If the used linen is soiled with a body fluid, it should be placed into a leakproof bag and sealed to prevent spills. Linen bags should not be more than three-quarters full. This helps prevent injury to the person handling the linen bag, and spillage of the contents.

Organisations should refer to AS/NZS 4146:2000 for managing linen.

#### Domestic type washers and dryers

Domestic type washing machines must be used only for an older person's personal items (not other linen). Washing must involve the use of an appropriate detergent and hot water. If hot water is not available, separate loads must be washed for each individual older person.

Clothes dryers should be used for drying.

## Handling of linen in home and community aged care

When starting services, the older person and the aged care organisation should work together to determine how personal linen (clothes, towels and so on) will be managed. This should include the use of appropriate products and handling of equipment and machinery to protect the worker. If equipment and machinery, such as a domestic washer or a drying machine, are to be used, workers should have access to instructions for their safe use.

## Home and community aged care

The following steps should be followed when managing linen in a home or community environment.

### Sorting and managing linen

- Wear appropriate PPE to sort and handle used linen.
- Always hold the linen away from the worker's clothes and avoid shaking linen because this may cause microorganisms to spread.

### Washing linen

- Use appropriate equipment to wash and dry linen, and avoid washing items by hand where possible.
- Do not overload the washing machine because this will result in the items not being properly cleaned.
- Perform hand hygiene after placing linen in the washing machine.
- Linen should ideally be washed at the highest temperature possible (based on manufacturer's instructions) together with a normal washing powder or laundry detergent.
- If a washing machine is not available, support to access a commercial laundry service should be offered. If hand washing linen is required, workers should wear utility gloves and an impervious gown with sleeves, use a dedicated plastic container to rinse the items with an appropriate detergent and physically wash underwater to avoid splashing and spreading microorganisms.

### Drying linen

- Hand hygiene should be performed before transferring washed linen to a drying machine. The drying machine should be set to tumble dry, if possible.
- If a drying machine is not available, linen can be hung up to dry in a location with fresh air and plenty of sunlight.

### Storing linen

- Perform hand hygiene before handling the clean linen.
- Linen should be sorted on a clean table (or flat surface) and stored in a cool, dry area.

## Essential knowledge

Linen items used by an older person with scabies can be decontaminated by machine washing in hot water and drying using the hot cycle, or by dry cleaning. Scabies mites do not survive more than two to three days away from human skin. Linen that cannot be washed or dry-cleaned can be decontaminated by being placed in a closed plastic bag for at least three days or until a machine wash and dry can occur. Hanging clothes out in the sun to dry will also remove the mite.

## Home and community aged care

**The IPC kit**

To ensure all aged care workers in the community are equipped to prevent and control infections, organisations should supply a basic kit that supports workers to perform IPC practices. It is suggested that this IPC kit includes:

- alcohol-based hand rub
- neutral detergent wipes (or two-in-one wipes: combined detergent and disinfectant wipes)
- gloves
- aprons
- impervious gown(s)
- surgical mask(s)
- goggles or face shield
- a puncture-resistant sharps container
- a spill kit (see **Chapter 6**)
- paper towels for hand drying if required
- Safe Work Australia first aid kit
- general waste bag
- clinical waste bag.

Depending on jurisdictional and local requirements, waste in the community may be managed differently. Aged care organisations should check local requirements and provide advice and appropriate equipment to the workforce based on these requirements. For example, NSW Health requires clinical waste to be disposed of at the point of use in the community.

Depending on the services offered, the location of the services (for example, rural or remote locations), and the infectious status of the older person, other considerations for the kit include:

- transmission-based precautions
- sterile dressing kit
- disinfectant wipes (or two-in-one wipes)
- cleaning products.

The items included in the IPC kit should be checked regularly to ensure stock expiry dates remain current, products are replaced promptly and kits are stored appropriately.

Additional resources may be required during clinical services to establish and maintain a clean workspace, especially for services in rural and remote settings. Each aged care organisation should work with their workforce to determine the specific items required for an IPC kit to be suited to the setting.

# Transmission-based precautions

Infections are mainly spread through contact, respiratory particles or a combination of these. The way that infections are spread depends on the type of microorganism causing the infection. In some cases, the same microorganism may be spread by more than one way (both contact and respiratory). **Transmission-based precautions** are used when an older person is suspected to have, or is diagnosed with, an infection. Transmission-based precautions are always used **in addition to STANDARD precautions**.

Choose from the **different types** of transmission-based precautions based on how an infection can be spread. Each type of precaution requires different levels of PPE to be worn to prevent the infection from spreading (see **Table 16**).

**Table 16** Transmission-based precautions

| CONTACT precautions | RESPIRATORY precautions | Combined CONTACT and RESPIRATORY precautions |
|---|---|---|
| PPE required for CONTACT precautions includes a gown and gloves. | PPE recommended for RESPIRATORY precautions generally includes a surgical mask, facial/eye protection and STANDARD precautions.<br>In some unusual and higher-risk situations, a PFR might be used instead of a surgical mask; however, this should be decided by the IPC lead(s) or people responsible for IPC based on a risk assessment.* | PPE recommended for combined precautions generally includes a gown, gloves, surgical mask, facial/eye protection and STANDARD precautions.<br>In some unusual and higher-risk situations a PFR might be used instead of a surgical mask; however, this should be decided by the IPC lead(s) or people responsible for IPC based on a risk assessment. |
| CONTACT precautions in aged care – poster (ACSQHC) | RESPIRATORY precautions in aged care – poster (ACSQHC)<br>RESPIRATORY precautions with PFR in aged care – poster (ACSQHC) | Combined RESPIRATORY and CONTACT precautions in aged care – poster (ACSQHC)<br>Combined CONTACT and RESPIRATORY precautions with a PFR in aged care – poster (ACSQHC) |

IPC = infection prevention and control; PFR = particulate filter respirator; PPE = personal protective equipment

* Refer to the IPC lead risk assessment for more information.

Transmission-based precautions should only remain in effect for limited periods until signs and symptoms of the infection have resolved, or according to recommendations from people responsible for IPC.

Recommendations for the duration of transmission-based precautions for specific infections can be viewed in Table A2.5 in Section 6.4 of the Australian Guidelines for the Prevention and Control of Infection in Healthcare.

Transmission-based precautions are used for older people suspected or confirmed to have an infection. Although it is not possible to identify all infections early enough to prevent transmission, in some settings recognising an increased risk means that transmission-based precautions should be used while confirmatory test results are pending. The aim of using transmission-based precautions early is to reduce transmission opportunities that may arise due to the specific route of transmission.

# Routes of transmission and precautions used

## Contact

**Description:** Contact is the most common route of transmission and usually involves transmission by physical touch or by contact with blood or body substances.

**Types:** Direct transmission occurs when infections are transferred directly from one person to another. Indirect transmission involves the transfer of an infection through a contaminated third object or person – for example, an aged care worker who comes into contact with a contaminated object, such as bedding or faeces, and then with an older person.

**Precautions:** PPE required for CONTACT precautions includes a gown, in addition to STANDARD precautions. Gloves should be used if there is a risk of exposure to blood or body fluids. Effective hand hygiene is especially important in preventing contact transmission. A poster that explains contact precautions is available.

## Respiratory particles

**Description:** Respiratory transmission can occur when an infected person breathes, coughs, sneezes, talks or sings, or during aerosol-generating procedures.

**Types:**

- **Respiratory droplets** are particles that are larger in size (more than five microns – for comparison, the thickness of a human hair is 40–70 microns). Droplets generally spread over short distances (usually no more than one or two metres). Therefore, ventilation changes are not required.

  Spread of infections via droplets requires close contact from person to person because the droplets usually travel less than two metres and do not remain suspended in the air for very long. Droplets can contaminate surfaces and objects in the environment, and the hands of aged care workers can become contaminated through contact with those surfaces, then spread infections if hand hygiene is not performed or if gloves are not worn correctly.
- **Airborne particles** are smaller than droplet particles (less than five microns). They contain fewer microorganisms than droplets, but they can remain infective for longer times. Airborne particles that contain microorganisms can be spread over long distances by air currents (for example, ventilation and air conditioning systems) and can be inhaled by people who have not had face-to-face contact with (or been in the same room as) the infectious person.

**Precautions:** In addition to STANDARD precautions, PPE recommended for RESPIRATORY precautions generally include a surgical mask and facial/eye protection. PFRs, including N95 and P2 respirators, are only recommended in aged care settings during high-risk situations, such as during an aerosol-generating procedure or other similar procedures for an older person with a suspected or confirmed respiratory infection.

For most situations when an aged care worker is caring for a person with a respiratory infection that is spread via the droplet or airborne route, a surgical mask with eye protection offers a high level of protection and is recommended. In some unusual and higher-risk situations, a PFR might be used instead of a surgical mask. The IPC lead(s) or people responsible for IPC should (if possible) be consulted before a PFR is used, and use a risk assessment to determine if required.

### Resources

For more information on the effectiveness of surgical masks, please refer to:

- the Australian Guidelines for the Prevention and Control of Infection in Healthcare (ACSQHC)
- Infection prevention and control (World Health Organization)
- Infection prevention and control in the context of COVID-19: a guideline (World Health Organization)
- P2/N95 respirators & surgical masks to prevent SARS-CoV-2 infection: Effectiveness & adverse effects (Infection, disease & health)
- Personal protective equipment for preventing highly infectious diseases due to exposure to contaminated body fluids in healthcare staff (Cochrane Database of Systematic Reviews).

## Combination (contact and respiratory)

**Description:** Sometimes a combination of CONTACT and RESPIRATORY precautions is required in addition to STANDARD precautions, if the infection can be spread through several ways.

**Precautions:** For most situations, combined precautions require a gown, facial/eye protection and a surgical mask in addition to STANDARD precautions. Gloves should be worn if there is a risk of exposure to blood or body fluids.

In some unusual and higher-risk situations, a PFR might be used instead of a surgical mask. The IPC lead(s) or people responsible for IPC should (if possible) be consulted before a PFR is used, and use a risk assessment to determine if required.

## IPC lead/person responsible for IPC risk assessment

A PFR and facial/eye protection is always required when caring for older people with suspected or confirmed measles (rubeola), chickenpox (varicella) or *Mycobacterium tuberculosis* (*M. tuberculosis*) infections. With any other respiratory infection, IPC lead(s) or people responsible for IPC should undertake a risk assessment to determine whether a PFR is required instead of a surgical mask and protective eyewear. When assessing whether a PFR mask is required, the IPC lead(s) or people responsible for IPC should conduct a risk assessment that considers several key points.

- Does the older person have measles, chickenpox or *M. tuberculosis* that requires a PFR to be worn by the aged care worker?*
- Does the older person have a suspected or confirmed respiratory infection **and** need assistance with an aerosol-generating or other high-risk procedure?
- Is the room well ventilated? For example, can windows be opened? Is there an effective indoor ventilation system?
- Is the older person cognitively impaired or unable to follow basic IPC precautions such as covering their mouth when coughing or sneezing?

Each of these factors – and others that the IPC lead(s) or people responsible for IPC identifies as significant issues for consideration – should be considered when determining whether a situation is high risk and requires aged care workers to wear a PFR.

* If an older person is diagnosed with one of these infections, consideration should be given as to whether the older person can be safely managed (for example, isolation) within the home/facility or needs to be transferred to hospital.



## Practice point

### Preventing a potential norovirus outbreak

An older person may present with symptoms including nausea, vomiting and diarrhoea. After speaking with the older person and the general practitioner, the IPC lead(s) may suspect that the older person has a norovirus infection. To avoid the risk of spreading the infection to others, the IPC lead(s) or people responsible for IPC should implement combined CONTACT and RESPIRATORY precautions for this older person while a stool sample is collected and tested. This will reduce the risk of further spread and a potential norovirus outbreak. It is also important to consider communication with carers and family members.

# Type and duration of precautions for specific infections and conditions in aged care

The information in Tables 17 to 19 provides a summary of diseases that may occur in an aged care setting and the precautions that may be required by aged care workers. Decisions about precautions should be based on a risk assessment performed by the IPC lead(s) or people responsible for IPC, and in the context of locally agreed policy relating to management of older people with specific diseases.

**REMINDER:** Transmission-based precautions are always applied in addition to STANDARD precautions that include hand hygiene, PPE, sharps management, respiratory hygiene/cough etiquette, aseptic technique and waste and linen management.

**Table 17** Precautions for infectious respiratory diseases

| Disease | Precaution | Duration of precautions | Comments |
|---|---|---|---|
| **Pneumonia (adenovirus)** | **CONTACT and RESPIRATORY** | Duration of illness* | Infectious period for immunocompromised individuals should be extended, as these individuals may remain infectious for longer due to prolonged viral shedding. |
| **Chickenpox (varicella virus)** | **CONTACT and RESPIRATORY with PFR (a single room should be allocated, and isolation used as able*)** | Until all lesions are dry and crusted over | Susceptible aged care workers and individuals† must not have direct contact with infected persons. This includes those who have not received varicella vaccine or have not previously been diagnosed with chicken pox. See the practice point below for more information.<br>See practice point below. |
| **Herpes zoster (shingles – disseminated disease; a disseminated disease is widely spread across the body, often including the face or mouth)** | **CONTACT and RESPIRATORY with PFR** | Until lesions are dry and crusted over | Susceptible aged care workers and individuals† must not have direct contact with infected person. This includes those who have not received varicella vaccine or have not previously been diagnosed with chicken pox.<br>See practice point below. |

| Disease | Precaution | Duration of precautions | Comments |
|---|---|---|---|
| **Herpes zoster (shingles – localised disease)** | **CONTACT as required (see comments)** | Duration of illness* (if blisters are present, precautions should be in place until they are dry and crusted) | While the blisters are open and draining and the dressings are down (for example, when showering or during dressing changes), CONTACT precautions should be followed. STANDARD precautions should be followed at all other times.<br>Isolation is not required if blisters are covered. Susceptible aged care workers and individuals† must not have direct contact. This includes those who have not received the varicella vaccine or have not previously been diagnosed with chickenpox.<br>See practice point below. |
| **Influenza** | **CONTACT and RESPIRATORY** | Until 72 hours after the older person receives anti-influenza medication; or five days have elapsed since onset of respiratory symptoms. May be longer for immunosuppressed persons | Annual immunisation recommended. |
| **Measles (rubeola)** | **CONTACT and RESPIRATORY with PFR** | Until four days after rash appears; duration of illness in immune-compromised older person | Susceptible aged care workers† should not provide direct care. |
| **Parainfluenza** | **RESPIRATORY** | Duration of illness* | Viral shedding (meaning contagious time) may be prolonged in older people who are immunosuppressed. |
| **Pneumococcal pneumonia/ viral pneumonia** | **RESPIRATORY** | Duration of illness* | Nil. |
| **Respiratory illness of unknown cause** | **RESPIRATORY** | Until cause identified and/or for duration of illness* | IPC lead(s)/people responsible for IPC should do a risk assessment to determine whether a PFR is required – see IPC lead(s)/people responsible for IPC risk assessment. |

| Disease | Precaution | Duration of precautions | Comments |
|---|---|---|---|
| **Respiratory syncytial virus (RSV)** | **CONTACT and RESPIRATORY** | Duration of illness* | Unwell person should avoid contact with older people, including by not attending work, until the person is feeling well and the severity of symptoms has reduced. May be prolonged shedding in immunocompromised people; this this case, duration of CONTACT precautions should be extended. |
| **Rhinovirus** | **CONTACT and RESPIRATORY** | Duration of illness* | Unwell person should avoid contact with older people, including by not attending work until the person is feeling well. |
| **SARS-CoV-2 coronavirus disease 2019 (COVID-19)** | **RESPIRATORY** | Duration of illness*, and at least 24 hours after resolution of symptoms | IPC lead(s)/people responsible for IPC should undertake a risk assessment to determine whether a PFR is required. |
| **Tuberculosis (pulmonary/ laryngeal)** | **CONTACT and RESPIRATORY with PFR** | Until GP or specialist deems the person is no longer infectious | RESPIRATORY precautions with a PFR are indicated for all people for whom pulmonary TB is suspected or proven.<br>STANDARD precautions are required for individuals with latent or extrapulmonary TB. |

IPC = infection prevention and control; PFR = particulate filter respirator; TB = tuberculosis

* For conditions requiring precautions for duration of illness: The relevant precautions should be followed for older people until they are asymptomatic. Aged care workers should not attend work during the exclusion period. Symptoms may extend beyond the normal anticipated time frames as outlined in CDNA Series of National Guidelines and the National guideline for the prevention, control and public health management of outbreaks of acute respiratory infection in residential aged care homes. In these cases, advice from a medical practitioner should be sought on when precautions can be removed. More information on exclusion periods for aged care workers can be found in **Chapter 9**.

† A susceptible individual is an aged care workers or older person at greater risk of infection. This includes individuals who are pregnant, immunocompromised, on immunosuppressive medications, have not had infection specific-vaccinations or have waning immunity (where applicable), as per the CDNA Series of National Guidelines.

## Practice point

### Managing shingles in aged care

Herpes zoster (shingles) caused by varicella zoster presents as small blisters (also known as lesions) on the skin. The blisters commonly appear on the torso or limbs only. This is known as localised shingles. The area of skin affected can usually be covered with a dry, waterproof dressing to protect the site. Aged care workers caring for a person with localised shingles should only need to used CONTACT and STANDARD precautions until all blisters have crusted over.

Shingles can also present on multiple sites on the body, including the face. This is referred to as disseminated shingles. It is not easy to cover the affected sites, especially the face, to protect the blisters. In this case, the aged care worker should consider using CONTACT and RESPIRATORY precautions with a PFR (including eye protection) until all blisters have crusted over.

Susceptible aged care workers, such as those who are pregnant, have not received the varicella vaccine or have not been previously had varicella zoster (chickenpox), should not provide direct care to older people.

**Table 18** Precautions for infectious gastrointestinal diseases

| Disease | Precaution | Duration of precautions | Comments |
|---|---|---|---|
| **Clostridio-ides difficile** | **CONTACT** | Until 48 hours after symptoms resolve | Discontinue antibiotics if appropriate.<br>Do not share electronic thermometers; ensure consistent environmental cleaning and disinfection. Hypochlorite solutions may be required for cleaning if transmission continues.<br>Use ABHR following glove removal. Wash hands with soap and water if gloves not worn and hands become soiled. |
| **Gastro-enteritis** | **CONTACT and RESPIRATORY** | Until cause is identified and/or for the duration of the illness | Continue precautions if the cause is communicable (an infectious disease able to spread from person to person).<br>Stop precautions if a noncommunicable cause is identified (such as a foodborne illness, like food poisoning). |
| **Rotavirus (gastro-enteritis)** | **CONTACT AND RESPIRATORY** | Until 48 hours after symptoms resolve | Use soap and water for hand hygiene. ABHR products are less effective than hand washing with soap and water for this infectious agent.<br>Ensure consistent environmental cleaning and disinfection and frequent removal of soiled continence pads.<br>Prolonged viral shedding may occur in both immunocompetent and immunocompromised people. |
| **Norovirus** | **CONTACT and RESPIRATORY** | For a minimum of 48 hours after the resolution of symptoms or to control institutional outbreaks | The use of combined CONTACT and RESPIRATORY precautions may be required during outbreaks or for those who are incontinent. This should be based on a risk assessment.<br>Alcohol-based hand hygiene products are less effective than hand washing with soap and water for this infectious agent.<br>Aged care workers should use a surgical mask if the older person is vomiting. Persons who clean areas heavily contaminated with faeces or vomitus may benefit from wearing masks because viruses can be aerosolised from these body substances. |

ABHR = alcohol-based hand rub

**Table 19** Precautions for skin, eye and wound infections

| Disease | Precaution | Duration of precautions | Comments |
|---|---|---|---|
| **Conjunctivitis** | **CONTACT** | Duration of illness | Highly contagious – can cause outbreaks. |
| **Herpes simplex virus infection** | **CONTACT** | Until lesions are dry and crusted | Nil. |
| **Scabies (*Sarcoptes scabiei*)** | **CONTACT** | Until 24 hours after treatment commenced | Aged care workers should be excluded from work until effective treatment has been commenced. |
| **Multidrug-resistant organisms (MROs) such as vancomycin-resistant enterococci (VRE), carbapenemase-producing *Enterobacterales* (CPE)** | **CONTACT** | Based on risk assessment | In each case, the implementation of CONTACT precautions and isolation should be based on an appropriate risk assessment. |
| ***Staphylococcus aureus* infections due to methicillin-resistant *Staphylococcus aureus* (MRSA)** | **CONTACT** (and RESPIRATORY as per comment) | Based on risk assessment | In each case, the implementation of CONTACT precautions and isolation should be based on an appropriate risk assessment. Use RESPIRATORY precautions for older people known to have respiratory infection or colonisation with MRSA. |
| **Wound infections (bacterial)** | **CONTACT** | Duration of illness | Until drainage stops or can be contained by a dressing. |

Source: Adapted from: Table A2.5: Precautions for specific infections and conditions in Section 6.4 of the Australian Guidelines for the Prevention and Control of Infection in Healthcare.

# Aerosol-generating procedures

Aerosol-generating procedures (AGPs) are procedures that have the potential to create aerosols. They include suctioning, sputum induction, non-invasive ventilation (NIV); for example, continuous positive airway pressure [CPAP], and the use of nebulisers. Although unlikely, infections can be spread when AGPs are performed; therefore, it is important for aged care workers to take a risk-based approach.

## What is the difference between a nebuliser and non-invasive ventilation?

A **nebuliser** is a machine that changes liquid medicine into a vapour so that the medicine can be inhaled. The machine works by pumping pressurised air through the liquid to form a fine mist, which can then be inhaled through a mask or mouthpiece.

A **NIV machine** provides extra support while an older person breathes but does not breathe for the person. Instead, NIV supports older people to breathe more efficiently by breathing in more oxygen and breathing out more carbon dioxide. There are two types of NIV.

- **Bi-level positive airway pressure** delivers air at two different pressures to support breathing. The airflow is strongest when an older person inhales and decreases to a lower pressure when the person exhales.
- **CPAP** provides a constant air pressure to keep the older person's airways open, allowing more air to flow in and out of the lungs.

## What should aged care workers do if an older person with an acute respiratory infection uses a nebuliser?

The use of nebulisers is not recommended for older people with acute respiratory diseases because they can increase the risk of transmission to others. Metered dose inhalers (MDIs) and spacers can reduce the risk of transmission. MDIs used in conjunction with spacer devices (or MDI adapters) should be considered as a replacement for a nebuliser for older people with acute respiratory infections. The choice of device should be discussed with the older person's general or nurse practitioner and pharmacist when the infection has been identified.

In some circumstances, nebulisers are the most effective way to deliver medicine to older people. If a nebuliser is required, the therapy should be administered in a single room and the IPC lead(s) or people responsible for IPC should be consulted about the PPE required for the procedure.

## What if an aerosol-generating procedure needs to be performed?

If an AGP needs to be performed, the following strategies should be considered regardless of the know infection status.

- Use a single room for the procedure.
- Reduce the number of aged care workers that enter the room during or for a set period of time after the procedure (usually and approximately 30 minutes).
- Ensure the most qualified clinical aged care worker oversees and manages the AGP.

- Consider alternatives to an aged care worker performing the procedure – for example, can the older person complete the procedure independently?
- Use appropriate PPE including PFR in consultation with an IPC lead(s) or people responsible for IPC.

**For more information, refer to Table 13 in Section 3.2.4 of the Australian Guidelines for the Prevention and Control of Infection in Healthcare.**

## The built environment

> Information regarding building design for aged care, including ventilation and air quality can be accessed in the National Aged Care Design Principles and Guidelines.

The design of a building can influence the spread of infections by air, water and contact with the physical environment. The environments where aged care services are provided differ greatly depending on the type of service. Therefore, some strategies, such as the provision of isolation or negative pressure rooms and airflow pressure monitoring, may not be feasible.

Key environmental strategies that can support residential and centre-based aged care organisations to reduce the likelihood and severity of respiratory and gastrointestinal disease outbreaks include:

- cohorting of older people and workers into smaller groups
- providing private amenities
- having dedicated equipment for use by older people who are infectious
- controlling access to homes for a limited time
- supporting the testing of visitors and workers
- promoting respiratory hygiene, cough etiquette and physical distancing
- increasing natural airflow – for example, by opening windows
- restricting transfers within and between facilities
- increasing cleaning of high-touch surfaces and shared equipment
- improving hand hygiene practice
- providing hand hygiene and PPE products
- providing a dedicated area for putting on and removing PPE.

The impact on older people's wellbeing during periods of isolation caused by lockdowns has been well documented. Building design features that support older people during such times include ready access to wi-fi and equipment to maintain links with family, and ready access to gardens and areas that offer meaningful activity.

Residential aged care homes need to develop plans for managing an infectious disease outbreak, including options for zoning as per the National Guideline for the Prevention, Control and Public Health Management of Outbreaks of Acute Respiratory Infection (including COVID-19 and Influenza) in Residential Care Homes.

## Environmental cleaning

Chapter 7 provides further and more specific guidance on cleaning.

**Residential and centre-based aged care facilities:** When the presence of an infection requiring transmission-based precautions is suspected or known, all surfaces should be physically cleaned with a detergent solution and an Australian Register of Therapeutic Goods–listed hospital-grade disinfectant with specific claims (or sodium hypochlorite if indicated for use). See Chapter 7 for more information on cleaning. Crockery and utensils used by people who are cared for using transmission-based precautions should be treated in the same manner as those used for non-infectious people – for example, washed in a dishwasher. Disposable crockery and utensils are not necessary in residential aged care homes, centre-based facilities or community settings.

**Home and community aged care**: Aged care workers should work with older people in their homes to discuss appropriate cleaning and disinfection practices and schedules. The aged care worker should explain the appropriate methods for cleaning and disinfection – especially when the older person has an infection – and work with the older person to develop an individualised approach that complements the products available, the environment and time allocated for the service.

## Placement and distancing

**Residential and centre-based aged care:** A single room with an ensuite is the most effective method for managing older people who require the use of transmission-based precautions. However, placement and cohorting in residential aged care homes is complex and often not possible due to financial arrangements for rooms and beds. When an older person is not allocated a single room, or when a single room is not available or the older person does not wish to move rooms, the IPC lead(s), team or people responsible for IPC should be consulted. The following should be considered for decisions about placement and cohorting.

- Can the older person engage in basic IPC interventions? For example, by using hand hygiene, wearing a surgical mask (when RESPIRATORY precautions are required) or following appropriate cough etiquette.
- Can the older people being cared for in the same room be physically separated from each other? Consider whether a privacy curtain can be drawn between beds to minimise opportunities for close contact.
- Are charts, electronic devices and notes kept outside the room?
- How will the workforce be made aware of the IPC requirements? Consider placing signage outside rooms or communicating the precautions required during handover.
- Is it safer to keep doors closed? Doors may be closed if there are older people who may enter the room without realising precautions are required. It may not be possible to close the doors for older people requiring high visualisation or for whom there are other safety concerns.
- If an older person with an infectious disease refuses to remain in their room, consider other strategies to reduce the transmission risk (see Complexities of risk-based isolation).
- Can workers be designated to care for the affected people to minimise the risk of further transmission?
- Can families or carers be given the choice to provide care at home for older people who share a room with someone who has an infectious disease?

**Home and community aged care:** Aged care workers should provide older people with education and information relevant to the precautions required for the infection. This should include information about the importance and benefits of self-isolation and social distancing in the home.

# Risk-based isolation

Isolation is an effective method for reducing the spread of infections, especially in outbreak situations. Isolation reduces the number of people exposed to the infection by separating the older person and/or people who are infectious from others who are not. There is a common misconception that if an older person tests positive to an infectious disease such as influenza or COVID-19, isolation strategies are the most effective and important method to prevent the spread of the infection. Despite isolation being an effective method for reducing the spread of infections, implementing **prolonged periods of isolation** can cause harm to the physical and psychological health of older people and can be challenging for those with cognitive impairment.

In determining whether isolation should be implemented, organisations should consult IPC experts and seek support from their IPC lead(s) or people responsible for IPC to make the safest and least restrictive decision. This decision may vary between settings, people and parts of the same setting or facility. A **risk-based approach** is required. It should take into account the risk of acquiring and spreading infections, and the risk of mental, physical and emotional decline of the older persons who will be affected.

This Guide uses the term *risk-based isolation* to support aged care organisations and older people to understand the benefits of isolation strategies, while also considering the risks that can result from prolonged periods of isolation. Risk-based isolation is the implementation of isolation after a comprehensive risk assessment has been conducted, considering the older person's psychological and physical health, as well as the impact on others. When considering whether risk-based isolation should be implemented, the person responsible should ask the following questions.

- Does the older person have symptoms of an infection?
- Has the older person been diagnosed with an infection that requires isolation?
- What are the benefits of isolation for this infection to the older person and others?
- What are the social, physical and mental risks associated with isolation of the older person from family, visitors, workers and others?
- Can the older person be supported to isolate in safely?
- How do we minimise any time a person is in isolation?
- If the older person cannot be supported to isolate safely, how can the risk of transmission be reduced?
- For how long will the isolation period be implemented and when will it be reviewed?

Isolation measures should only be implemented when they are necessary and when the benefit of isolation is greater than the risk of harm, including psychological, emotional and physical harm.

## Implementing risk-based isolation

Before risk-based isolation measures are implemented, aged care organisations and workers should provide the older person with information about the reason for isolation and then consider and act on their feedback. The following strategies can support an older person who is being cared for in isolation.

- Maintain engagement with older people who are isolated to encourage adherence to isolation requirements. Aged care workers should regularly check on and engage with people in isolation, including through conversation, holding their hand, delivering food and setting up one-to-one activities.

- Consider whether it is appropriate and possible to offer the older person one-to-one care (also known as a special).
- Ensure that all care needs are met, including physical, mental and social. This may also mean supporting the older person to connect with family, carers or friends.
- Implement reminders such as door signs, scripts or recordings that remind people to stay in their room or area to reduce the risk of infection.
- Consider whether cohorting infectious older people with others who are also infectious is a practical option. This may include establishing a section where people with the infection can spend the day together (if they are well enough) to reduce the stress of isolation.
- Set up a partnerships in care program for the older person so that some family members or close friends can provide social support during periods of an outbreak of an infection.
- If there are difficulties maintaining isolation requirements for the older person in isolation, seek to understand why they do not comply with the requirements.

## Complexities of risk-based isolation

If an older person refuses to isolate when they have an infection *that requires isolation*, it is important to understand the reasons for their refusal and how the person can be supported. Older people with cognitive impairment may forget that they are infectious and be unable to follow isolation instructions. The consequences of their choice will be different in each setting. Aged care workers have a duty of care to protect older people from harm, both to themselves and to other people. For this reason, it is important to consider each older person's individual needs to identify the least restrictive isolation method that will reduce the risk of transmission of infection.

When it is not possible to isolate an older person, or it is challenging to safely implement isolation, a risk-based approach should be implemented. It should focus on reducing (not eliminating) the infection risk through person-centred IPC strategies (see **Table 20**). Several groups of older people may be at a higher risk of physical or psychological decline due to isolation, but there are strategies for reducing these risks.

**Table 20** Person-centred IPC strategies

| Groups | Strategies |
|---|---|
| **Older people with cognitive impairment** | Implement one-on-one care (a special or a partner in care), which will not eliminate the risk of spreading the infection, but will reduce the risk and promote person-centred care (for example, through redirecting behaviour support for outdoor activities and diversional therapy).<br>Encourage spending time outside in a safe manner (for example, away from other people, supervised or wearing a surgical mask).<br>Refer to the ACQSC Infection prevention and control in aged care – Cognitive decline and dementia resource for more information. |
| **Older people who are socially active** | Strategies that will help them cope with isolation should be developed collaboratively with the older person and their carers or family members before and during outbreaks or when isolation may be required.<br>Methods of communication should be provided if isolation is implemented (for example, through phone or video calls, or by arranging contact with another person who is also infectious or who can effectively use PPE).<br>Pre-emptive care plans should be developed and include information on partners in care.<br>Encourage spending time outside in a safe manner (for example, away from other people, supervised or wearing a surgical mask). |
| **Older people with a hearing, visual or double impairment** | Aged care workers should work with their IPC lead(s) or people responsible for IPC to conduct a risk assessment to determine the best way to support communication and engagement for the older person.<br>Communication tools should be discussed at the start of service delivery to avoid complications in an outbreak situation.<br>Ensure hearing aids are functioning well and that they are worn correctly.<br>Visual aids (such as cards, pictures and videos) can be used to assist with communication. |
| **Older people with mental health issues** | Ensure that appropriate mental health care is provided (for example, referral to a geriatric psychiatrist or a mental health support plan).<br>Consider strategies to provide mental health first aid for older people in isolation.<br>Support spending time outside in a safe manner (for example, away from other people, supervised or wearing a surgical mask) and visits by partners in care, and one-on-one activities. |
| **Older people at risk of weight loss** | Encourage partners in care to attend and assist with meals.<br>Discuss the need for supplements or specialist reviews with the older person, their GP and their carer/family member.<br>Develop meal plans with the older person to provide food that they enjoy.<br>For more information see the ACQSC's Why meals matter. |

ACQSC = Aged Care Quality and Safety Commission; GP = general practitioner; IPC = infection control and prevention; PPE = personal protective equipment

# IPC training and education

It is important to plan and prepare training sessions. The aim of providing training in IPC is to provide aged care workers with a solid foundation in evidence-based theory and the practical implementation of IPC principles and practices. This will enable workers to provide safer care by reducing the risk of infection to older people, themselves, other workers and the broader community.

When developing a training session, the IPC lead(s) or people responsible for IPC should consider:

- an appropriate learning topic
- the learning objectives
- resources and equipment required
- development of relevant content
- incorporation of a variety of activities
- assessment of the learning.

The ACSQHC's Aged Care IPC Training Tool has been developed to help IPC lead(s) and people responsible for IPC in aged care to plan and prepare training sessions.

This tool is designed as a guide for developing and recording a training session, using the resources from **Appendix 3** and personal experience. This tool can assist IPC lead(s) and people responsible for IPC to organise content, activities, and resources to guide training sessions towards an identified learning objective. It will help to identify the appropriate learning needs, duration of training and the effectiveness of training. Depending on the experience and ability of IPC lead(s) and people responsible for IPC, this tool may be used to simply outline a training session or to comprehensively plan in detail.



### Resources

Download the ACSQHC's Aged Care IPC Training Tool.

**Appendix 3** within this Guide gives a list of IPC resources for developing education and training.

**For more information on person-centred care, refer to Section 2.4 and Section 2.4.1 of the Australian Guidelines for the Prevention and Control of Infection in Healthcare.**

# Chapter 7: Clean, safe and hygienic environments

## Key points

- Environmental cleaning is a basic part of STANDARD precautions and is an essential part of any infection prevention and control (IPC) program.
- Cleaning involves the use of neutral detergent, water and physical scrubbing to remove microorganisms from surfaces.
- Disinfection is the process of using a disinfectant, which is a chemical that rapidly kills most microorganisms and that is usually only effective in the absence of organic material.
- Reprocessing of reusable equipment in aged care primarily includes cleaning and disinfection of reusable equipment such as commodes, blood pressure machines and nail clippers.
- Cleaning schedules should be tailored to the risk of transmission of infection within a specific setting. All organisations should have a documented cleaning schedule that clearly outlines the responsibilities of all aged care workers, a roster of duties, frequency of cleaning required and the products that should be used to clean specific areas.
- Regular auditing of environmental and equipment cleaning supports aged care workers to maintain a clean and hygienic care environment and reduce the spread of infections.
- Prompt removal of spots and spills of blood and body fluids, followed by cleaning and disinfection of a contaminated area, is a sound infection control practice and meets work health and safety requirements.
- Staff, including contractors, who provide cleaning services in aged care settings, should receive initial and ongoing training, including information on the basic principles of IPC, IPC signage, specific cleaning and equipment processes, correct selection of cleaning products, and handling and storage of cleaning solutions.
- The risk of infection depends on the type of service and the settings where care is provided; therefore, risk assessment is essential to support an effective cleaning program.
- If there are safety concerns arising from an environmental risk assessment, it is important to discuss these concerns with the older person, their family or carers when possible. This discussion should outline key concerns about the environment, whether for the worker entering the home or the older person living in the home, and include possible risk-reduction strategies to eliminate, reduce, replace, isolate or control the risk.

# The basics of maintaining a clean, safe and hygienic environment

Environmental cleaning is a **fundamental** part of STANDARD precautions and is an essential part of any IPC system to ensure a clean and safe environment for older people, visitors and aged care workers. To ensure all aged care workers are equipped to deliver cleaning services effectively, aged care organisations should maintain a cleaning program as part of a larger IPC system.

Organisations should use a risk assessment approach to identify frequently touched surfaces and the associated risk of infection. The cleaning methods, thoroughness and frequency of cleaning and the products used for different surfaces should be determined by risk assessment and should be reflected in each organisation's policy and processes. The basic elements of an environmental cleaning program include:

- routine cleaning and disinfection of surfaces and the environment
- reprocessing of reusable equipment
- cleaning schedules and frequencies
- auditing
- managing spills
- workforce training and education.



## Home and community aged care

In addition to the elements outlined above, aged care organisations that provide care in home and community settings should consider that local processes address:

- **environmental hazard assessments** – more information can be found under **Risk assessment and cleaning** later in this chapter
- **access to appropriate equipment** – more information on an IPC kit for community and home care organisations can be found in **Chapter 6**
- waste and linen management – more information on waste and linen management can be found in **Chapter 6**.

It is important that older people receiving aged care services in the community are assisted to maintain a clean and safe home environment, as far as practicable, to prevent infections. Each aged care worker responsible for coordinating home care services should be able to use a risk-based approach to develop an individualised plan to provide a cleaning service. This approach should be documented and accessible to the older person and other aged care worker(s) providing the cleaning (for example, in a care plan). More information can be found under **Cleaning schedules** later in this chapter.

### Resources

More information on environmental cleaning and IPC can be obtained from the Australian Commission on Safety and Quality in Health Care.

For more detailed recommendations on cleaning and disinfection requirements in healthcare- and office-based settings, aged care organisations should refer to the Australian Standard AS/NZS AS5369:2023 Reprocessing of reusable medical devices and other devices in health and non-health related facilities.

Australian Standards can be purchased from Standards Australia.

# Routine cleaning

## The routine cleaning process

The process of routine cleaning for hard surfaces involves three important elements.

1. **Using neutral detergent and water**
    - A neutral detergent is a solution that contains a surfactant. A surfactant is a chemical that facilitates the removal of dirt and organic matter. Most hard surfaces can be adequately cleaned with warm water and a neutral detergent as per the manufacturer's instructions.
2. **Mechanical cleaning**
    - Mechanical cleaning (scrubbing the surface) physically reduces the number of microorganisms on the surface. It is an important step in cleaning. Simply applying a cleaning product is not effective unless the product is physically scrubbed into the surface.
3. **Rinsing and drying**
    - Rinsing with clean water removes the loosened dirt, organic matter and any neutral detergent residues from the surface. *Drying* the surface (or waiting for the surface to dry) makes it harder for microorganisms to survive or grow.

Most microorganisms do not survive for long on clean surfaces when exposed to air and light; therefore, unless there is an increased risk of exposure (such as during an outbreak) or when there is a known infection. Routine cleaning should be enough to reduce the number of microorganisms on hard surfaces to prevent the spread of infections.

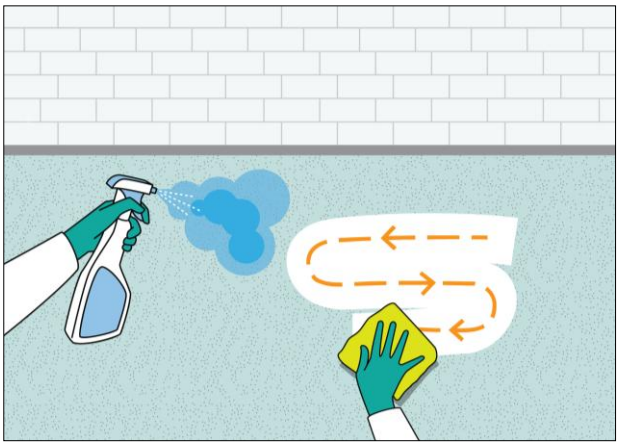
### Home and community aged care

In a home setting, cleaning can be performed using a standard household neutral detergent (any product commercially labelled as a neutral detergent) and water. The detergent can be supplied by either the organisation or the older person who is receiving services.

## How to conduct routine cleaning

When performing routine cleaning of hard surfaces (for example, mopping) or equipment, always clean:

- high surfaces before low surfaces
- cleaner areas before dirtier areas (for example, clean bedrooms before bathrooms and vanity basins before toilets)
- by wiping in one direction using an S-shaped pattern to prevent going back over wiped surfaces.



## Methods of cleaning

### Automated cleaners

Automated cleaners (washer–disinfectors) reduce the need to handle equipment and are recommended for cleaning reusable equipment that can endure the process, such as bedpans and urine bottles.

Washer–disinfectors use neutral detergent solutions. The detergent is added at preset high temperatures and time periods to clean reusable equipment. When a washer–disinfector is used, care should be taken when loading items into the machine so that all equipment has enough contact with the neutral detergent solution. This can be achieved by not overloading the washer–disinfector and, if possible, disassembling equipment that has multiple parts.

### Manual cleaning

Cleaning is done by hand for fragile or difficult-to-clean reusable medical devices (such as bladder scanners, blood glucose level machines and observation machines) and in settings that do not have automated cleaners.

If there is a risk of exposure to blood, body fluids or chemicals, aged care workers should wear appropriate personal protective equipment (PPE) – plastic apron, utility gloves and face protection (protective eyewear and mask or face shield). Care should be taken to prevent aerosols, splashes to mucous membranes or penetration of the skin by sharp instruments.

## Cleaning equipment

### Residential and centre-based aged care

Cleaning products and equipment should be intended for the purpose of cleaning and should be specifically labelled, and Australian Register of Therapeutic Goods (ARTG) registered where required. Workers should only use cleaning products and equipment that are in good condition and working order and supplied and approved by the organisation (including mops, microfibre pads, buckets, appropriate PPE, cleaning cloths, and cleaning solutions). These products should be used as per the manufacturers' instructions.

Workers who undertake environmental cleaning should have access to an appropriate water supply, sink or floor drainage, and suitable facilities for equipment and chemical storage. All cleaning equipment should be cleaned and dried between uses. Mop heads or pads and reusable cleaning cloths should be laundered daily after being used in a care environment and after contamination by an infectious agent. If a cleaning cart is used, there should be separation between clean and soiled items, and the cart should be thoroughly cleaned at the end of the day. Reusable cleaning equipment can be colour coded to restrict the use of specific items, such as mops and cloths, to designated areas, such as bathrooms, kitchens or isolation rooms. Cleaning equipment that is designated as single use should be appropriately disposed of immediately after use.

In the interest of environmental sustainability, reusable items should be used in preference to single-use items wherever it is safe to do so. Cleaning carts should be equipped with a locked compartment for storage of hazardous chemicals and each cart should always be locked when not attended.

### Home and community aged care

Aged care organisations providing home and community services should train those responsible for IPC to use a risk-based approach when planning a cleaning service. The approach should consider each older person's preferences, situation and available equipment. In home settings, cleaning can be performed using a standard household neutral detergent (any product commercially labelled as a neutral detergent) and water. Disinfectant products can be considered for use if someone in the home is unwell and must always be used in accordance with the manufacturer's instructions. These products can be supplied by the organisation or the older person who is receiving services but should always be stored and maintained according to the manufacturers' instructions.

## Disinfection

Disinfectants are chemicals that rapidly kill most microorganisms. Disinfectants are only necessary if a surface may have been or is known to have been contaminated by a multidrug-resistant organism or blood or other body fluids, or when transmission-based precautions are required (such as during an outbreak).

## The process of disinfection

The process of disinfection must involve either a **two-step** or **two-in-one-step** process.

### Two-step process

This type of disinfection uses two products and requires cleaning with neutral detergent followed by cleaning with a disinfectant.

**Step 1:** All surfaces should be cleaned with a neutral detergent and water to remove dirt and dust. The surfaces are allowed to dry completely.

**Step 2:** If the surface has been contaminated with blood, body fluids or if someone in the room is suspected or known to have an infection, a disinfectant solution should be applied to the surface after the neutral detergent. Allow the disinfectant to remain on the surface for the recommended time advised by the manufacturer, then allow the surface to dry completely again.

### Two-in-one-step process

This type of disinfection uses ONE product that contains both a neutral detergent and a disinfectant to clean and disinfect environmental surfaces.

After using a two-in-one disinfectant product – for example, a combined neutral detergent/disinfectant wipe – allow the surface to dry completely.

## Other considerations

- Disinfectants are not to be used as routine cleaning products unless combined with a neutral detergent as a two-in-one product. This is because they will be ineffective unless routine cleaning occurs as well.
- Safety data sheets should be available in all locations where a disinfectant is in use.
- If separate detergent and disinfectant solutions are used, they must be prepared fresh each day.
- Never mix different cleaning products because in some instances chemical reactions can occur that could be harmful to people or could damage surfaces.
- Avoid ‘topping up’ detergent or disinfectant containers as this can lead to contamination of the containers and solutions.
- When preparing disinfectant solutions, workers must ensure that solutions are stored, handled and, if required, diluted as per the manufacturer’s instructions.
- PPE must be worn when handling or diluting disinfectants.

## Types of disinfectants

Disinfectants must be listed on the Australian Register of Therapeutic Goods (ARTG) before they can be used in Australian healthcare facilities. This is to ensure that the product does what it claims to do. There are three primary grades (types) of disinfectants on the ARTG. These are household, commercial and hospital-grade disinfectants. The standards used to test the performance of hospital-grade disinfectants are higher than those for household- and commercial-grade disinfectants. A disinfectant used in residential and centre-based aged care settings must be listed on the ARTG as a **hospital-grade disinfectant.**

Chlorine-based products, such as sodium hypochlorite, can be used as disinfectants. Sodium hypochlorite, commonly known as bleach, is a chlorine-based agent that is often used as a disinfectant. The level of disinfection provided by sodium hypochlorite depends on the:

- surface it is applied to
- amount of time allowed for the chemical to work
- mixing of the product – proportions and methods
- disinfectant claims of the product (that is, its antibacterial action or activity against other microorganisms)
- product's compatibility with the surface being cleaned.

Sodium hypochlorite (bleach) solutions are very effective disinfectants. However, bleach can cause damage to the eyes, skin and mucous membranes. It can also harm various surfaces and fabrics, and corrode metals. Therefore, it should be used with the utmost care and strictly following the manufacturer's instructions. Users may wish to explore alternative disinfectant products, especially in home settings.

### Home and community aged care

In a home setting, disinfection can be performed using a standard household disinfectant. If bleach is the preferred disinfectant of the older person or their carer, it should be used with the utmost care and strictly following the manufacturer's instructions, because it can cause damage to the eyes, skin and mucous membranes.

Disinfectants can be supplied by the organisation or the older person who is receiving services.

A disinfectant may be considered for use in a home setting if someone in the home is or has been unwell, or a surface has been contaminated by blood or other body fluids. Disinfectants must always be used in accordance with the manufacturer's instructions.

### Resources

The ARTG is the public database of all therapeutic goods that can be legally supplied in Australia. It is maintained by the Therapeutic Goods Administration.

## High-level cleaning

High-level cleaning is a cleaning and disinfection process required after an older person has left a room, either through transferring to another facility, moving rooms or when the room is no longer required. To perform high-level cleaning, follow several key steps.

- Wear PPE – for example, surgical mask, protective eyewear, gloves, and gown.
- Prepare the room, clean, disinfect and remove all equipment that does not need to remain in the room. Pack up personal items and store them safely. Remove clutter and throw away disposable items and rubbish.
- Remove bed screens, privacy curtains, and window curtains (if fitted), and send for laundering or dry cleaning. Throw them away if they are disposable.
- Perform the clean with a hospital-grade disinfectant or a chlorine-based product using a two-step process or a two-in-one-step process.
- Clean and disinfect all surfaces, furniture (including all surfaces of the bed and mattress), fittings and the bathroom(s) used by the older person.
- Vacuum or mop the floor using a detergent solution. Assess the need for steam cleaning of carpets. Steam clean any soft furnishings.
- Following cleaning and disinfection, remove PPE and perform hand hygiene.
- Replace any bed and privacy screens and curtains and other fixtures and fittings as standard for the area or room.
- In a separate area, put on fresh gloves and protective eyewear, then clean and disinfect any reusable cleaning equipment (for example, mop handles). Return cleaned equipment to the cleaners' room or storage area.
- Remove gloves and other PPE and perform hand hygiene.

# Reprocessing reusable equipment

**Reprocessing** involves a set of actions to make sure that each piece of reusable equipment is safe for use. This includes cleaning, inspecting and assembling, functional testing (if applicable), disinfecting (if required), packaging and labelling, and storing.

**Reusable equipment** is equipment that is intended by the manufacturer to be appropriately cleaned, disinfected (if needed) and reused. Reusable equipment includes blood pressure cuffs, stethoscopes, nail clippers, commode chairs and hoists, and can also include items such as smart phones and tablets. **Any piece of equipment that is reusable requires reprocessing, meaning that it requires cleaning and (if needed) disinfection after each use.**

**Sterilisation** is the use of a physical or chemical procedure to reprocess equipment by destroying all microorganisms including bacterial spores. (Spores are cells produced by bacteria or fungi that are highly resistant to cleaning and disinfection methods.) Sterilisation is not addressed in this Guide because it is rarely used in aged care settings. Information on sterilisation is included in the Australian Guidelines for the Prevention and Control of Infection in Healthcare.

All aged care organisations should develop local policies and processes for the management of reusable equipment to minimise the infection risk to the older person, aged care workers and the environment. The minimum level of reprocessing required for reusable equipment depends on the individual situation and the manufacturer's instructions.

For example, a reusable blood pressure cuff will require cleaning (neutral detergent and water or a neutral detergent wipe), but not disinfection, unless it has been contaminated by blood or other body fluids, or if the older person requires transmission-based precautions.

**Various points should be considered when reprocessing of reusable equipment.**

- Before purchasing reusable equipment, aged care organisations should read and understand the manufacturer's reprocessing instructions to ensure the facility or service is able to effectively clean, disinfect (if needed) and reuse the equipment.
- If a piece of equipment cannot be cleaned or disinfected, it cannot be reused. In this situation, single-use equipment should be used.
- Equipment should be cleaned as soon as practicable after use and before soiled materials become dried onto it – consider a bed pan that is dirty and left for a period of time before placing into the washer. Leaving used or soiled equipment for an extended period before cleaning and/or disinfection can make cleaning difficult and ineffective and can damage the equipment.
- Equipment that can be taken apart must be disassembled before cleaning and disinfection so that all components are cleaned and disinfected effectively.

## Methods of disinfection

There are two methods of disinfection – chemical disinfection and thermal disinfection, which uses heat. Thermal disinfection is usually the most effective.

**Chemical disinfection** uses chemicals to kill microorganisms.

Chemical disinfection can be achieved with an appropriate ARTG-listed disinfectant, which may be a household-, commercial- or hospital-grade product. All products are designed for a specific purpose (this may be to kill specific microorganisms such as a bacteria or virus), so it is important to read labels carefully, use the correct product for the intended use, and apply it appropriately.

**Thermal disinfection** uses heat (high temperature) and water to kill microorganisms.

To ensure thermal disinfection occurs, equipment must be exposed to a specified temperature for a specified length of time. Thermal disinfection processes used in aged care include washer–disinfectors, steam cleaners, steam vacuums, commercial washing machines, and drying machines. Equipment must be heat- and moisture-resistant to undergo thermal disinfection. Thermal disinfection is nearly always more effective than chemical disinfection.

## Levels of disinfectants

There are four levels of disinfectants that can be used. The level of disinfectant required is based on the types of microorganisms the disinfectant product claims to kill. The different levels of disinfection include:

- **low-level disinfectants**; these kill most bacteria, as well as most viruses and fungi, but do not kill bacterial endospores
- **intermediate-level disinfectants**; these kill all microorganisms, except bacterial endospores
- **high-level disinfectants**; these kill all microorganisms, except large numbers of bacterial endospores
- **sterilisation** is the highest level of disinfection; it also kills endospores but is not routinely available or used in aged care settings.

## Categorisation of equipment

The approach to disinfection of reusable equipment used in health care is known as the ‘Spaulding approach’, which is a categorisation system. Reusable equipment is categorised as critical, semi-critical or non-critical, according to the degree of infection risk associated with use of the items (Table 21).

For example, a reusable blood pressure cuff (non-critical item) is much less likely to present a high infection risk than are nail clippers (semi-critical item) that may contact blood, body fluids or non-intact skin.

**Table 21** Categories of equipment and level of disinfectant required

| Category | Description | Examples | Level of disinfectant |
|---|---|---|---|
| **Non-critical equipment** | These items come into contact with intact skin but not mucous membranes. Cleaning is sufficient for most non-critical items after each individual use, although either intermediate or low-level disinfection may be appropriate in specific circumstances. For example, if the item is contaminated with blood or body fluids. | Examples of non-critical equipment include blood pressure cuffs, stethoscopes, wheelchairs, commode chairs, computers, mobile phones and keyboards. | This type of equipment requires either low-level or intermediate disinfectants. |
| **Semi-critical equipment** | This type of equipment has contact with mucous membranes, non-intact skin, or body fluids. | Examples of semi-critical equipment include bed pans, respiratory therapy equipment and urine bottles. | High-level disinfection if single-use equipment is not available. |
| **Critical equipment** | This equipment comes into contact with sterile tissue or the vascular system (for example, veins and arteries).<br>This equipment must be sterile at the time of use. | If required in aged care settings, this equipment will be single use. | Appropriate sterilisation method. |

For more information, refer to AS 5369:2023 Reprocessing of reusable medical devices and other devices in health and non-health related facilities, which outlines the requirements and practices necessary for the effective and safe reprocessing, storage, handling and transportation of reusable medical devices and other devices used in human health care and other treatments.

## Storage of equipment

All reusable equipment must be stored in a way that maintains the level of reprocessing (cleaning/ disinfection/ sterilisation). Dry, sterile, packaged equipment (such as dressing packs) should be stored in a clean, dry environment and be protected from sharp objects, heat and sunlight that may damage the packaging. For example, if transporting sterile stock in the community, consider storing equipment and stock in cleanable dust- and moisture-proof containers.

Equipment should be regularly examined for breaks, in the packaging or the equipment itself, that would impair cleaning or disinfection (this should be a documented process). Equipment that no longer functions as intended or cannot be adequately cleaned and disinfected should be repaired or discarded.

## Cleaning schedules

Every aged care organisation should develop and implement a local cleaning schedule and policy that suits its environment.

Cleaning schedules should be determined by the risk of transmission of infection within each specific setting. All organisations should have a documented cleaning schedule that clearly outlines

the responsibilities of all aged care workers, gives a roster of duties, and lists the frequency of cleaning required and the products that should be used to clean specific areas and surfaces. Aged care workers should be provided with appropriate education and training on cleaning.

General surfaces and fittings such as walls, floors, curtains, windows and blinds should be cleaned when visibly soiled and immediately after a spill has occurred. Frequently touched surfaces such as door handles, handrails, light switches, computers and telephones should be cleaned with neutral detergent solution at least daily and when visibly soiled and after each contamination. During an outbreak, these surfaces may need to be cleaned more often and disinfected (Tables 22a and 22b).



## Home and community aged care

Home care is intermittent, with services depending on the care needs of the older person and the package of care. It is important that aged care organisations help to educate older people on the importance of cleaning, especially cleaning frequencies for surfaces.

Aged care organisations should train the workforce to acknowledge the older person's expectations, and their ability to contribute to cleaning. If cleaning services are required, those responsible for IPC should collaborate with the older person to develop a cleaning schedule for each planned visit. Individual cleaning routines should be documented in the care plan. The care plan should be accessible to the older person and to workers. It should outline the responsibilities of aged care workers attending the service, a roster of duties, the frequency of cleaning required and the products to be used when cleaning specific areas and surfaces.

**Table 22a** Cleaning schedules for shared equipment and personal care items

| Equipment | Standard cleaning frequency (in addition to cleaning between use with different older people)<br>*When there is no known or suspected infection or outbreak* | High-risk cleaning frequency (in addition to cleaning between use with different older people)<br>*When there is a known or suspected infection or outbreak* |
|---|---|---|
| **Blood pressure cuff** | Clean after use | Clean after use |
| **Cleaning equipment** | Clean after use | Clean after use |
| **Clinical equipment (for example, pulse oximeters)** | Clean daily (when in use) | Clean daily (when in use) |
| **Commode** | Clean contact points after use<br>Clean whole daily | Clean contact points after use<br>Clean whole daily |
| **Hoist, bathroom** | Clean contact points after use | Clean contact points after use |
| **Manual handling (for example, stand-up lifter)** | Clean contact points after use | Clean contact points after use |

| Equipment | Standard cleaning frequency (in addition to cleaning between use with different older people)<br>*When there is no known or suspected infection or outbreak* | High-risk cleaning frequency (in addition to cleaning between use with different older people)<br>*When there is a known or suspected infection or outbreak* |
|---|---|---|
| **Medication and clinical trolleys (dressing trolleys)** | Clean daily and after use | Clean daily and after use |
| **Mobility aids (four-wheel walker, wheelchair and walking sticks)** | Clean daily<br>Clean after use for shared equipment | Clean daily<br>Clean after use for shared equipment |
| **Nebuliser and other oxygen delivery machines (when in use)** | Clean daily and after use | Clean daily and after use |
| **Sharps bin trolley and brackets** | Clean daily | Clean twice daily |

**Table 22b** Cleaning schedules for workplace items and environmental fixtures

| Equipment | Standard cleaning frequency<br>*When there is no known or suspected infection or outbreak* | High-risk cleaning<br>*When there is a known or suspected infection or outbreak* |
|---|---|---|
| **Bed** | Clean frame daily<br>Clean underneath weekly | Clean frame daily<br>Clean underneath weekly |
| **Bedside table** | Clean daily | Clean twice daily and after use |
| **Call bell** | Clean daily | Clean daily |
| **Computer, electronic devices and keyboards** | Clean daily, when visibly soiled and after use in accordance with the manufacturer's recommendations<br>Consider use of washable keyboard and mouse for each computer | Clean after each use in accordance with the manufacturer's recommendations.<br>Consider use of washable keyboard and mouse for each computer |
| **Curtains and blinds** | Clean monthly<br>Change when visibly soiled, damaged and during high-level clean* | Clean weekly<br>Change when visibly soiled, damaged, during a high-level clean* or following transmission-based precautions or other changes to infection risk |

| Equipment | Standard cleaning frequency<br>*When there is no known or suspected infection or outbreak* | High-risk cleaning<br>*When there is a known or suspected infection or outbreak* |
|---|---|---|
| **Doorknobs** | Clean daily | Clean twice daily |
| **Floor (polished)** | Dust removal and clean daily | Dust removal and clean twice daily |
| **Shower** | Clean daily and one spot check clean daily | Clean daily and one spot check clean daily |
| **Surfaces (general horizontal) in bedrooms – for example, ledges** | Clean twice daily and spot clean after use | Clean twice daily and spot clean after use |

Source: Adapted from Table A2.2: Recommended cleaning frequency in Section 6.1 of the Australian Guidelines for the Prevention and Control of Infection in Healthcare.

* A high-level clean, is a clean that occurs at the changes of circumstances of an older person including transfer to a hospital, short-term or long-term departure from the facility, or any changes to their infection status.

## Auditing

An environmental cleaning audit is a way to check that environmental cleaning is performed to a high standard. Audits can help reduce the spread of infections. Residential and centre-based aged care organisations should develop and implement processes for environmental cleaning audits as part of their IPC system (**Table 23**).

**Table 23** Environmental cleaning audit considerations

| Consider | Description |
|---|---|
| Who will be undertaking the audit? | The auditor should have knowledge of environmental cleaning processes and be familiar with the organisation. The auditor may be an IPC lead or a person responsible for IPC. |
| When to audit? | Consider auditing at the times of the day and month needed to capture the various cleaning activities. |
| Where to audit? | A random sample of different surfaces and equipment should be included in each environmental cleaning audit. For example, a mix of often touched surfaces (for example, light switches, handrails, bathrooms, care equipment) and rarely touched surfaces (for example, light fixtures, blinds, curtains, bed frames). If comparing audit results for a specific surface over time (for example, the same tap handle in the same room in the same section of the organisation), it is important to record which sites have been reviewed at each audit. |

| Consider | Description |
|---|---|
| Frequency of audits | The frequency of auditing for routine cleaning depends on the outcome of the risk assessment. In general, higher risk areas require higher frequency of cleaning, which means that these areas should be audited more often.<br><br>The timing of cleaning audits should be based on how often cleaning is occurring, as well as:<br><br>• local risks – for example, higher infection risk areas may require more frequent auditing in response to identified gaps in cleaning processes<br>• the employing of new cleaning processes or staff<br>• outbreak management. |
| How to undertake cleaning audits | Visual inspections measure the cleanliness that is apparent to older people and visitors and help identify maintenance issues and the need for repairs.<br><br>Objective methods, such as fluorescent gel markers and adenosine triphosphate bioluminescence detection systems, can measure the amount of dirt on a surface and the effectiveness of individual cleaning techniques.<br><br>Frequently touched surfaces should be cleaned more often because of an increased risk of contamination, and objective methods should be considered for audits. Minimally touched surfaces should, at the minimum, be audited by visual inspection. |
| **What should be included in cleaning audits?** | The approach used will depend on the types of services provided by each aged care organisation. Besides auditing the cleaning processes within the different areas in each setting, such as non-clinical and clinical areas, audits may also include assessing:<br><br>• compliance with linen storage and handling policies<br>• compliance with waste management, storage, and handling policies<br>• cleaning and storage of shared equipment. |
| **What should be done with audit results?** | Audit results should be fed back to all aged care workers who are involved in environmental and equipment cleaning (clinical staff, non-clinical staff, support staff and managers). This information can then be used to:<br><br>• change cleaning processes, products or equipment if need be<br>• assess compliance with environmental policies, procedures and protocols<br>• identify and repair damaged equipment and surfaces<br>• improve stock and equipment storage systems.<br><br>Executive should be informed of audit results. Auditing of cleaning can be used to identify and set priorities for organisational strategies and resourcing to improve the prevention and control infections and manage infection risks. |

### Resources

There are several existing cleaning audit tools such as:

- NSW Clinical Excellence Commission Templates for External and Internal Cleaning Audits
- SA Health Environmental Cleaning External Audit Tool.

Refer to the Fact sheet – Principles of Environmental Cleaning Auditing for more information. More information on auditing and monitoring infections can be found in **Chapter 8**.

# Spill management

Prompt removal of spots and spills of blood and body fluids, followed by cleaning and disinfection of the contaminated area, is a fundamental infection control practice that helps organisations meet work health and safety requirements. When emergency procedures or urgent transport are under way, spills should be attended to as soon as it is safe to do so.

## Process of spills management

Strategies for cleaning spills of blood and other body fluids depend on the setting in which they occur and the volume of the spill. **Table 24** outlines the appropriate processes for managing spills based on the volume of the spill.

**Table 24** Appropriate processes for managing spills

| Volume of the spill | Process |
|---|---|
| **Spot cleaning** | • Select appropriate PPE<br>• Wipe up spot immediately with a damp cleaning cloth, tissue or single-use paper towel<br>• Discard contaminated materials<br>• Perform hand hygiene |
| **Small spills (up to 10 cm diameter)** | • Select appropriate PPE<br>• Wipe up spill immediately with absorbent material such as a paper towel<br>• Place contaminated absorbent material into container or plastic bag for disposal<br>• Clean the area with warm neutral detergent solution, using disposable cloth or sponge<br>• Wipe the area with ARTG-listed disinfectant and allow to dry*<br>• Perform hand hygiene |
| **Large spills (greater** | • Select appropriate PPE<br>• Cover area of the spill with an absorbent clumping agent and allow to absorb |

| Volume of the spill | Process |
|---|---|
| **than 10 cm diameter)** | • Use disposable scraper and pan to scoop up absorbent material and any unabsorbed blood or body substances<br>• Place all contaminated items into a container or plastic bag for disposal<br>• Discard contaminated materials<br>• Mop the area with neutral detergent solution<br>• Wipe the area with ARTG-listed disinfectant and allow to dry<br>• Perform hand hygiene |

ARTG = Australian Register of Therapeutic Goods; PPE = personal protective equipment

* In residential and centre-based aged care settings, an ARTG-listed hospital-grade disinfectant with specific claims should be used for routine management of spills. The disinfectant chosen must have label claims against the microorganism of concern and should be compatible with the surface material where the spill has occurred to avoid damage to the surface.

## Spill kit

A spill kit should be readily available in certain areas (such as care environment and laundry or waste rooms) or close at hand to those aged care workers providing services in the community where exposure to blood or body fluids may occur. A spill kit should include a scoop and scraper, single-use gloves, protective apron, surgical mask and eye protection, absorbent agent, clinical waste bags and ties, and neutral detergent. All parts should be disposable to prevent cross-contamination.



### Practice point

#### Outsourcing cleaning service

If cleaning is outsourced to external agencies, it is important that the cleaning procedures are documented and an explanation provided about how each procedure should be undertaken. This will assist the external agency to support maintenance of safe quality of care. Documentation should cover:

- minimum requirements for cleaning frequencies, methods and reporting
- staffing including rosters for full-time, part-time and relief staff and for management and supervisory positions
- equipment and products to be used to deliver each cleaning service.

# Workforce training and education

Staff, including contractors who provide cleaning services in aged care settings, should receive initial and ongoing training. This training should include information on the basic principles of IPC including hand hygiene, IPC signage, specific cleaning and equipment processes, correct selection of cleaning products, handling and storage of cleaning solutions and appropriate use of PPE.

Details about staff training on cleaning and IPC should be recorded. These records should include the frequency of training, how the training was delivered, the training content, who delivered and participated in the training and when the training was done. Contracted cleaning staff should be trained by their employer in the appropriate use of cleaning and disinfection procedures, products to be used and in the use of PPE.

## Risk assessment and cleaning

Each person and environment presents different challenges for the maintenance of a clean and safe environment. Risk assessments are essential to support cleaning. As described in **Chapter 5**, the risk of infection depends on the type of service and the settings where care is provided.

If there are concerns arising from an environmental risk assessment about the safety or cleanliness of the environment, especially in home and community settings, it is important to discuss these concerns with the older person, their family or carers when possible. This discussion should outline key concerns about the environment, either for the worker entering the home or the older person living in the home, and include possible risk-reduction strategies to eliminate, reduce, replace, isolate or control the risk. **Table 25** includes examples of environmental hazards and possible risk-reduction strategies and resources.

**Table 25** Environmental hazards and risk-reduction strategies

| Environmental hazards | Examples | Possible risk-reduction strategies and resources |
|---|---|---|
| **Biological hazards** | Blood and body fluids or animal waste | STANDARD and transmission-based precautions including hand hygiene and PPE should be used to reduce the risk of worker exposure to biological hazards. |
| **Falls hazards** | Loose carpet or rugs, uneven floor edges, electrical cords or cables, steps or stairs, wet or slippery surfaces | Organisations should consider reducing the risk of slips, trips and falls through an environmental risk assessment. Staff should wear slip-resistant footwear and make sure that floors have time to dry after cleaning before people walk in the area to prevent falls. More information is available from Safe Work Australia – Slips, trips and falls. |
| **Harmful chemicals or substances** | Cleaning or gardening products | When using, handling, generating and storing hazardous chemicals, organisations should consider work health and safety requirements such as correct labelling, maintaining a safety data sheet, and training. More information is available from Safe Work Australia – Managing risks of hazardous chemicals in the workplace. |

| Environmental hazards | Examples | Possible risk-reduction strategies and resources |
|---|---|---|
| **Electrical safety** | Broken or damaged electrical cables, cords or safety switches | Aged care organisations must do what is reasonably practicable to ensure the safety of the workers and put measures in place to ensure that workers do not use unsafe electrical equipment, whether supplied by them or the older person. This could include disconnecting or removing equipment that is believed to be unsafe.<br><br>More information is available from Safe Work Australia – Managing electrical risks in the workplace. |
| **Hoarding and squalor** | Hoarding is a mental health condition and involves a person having trouble discarding a large volume of possessions that others would consider useless or of limited value. It is different from chronic messiness and collecting<br><br>Squalor describes an environment that is made cluttered, filthy and dirty by a person neglecting the space. It describes a living environment | If hoarding or squalor is noticed during the initial environmental review, aged care organisations can discuss the concerns with the older person, their family, or carers, and if need be, escalate to appropriate local service providers that are trained to support these situations.<br><br>There are several assessment tools to screen or assess for hoarding or squalor behaviours:<br>• Hoarding & squalor program screening tool<br>• Hoarding and squalor rating scale<br>• Environmental cleanliness and clutter scale tool<br>• Clutter image rating scale. |

PPE = personal protective equipment

# An environmental cleaning program

Developing an environmental cleaning program (also referred to as a cleaning program) can be a complex process. As a minimum, cleaning programs should:

- identify, assess and respond to relevant environmental risks
- provide aged care workers responsible for cleaning with training on the basics of IPC, and how to correctly use PPE and perform hand hygiene
- include cleaning schedules that describe the recommended cleaning frequencies, procedures and roles and responsibilities of all staff
- routinely evaluate and monitor cleaning processes
- use suitable cleaning equipment and products for the service. This includes following manufacturers' instructions.

Tables 26 and 27 outline how to implement the basic principles of cleaning in a residential and centre-based aged care organisation, and a home and community aged care organisation, respectively.

**Table 26** Cleaning program – suggestions for a **residential and centre-based aged care settings**

| Component | Implementation |
|---|---|
| **Cleaning and disinfection** | • Implement policies and processes for appropriate cleaning, disinfection and product selection.<br>• Ensure that disinfectant products used in a residential and centre-based aged care setting are listed on the ARTG as hospital-grade disinfectants; chlorine-based products (such as sodium hypochlorite) may also be used.<br>• Provide staff responsible for cleaning with training on the principles of IPC. |
| **Reprocessing reusable equipment (such as commode chair and dressing trolleys)** | • Identify reusable equipment that requires reprocessing.<br>• Document the processes for reprocessing each piece of equipment and who is responsible for reprocessing.<br>• Ensure those responsible for reprocessing are adequately trained.<br>• Ensure that cleaning equipment and products are assessed for their suitability for cleaning in the setting; this includes using products according to manufacturers' instructions. |
| **Cleaning schedules and frequencies** | • Develop a detailed cleaning schedule for the entire workforce; it must describe recommended cleaning frequencies, cleaning procedures and policies, and roles and responsibilities of all aged care workers. |
| **Auditing** | • Implement regular cleaning audits and making sure outcomes are routinely evaluated and monitored by routine auditing.<br>• Align efforts with jurisdictional requirements, if required.<br>• Use data and feedback to improve cleaning practices. |
| **Spill management** | • Ensure spill kits are readily available where there is a higher risk of spills (such as the care environment and laundry or waste rooms).<br>• Ensure all contents of spills kits are disposable, to reduce the risk of cross-contamination. |
| **Workforce training and education** | • Ensure staff and contractors who provide cleaning services in aged care organisations receive initial and ongoing training in local cleaning policies and procedures. |
| **Common barriers** | The built environment in which aged care services are provided can influence the transmission of infections by air, water and contact with the physical environment. IPC requirements should be considered during the planning, design and construction of aged care homes. Key design features that minimise the risk of transmission of infection include:<br>• surface finishes that are easy to maintain and clean (floors, walls, benches, fixtures and fittings)<br>• ventilation, air conditioning, cooling towers and water systems that meet Australian Standards for the building they are to service |

| Component | Implementation |
|---|---|
| | • the ability to isolate infectious older people in a single room with bathroom or ensuite; this entails<br>  ○ appropriate workplace design<br>  ○ separation of procedural and cleaning areas<br>  ○ movement and workflow systems<br>  ○ ready access to hand hygiene facilities<br>  ○ storage for all items used for care of the older person<br>  ○ easily accessible storage for PPE<br>  ○ adequate waste management procedures and linen handling<br>• involvement of a multidisciplinary team that includes IPC staff to coordinate preventive measures in demolition, construction and renovation projects. |

ARTG = Australian Register of Therapeutic Goods; IPC = infection prevention and control; PPE = personal protective equipment

**Table 27** Cleaning program – suggestions for a **home and community aged care service**

| Component | Implementation |
|---|---|
| **Cleaning and disinfection** | • Document policies and processes for appropriate cleaning, disinfection and product selection.<br>• Make sure that all cleaning products are appropriate for use on the surfaces they are being used on.<br>• As part of an organisation's IPC system, ensure staff responsible for cleaning in the community are provided with training on the principles of IPC. |
| **Reprocessing reusable equipment** | • Identify equipment that is reusable and taken to different homes (such as commode chairs, blood pressure machines, blood glucose monitors) that requires reprocessing.<br>• Document the processes for reprocessing each piece of equipment and who is responsible (for example, blood pressure machines must be cleaned and disinfected in between uses on individual people and this should be done by the worker using the machine).<br>• Make sure that those responsible for reprocessing are adequately trained.<br>• Ensure cleaning products are stored and maintained according to manufacturers' instructions (for example, have processes for checking expired products). |

| Component | Implementation |
|---|---|
| **Cleaning schedules and frequencies** | • Ensure aged care workers can and do educate the older people being cared for on the principles of cleaning frequencies, especially for heavily used surfaces.<br>• Prioritise frequently touched surfaces including tables, door handles, taps and toilets, and surfaces that are visibly dirty.<br>• Ensure aged care workers acknowledge the older person's expectations, and their ability to contribute to routine cleaning. The aged care worker should collaborate with the older person to develop a cleaning schedule for each planned visit. |
| **Auditing** | • Auditing is not required in home and community settings. |
| **Spill management** | • Ensure aged care workers are equipped with a spill kit for community visits; it should include waste bags and ties. |
| **Workforce training and education** | • Ensure staff and contractors providing cleaning services in aged care organisations receive initial and ongoing training. |
| **Other considerations** | • Consider whether linen management and waste management may be considered as part of an organisation's cleaning program in home and community aged care organisations. See Handling of linen in **Chapter 6** for more information. |

IPC = infection prevention and control



## Resources

More information on these recommendations can be found at Safe Work Australia: Cleaning.

**For more information, refer to the Australian Guidelines for the Prevention and Control of Infection in Healthcare. Specifically, for:**

- **environmental cleaning, refer to Section 3.1.3**
- **influence of building design on healthcare-associated infection, refer to Section 4.6**
- **cleaning schedules, refer to Appendix 2, Section 6.1, Table A2.2: Recommended cleaning frequency**
- **emerging disinfectants, refer to Section 3.1.3.1: Emerging disinfection methods.**

# Chapter 8: Monitoring and continuous quality improvement

## Key points

- Monitoring of infections (also known as infection surveillance) looks at how and why infections are spread in an aged care organisation or service. It helps aged care providers identify issues that may be leading to infections.
- Monitoring of infections should always be linked to a prevention strategy or a continuous quality improvement activity to drive change.
- A variety of methods may be used to monitor infection prevention and control (IPC) activities.
- Monitoring of infections and IPC activities should be fitted to the needs and the context of the service.
- The elements of infection monitoring include
  - defining the activity
  - collecting the data
  - reviewing the data
  - communicating the results of the data to drive change.
- Continuous quality improvement aims to make a difference to the health and wellbeing of older people by improving the safety, effectiveness, and experience of care through application of a systematic approach to review of outcomes. IPC involves responding to infections when they occur and delivering comprehensive care to prevent infections.

## Monitoring infections

Monitoring infections refers to the ongoing collection, analysis and evaluation of infection-related data, which is done to plan and improve practice. It is also known as infection surveillance. Collecting and examining this information can help aged care organisations to understand:

- whether there may be a problem relating to the spread of infections
- the potential size of the problem
- why the problem is happening.

The way in which monitoring can be undertaken depends on the type of care and service provided, the number of older people receiving care and the environment in which care is provided. Data may be collected on different types of infections, such as acute respiratory infections, skin and wound infections, gastrointestinal infections, urinary tract infections (UTIs) and device-associated infections, or on IPC practices, such as workforce vaccination and compliance with STANDARD precautions, such as cleaning and aseptic technique.

The following points should be considered as part of a provider's plan for monitoring infections.

- What is the purpose of collecting the information?
- For how long will the information need to be collected?
- What information needs to be collected?
- What resources are needed (and available)? Does the organisation have existing arrangements or systems for collecting the data, such as an electronic resident record from which the data could be extracted?
- Who should be included in monitoring?
- What are the risk factors to consider when reviewing the data to ensure the process is meaningful and considers the relevant variables?
- How will the service use the information to improve practice?

When data has been collected and analysed, strategies and interventions can be implemented to reduce the rate of infections, or noncompliance with policies and recommended IPC practices. The ongoing use of this information to improve the quality of care is referred to in this Guide as continuous quality improvement (also known as continuous improvement or quality improvement), which is discussed later in this chapter. Monitoring infections and IPC practices will not change the rate or spread of infections unless it is linked to continuous quality improvement.

## Targeted monitoring

Monitoring should be tailored to the needs and context of the service so that the data collected are meaningful and can be used to improve practice. Infections or IPC practices that are selected for monitoring should be linked to an organisation's IPC system and its goals, so that the data collected are useful and help to monitor local IPC-related risks. The IPC system for the organisation should involve documenting the monitoring of infections and IPC-related activities, along with the continuous quality improvement strategies that have been developed using the monitoring data.

The infections and IPC-related activities that are monitored should be reviewed regularly to ensure that the organisation is responding to identified risks. Aged care organisations that conduct infection monitoring as part of their IPC system may focus on:

- specific types of IPC activities (such as cleaning audits – refer to **Chapter 7**)
- specific types of infections (such as influenza and COVID-19)
- specific sites of infection (such as device-associated infections and wound infections)
- specific organisms or types of organisms (such as *Clostridioides difficile*).

> It is not possible for an aged care provider to monitor every infection or activity that might cause an infection. Monitoring should be tailored to the needs, identified problems and the context of the service.

## Types of monitoring

A variety of approaches can be used to collect information about infection or IPC activities. These include a focus on the **length of time** for which the information is collected (for example, continuous monitoring), the **type** of information that is collected (for example, process or outcome monitoring), and **when** the information is collected (for example, prospective or retrospective monitoring). Two different methods may be used – for example, an organisation may use both outcome and retrospective methods to collect information (such as collecting data on the number of confirmed COVID-19 infections in older people between 1 January 2021 and 1 January 2022). Table 28 outlines some of the methods that can be used to monitor infections and IPC activities.



### Practice point

#### Which data are the most meaningful to collect?

Outcome data and process data can assist with understanding factors that may have influenced the occurrence of an infection. For example, a provider may choose to monitor influenza infections across a service (this is outcome data). However, understanding infection rates may be difficult if the provider does not monitor IPC practices such as vaccination and use of STANDARD and transmission-based precautions.

If a provider monitors both influenza cases (outcome), mask wearing (process) and vaccination rates of staff and older people (process), it may be possible to identify a link between high infection rates and low adherence to vaccination or other IPC practices. This provides a starting point for continuous quality improvement projects.

Some providers (such as home and community-based organisations) may choose to perform only process monitoring, because there may not be enough outcome data or the results may not be meaningful enough to assess practice.

Older people who live in the community have a variety of different services providing care; therefore, outcome data, such as infection rates, may not be indicative of the care provided by a specific service provider. Even so, the community organisation could monitor hand hygiene product usage to check whether aged care workers are performing correct hand hygiene practices when providing care for older people. Poor hand hygiene practices are a known factor in the spread of infections and can be a good indicator for process monitoring to check if IPC is being performed well.

**Table 28** Methods for monitoring infections

| Monitoring method | Advantage | Disadvantage |
|---|---|---|
| **Continuous monitoring** collects data on a specific type of activity or infection for a specific group of people. This is appropriate if there is a need for ongoing monitoring. | Provides a historical and real-time baseline rate (benchmark) that new data can be compared against to identify changes in the spread of an infection. | Can be resource intensive. Produces a large amount of information that may be complex to manage and interpret. |
| **Targeted monitoring** focuses on a specific aspect of care that may be known to contribute to an elevated level of infection risk. For example, focusing on specific locations or areas in a building or service or during specific events, such as during the influenza season. | Can be used for a short period. Provides very specific information.<br>Can be initiated in response to a change in infection rates or in response to an intervention. | Information is limited to the specific process, outcome or setting that is being monitored. |
| **Outcome monitoring** monitors an 'outcome', such as the number of actual infections of a particular type that occur in a specific group of people. When monitoring outcomes, it is important to define what outcome is being monitored. | Can be used to discover changes in the spread of diseases.<br>Can often predict outcomes – for example, if an organisation has poor cleaning practices, it is possible that more older people will develop infections from contact with contaminated surfaces. | Data can only be collected after the outcome has occurred.<br>Does not identify the processes that may have contributed to the infection.<br>Relies on accuracy of data collected at the time. |
| **Process monitoring** focuses on practices (processes) that are used to prevent infections (outcome) to identify whether they are effective. Process monitoring involves auditing specific IPC practices against a standard, guideline or policy to ensure the practice is being carried out correctly. Some specific practices (such as hand hygiene and uptake of vaccinations) have a large impact on the spread of infections. | Easy to implement by using auditing tools to monitor practices. Findings can be benchmarked against specific indicators.<br>Can be used to monitor practical activities, such as hand hygiene, PPE use, compliance with aseptic technique. | Can be resource intensive. Cannot definitively identify whether a poor process has caused an infection. |

IPC = infection prevention and control; PPE = personal protective equipment

## Auditing

Auditing is a way of collecting data that helps to measure performance. It is used to measure the quality of care provided against a specific standard, policy or procedure to support improvement of adherence to IPC best practice. Audits can be used to understand the factors that contribute to noncompliance, so that improvement strategies can be implemented to support the continuous

quality improvement of an IPC system. An audit can be conducted on a variety of IPC-related activities. Ideally, auditing should focus on a specific topic, be repeatable and, if possible, involve a standardised tool.

Audits can be done at the point of care or by reviewing medical records, or both. Examples of practices that could be monitored using a point-of-care audit to measure compliance with policies or procedures include:

- aseptic technique
- STANDARD or transmission-based precautions
- correct documentation for insertion or removal of invasive devices
- uptake of vaccination by the workforce.

Conducting regular audits can provide a level of assurance about the organisation's compliance with the national standards. Following any audit, a plan for continuous quality improvement should be developed to deal with any areas that do not comply with best practice.

# Data processing

Data processing uses data to create actionable and meaningful information and insights to drive continuous quality improvement. Data processing involves four main steps.

## Step 1: Definitions

It is important to define the infection or activity that is being monitored so that those collecting the data know when and what information to collect. It may help to ask: Who is the population that is included? For example, 'all older people in wing one of a residential aged care home'.

Consider UTIs as an example. If the organisation wants the rate of UTIs monitored, how will workers collecting the information know when an older person has a UTI? For example, the organisation could outline whether a diagnosis needs to include a laboratory-confirmed infection (such as a positive urine culture), plus related symptoms. Developing definitions means that all workers are abiding by the same rules when collecting data, meaning the data collected is internally comparable.

Many infection monitoring programs in aged care use definitions from the McGeer methodology. Using standardised definitions such as these allows organisations to compare their data with other aged care services. States and territories also have standardised monitoring definitions for infections of local significance.

The Aged Care Quality and Safety Commission's To Dip or Not to Dip standardised audit tool provides a clinical definition for UTI diagnosis.

## Step 2: Collecting the data

Data can be collected from areas of practice such as clinical observations, audits, surveys, incident management systems, interviews, and test and laboratory results. Some residential aged care homes may also use resident information systems that include incident report data.

## Practice point

### Using incident management systems to monitor infections

Aged care providers may choose to collect infection-related data by asking aged care workers to report suspected infections in an online incident management system.

Providers can use these systems to monitor information relating to infections, such as the type of suspected infection (skin, urinary or respiratory) and the symptoms identified that led the worker to suspect an infection was present (this may be clinical symptoms, pathology reports or antimicrobials taken). Some incident management systems can be programmed to use this information to identify whether the infection meets a specific definition, and others may need a person to run a report and review the data to determine whether the data meet the provider's definition of a confirmed infection.For example, an aged care worker may notice that an older person being cared for (with no urinary catheter) has developed a fever, acute urinary incontinence, and a change in behaviour. Once the older person is clinically reviewed and managed, the aged care worker can use the incident management system to report a suspected infection, and record the older person's details, the location, date and time, symptoms noted, and the actions taken into the system. Depending on the organisation's definition of a UTI, this may be counted as an unconfirmed infection or a confirmed infection.

Using an incident management system to monitor infections can take away the burden of aged care workers needing to know the definition of each infection, while still ensuring that the organisation is monitoring infections that meet the predetermined defintion. The definition of the infection must be clear and consistent in the system and known by those analysing the data so that the quality of the data is maintained. Over time, an incident management system can support organisations to monitor infection patterns or trends in specific locations and services.

When collecting data, it is important to ensure that the information is accurate, stored correctly and meets the monitoring definitions – this is known as data quality. Several factors can influence the quality of data, including whether the data are complete, consistent, accurate, reported on time, valid and relevant to the context. High-quality data are obtained when these factors are considered and met. Ensure that data from monitoring accurately reflect the true risk of infection in a specific setting or population. If high-quality data are not available or not used, the reporting based on the data will be inaccurate and may result in development of inappropriate or inadequate improvement strategies.

If data appear to be missing, never make them up. Review the process for data collection to see whether something was missed, or whether the collection process or definition requires improvement.

Aged care organisations should ensure that monitoring methods comply with legislative requirements for how data can be collected, stored and reported.

# Step 3: Analysing the data

## Step 3.1: Data validation

Validation is a process that ensures collected data are accurate, classified correctly, fit for purpose and that there is minimal risk of bias. Data validation is an essential step in the analysis process.

Data validation identifies errors and anomalies in data. If data are not validated, IPC interventions based on the data will be misinformed. This may mean that inappropriate or ineffective strategies are used. Finite resources may be misallocated, and safety risks for older people and aged care workers may be increased.

Data validation involves checking that all the information collected for monitoring is accurate and complete. As a minimum, this process should include checking that:

- all the required data entry fields have been completed
- there are no duplicate data entries
- there are no errors from cutting and pasting practices
- all data fields are within the expected or acceptable value ranges
- there has been consistent use of monitoring definitions
- any other events that may affect validity of the findings have been captured – for example, outbreaks of infections, or introduction of new equipment, processes or procedures.

## Step 3.2 Data analysis

Analysis of data involves reviewing and presenting the data in a way that is useful to and can be understood by many people. Data analysis may include looking for trends or patterns that are meaningful to practice. Data analysis can be challenging. There are many software programs to help analyse data, to calculate percentages and to prepare graphs, charts, tables and infographics. For example, Microsoft Excel is widely available and is a useful tool to record, store and analyse data.

Considering risk when analysing data is also important. Within any population, some people are at a higher risk of infection than others. For example, older people who have been admitted to hospital and are immunocompromised may be more likely to acquire an infection. It is important to account for varying levels of infection risk within a population when analysing monitoring data. Failure to do so may result in missed opportunities to improve the safety of high-risk older people and aged care workers. It may also result in avoidable costs associated with unnecessary interventions when the risk of infection is low.

# Step 4: Feedback and reporting

Providing timely and relevant feedback to aged care workers on IPC practices may have a positive effect on improving infection rates. Overall accountability for feedback and reporting is determined by an organisation’s corporate and clinical governance arrangements.

Reporting infection monitoring data at team meetings provides an opportunity to discuss the effectiveness of existing continuous quality improvement initiatives. Aged care organisations should also ensure that the outcomes of infection monitoring are reported to older people and carers. Feedback received from older people and carers (including visual presentation of data) should be used in combination with feedback from the workforce (for example, patient safety and workforce culture measurements) to inform future continuous quality improvement activities to reduce the risk of infection.



### Resources

Various national monitoring systems and resources that support IPC programs are available in Australia.

- Aged care organisations must abide by the National Aged Care Mandatory Quality Indicator Program, which is a form of national surveillance; however, this program does not directly monitor infections (Department of Health, Disability and Ageing).
- The Communicable Diseases Network Australia coordinates national monitoring programs for communicable diseases in Australia (Australian Centre for Disease Control).
- The National Notifiable Diseases Surveillance System includes data on nationally agreed notifiable diseases provided by state and territory public health authorities (Australian Centre for Disease Control).
- The Antimicrobial Use and Resistance in Australia (AURA) surveillance system includes data from programs that monitor antimicrobial use and antimicrobial resistance in hospital and community settings, including aged care (Australian Centre for Disease Control).
- The Aged Care National Antimicrobial Prescribing Survey is a standardised audit tool that can be used by all residential and centre-based aged care services to monitor antimicrobial use (National Centre for Antimicrobial Stewardship).

# Continuous quality improvement

Continuous quality improvement in aged care means striving to continually improve the quality of care and services provided to older people. In addition to reducing the risk of infections, continuous quality improvement interventions can improve the quality of care, protect aged care workers, reduce financial costs, promote environmental sustainability and improve the use of resources (see **Table 29**). Monitoring data can be used to measure what practices need to be improved and whether changes implemented to improve practice have worked. Continuous quality improvement activities should always be informed by valid data.

Data collection supports organisations to identify issues, to prioritise changes to fix those issues and to assess whether those changes have been successful.

- If a provider monitors the number of acute respiratory infections, improvements can be implemented that lead to timely identification of cases, and infection control measures such as staff training about PPE.
- If a provider monitors rates of vaccination for influenza or COVID-19 in older people and staff, improvements can be implemented to lower the risk of outbreaks.

- Continuous monitoring of antimicrobial prescribing using audits can identify use of antimicrobials that is not consistent with prescribing guidelines.
- Monitoring UTIs in conjunction with an audit tool such as To Dip or Not to Dip can help identify overuse of antibiotics to treat UTIs. It can inform strategies to prevent UTIs and respond to asymptomatic bacteriuria.



## Resources

The Aged Care Quality and Safety Commission developed To Dip or Not to Dip, a continuous quality improvement activity that incorporates an evidence-based clinical pathway. The tool aims to improve the diagnosis and management of UTIs in older people living in residential and centre-based aged care homes.

Developing written plans for continuous improvement (PCIs) is a requirement for aged care organisations and is a form of continuous quality improvement. PCIs categorise identified issues within an aged care service according to each Aged Care Quality Standard (Aged Care Quality and Safety Commission).

The Department of Health, Disability and Ageing Star Ratings helps providers to monitor, compare and improve the quality of aged care.

**Table 29** Steps to developing a continuous quality improvement intervention

| Steps | Explanation |
|---|---|
| **Establish a team** | Depending on the size of the provider, the team may consist of one person, or a large group of people. If a team with more than one person is established, consider who is most appropriate to lead the program of work. Consider including workers from various areas (non-clinical and clinical staff), older people and carers who can provide a different perspective on what needs to be improved and how to go about the improvement. |
| **Identify a problem by using existing data** | When identifying a problem, it is important to use existing data to confirm it is a true problem. Comparing existing data to new data helps assess whether the continuous quality improvement intervention made a difference.<br>Continuous quality improvement interventions to reduce infection risks may include changes to current IPC or care practices, review of current programs or policies, additional education or training in IPC, or changes to equipment or processes. |
| **Develop your intervention using the SMART framework** | When designing a continuous quality improvement intervention, it is important to identify a goal, what needs to change and how the change will be measured. The SMART framework can help develop an intervention that is achievable and able to be measured.<br>• **Specific:** Clearly define the goal and the proposed outcome of the continuous quality improvement program.<br>• **Measurable:** Identify what will be measured, and how will it be measured.<br>• **Achievable:** Determine whether there is access to the resources, skills and knowledge to deliver this change.<br>• **Realistic:** Determine if this change can be made within the current context and resourcing of the organisation.<br>• **Time-bound:** Set a deadline for each milestone in the program. |
| **Implement, review and continually improve quality** | When an intervention has been implemented, the intervention should be routinely monitored to see if it has had an impact on reducing the risk or incidence of infection. An effective way to monitor an intervention is to use the plan–do–see–act method.<br>• **Plan:** Define the continuous quality improvement intervention using the SMART framework.<br>• **Do:** Roll out the continuous quality improvement intervention.<br>• **See:** Use new and existing monitoring to track the effect of the intervention.<br>• **Act:** Based on the monitoring results, identify further aspects for intervention or change. |

**For more information, refer to the Australian Guidelines for the Prevention and Control of Infection in Healthcare Specifically, for:**

- **outbreak investigation and management, refer to Section 3.4.2**
- **infection control strategies to contain an outbreak, refer to Section 3.4.2.1**
- **outbreak surveillance, refer to Section 4.4.4.**

# Chapter 9: Staff health and safety

## Key points

- All aged care workers have a right to work in a safe environment.
- In Australia, work health and safety (WHS) is regulated by states, territories and the Australian Government.
- A workforce screening and vaccination program in aged care settings can reduce the burden and transmission of vaccine-preventable diseases among older people, the aged care workforce, families, visitors and the wider community.
- Vaccination should be actively promoted for aged care workers and older people.
- Unless required under state or territory public health regulation, vaccination should not be mandated.
- Workforce screening programs help to identify workers who have a vaccine-preventable disease or who are at higher risk of acquiring one. This process helps those responsible for infection prevention and control (IPC) to assess and reduce the risk of the spread of infection.
- Aged care organisations should have processes in place to respond to seasonal infections risks such as influenza.
- Each aged care organisation should have a policy on the management of needlestick and other sharps injuries. The policy should address immediate first aid, risk assessment and provision of immediate post-exposure advice for sharps injuries and other blood or body substance exposures involving aged care workers and older people.

## Work health and safety

All aged care workers have a right to work in a safe environment. Compliance with WHS obligations and integrating these obligations in the governance processes for the aged care organisation protects everyone in the workplace. This includes preventing and controlling the risk of infections in aged care settings. In Australia, WHS is regulated by states, territories and the Australian Government. The Australian Government works closely with the states and territories through Safe Work Australia to develop and maintain model WHS laws.



### Resources

Safe Work Australia aims to reduce the number of work-related deaths, injuries and illnesses, and exposure to hazards and risks in Australian workplaces, including aged care organisations.

The model WHS laws have three parts – the model *Work Health and Safety Act 2011* (WHS Act), model Regulations and model Codes of Practice. Most states and territories have developed their own WHS legislation that is based on these model WHS laws.

- The WHS Act (the law) was developed to provide a nationally consistent framework for the health and safety of workers and workplaces.
- The WHS Regulations outline the procedural and administrative requirements to support the model WHS Act.
- The Codes of Practice are practical guides specific to each state or territory that outline how to achieve the standards of WHS required under the WHS Act and Regulations.
- The Code of Conduct for Aged Care (the Code) describes how aged care organisations, their governing persons and workers must behave and treat people receiving aged care services.

## Work health and safety hazards and IPC

A variety of hazards in aged care settings can put the workforce at risk of spreading and acquiring infections. Any member of the aged care workforce can become exposed to an infection in various ways, including through direct contact with an infectious person, as a result of a sharps injury and through eating or drinking in a care area.

All members of the workforce should be informed of the aged care organisation's policy on staff health and safety. The primary measures of protection for staff health and safety relating to IPC should include:

- workforce screening and vaccination programs
- safe systems of work that are designed to minimise the risk of spreading infections (including exclusion periods) and manage occupational exposures
- education on safe work practices and the provision of physical protection, including the use of personal protective equipment (refer to **Chapter 6**).

# Vaccination and vaccine-preventable diseases

Vaccine-preventable diseases are those that can either be prevented by vaccination or have their severity and frequency of infection reduced by vaccination.

Vaccine-preventable diseases can have serious health outcomes, especially for older people. It is estimated that immunisation prevents 2 to 3 million deaths around the world each year, with the World Health Organization recognising it as one of the most successful and cost-effective health interventions ever known. There is evidence that the burden of vaccine-preventable diseases has been reduced in Australia due to the introduction of certain vaccinations and the availability of these vaccines on the National Immunisation Program (NIP) Schedule.

## The role of vaccination in aged care

Vaccination is the term used for getting a vaccine, whereas immunisation refers to the process of becoming immune to a disease, which can occur by acquiring a disease or following vaccination. Administering a vaccine stimulates the immune system to produce a protective immune response, which on average takes around 10 to 14 days to develop. Immunity developed from a vaccine may last for months or many years, depending on the nature of the vaccine, the type of immune response and factors specific to the individual such as age. Some vaccinations may require several doses before a full protective immune response is seen.

Vaccination can protect both the vaccinated person and others in aged care who are not immune, because transmission of infection can be reduced. Vaccination increases the level of immunity in the population. This is known as ‘herd immunity’ or ‘community immunity’. Herd immunity helps minimise the spread of infection in the community.

The Australian Immunisation Handbook provides recommendations for vaccinations for all healthcare workers, including all workers and students directly providing care, or handling human tissue, blood or body fluids. These workers are recommended to receive vaccines against:

- hepatitis B
- influenza
- measles (if non-immune)
- mumps (if non-immune)
- rubella (if non-immune)
- pertussis
- varicella (if non-immune).

In addition, hepatitis A vaccine is recommended for workers who:

- work in remote Aboriginal and Torres Strait Islander communities
- work with Aboriginal and Torres Strait Islander children in the Northern Territory, Queensland, South Australia or Western Australia
- are other specified healthcare workers in some states or territories.

### Essential knowledge

Under the model WHS laws, an organisation has a duty to eliminate or, if elimination is not reasonably practicable, minimise the infection-related risks in the workplace so far as is reasonably practicable. An organisation will not be able to completely eliminate all infection-related risks, so must do all that is reasonably practicable to minimise the risks. Vaccination should be considered as one of the ways to minimise these risks in the context of a range of IPC control measures.

Even though vaccination is available, this does not necessarily mean it is reasonably practicable for an organisation to require vaccinations in the workplace or for all of the workforce unless required by a public health order. However, the benefits of being vaccinated should be strongly promoted to both the workforce and older people. Aged care organisations can also develop their own policies and WHS arrangements related to workforce screening and vaccination programs.

If workers are unsure of the vaccination requirements for a specific organisation, information can be checked by referring to:

- local aged care organisations' vaccination policies
- state and territory public health orders and directions – aged care workers must comply with any public health orders or directions that are made by state and territory governments and apply to the workplace
- national guidelines, such as the Australian Immunisation Handbook.

## Booster/catch-up vaccinations

Catch-up vaccinations aim to provide optimal protection against vaccine-preventable diseases by completing a person's recommended vaccination schedule. A catch-up vaccination is required for incomplete or overdue vaccinations.

### Resources

- The National Immunisation Program Schedule recommends which vaccinations should be given at specific times throughout a person's life, ranging from birth through to adulthood.
- The Australian Immunisation Handbook provides clinical guidelines for health and aged care workers about using vaccines safely and effectively. Aged care organisations should encourage both older people and the workforce to remain up to date with recommended vaccinations as per the National Immunisation Program and the Australian Immunisation Handbook.

# Workforce screening and a vaccination program

**Workforce screening programs** help identify workers who are at risk of acquiring a vaccine-preventable disease (for example, if they are not vaccinated), or already have an infectious disease. This allows an assessment to be completed to identify as to whether the worker is at risk of spreading the infection to others. All aged care organisations, regardless of their size or function, should have processes in place for workforce screening.

**Workforce vaccination programs** help to protect vulnerable people against vaccine-preventable diseases through promoting vaccinations that reduce an aged care worker's risk of acquiring and spreading an infectious disease. A workforce screening and vaccination program assesses the risk of vaccine-preventable diseases to members of the aged care workforce. A workforce screening and vaccination program for vaccine-preventable diseases should include systems and processes for:

- assessing the vaccine-preventable disease status of all members of the aged care workforce, including students, contractors and volunteers
- identifying vaccine-preventable disease risks for the workforce
- informing workers about relevant vaccine-preventable diseases catch-up vaccinations and where to get vaccinated
- providing access to vaccines for all members of the aged care workforce as required, including maintaining an annual influenza vaccination program
- maintaining records of the vaccination status of workers and older people in line with the Aged Care Act 2024.

The Australian Immunisation Handbook provides recommendations about which diseases aged care and healthcare organisations should prioritise for their workforce screening and vaccination programs.

## Vaccine-preventable disease risk assessment

Working in some jobs can increase a person's risk of acquiring some diseases and spreading them to vulnerable people. The chance of a person being infected by a vaccine-preventable disease is known as a 'vaccine-preventable disease risk'. Members of the aged care workforce have an increased risk of being exposed to a vaccine-preventable disease because of the close-contact care provided to older people, and subsequent increased risk of exposure to potentially infective materials (such as surfaces and equipment).

Assessing the risk for workforce exposure to a vaccine-preventable disease is an ongoing process and should be informed by the environment in which aged care services are delivered (community or residential care), the role of individual aged care workers, local outbreaks or disease prevalence, and the immunisation and vaccination status of the workforce. When conducting risk assessments for the workforce, consider whether workforce members:

- have confirmed histories of vaccination
- show serological evidence of immunity to a vaccine-preventable disease (although this check is not done often in the aged care sector)
- are uncertain about previous vaccination or disease status
- are unvaccinated or have no known history of vaccine-preventable disease or infection
- show contraindications to vaccination and suitability of place of employment.

By conducting a risk assessment, organisations may be able to reduce the risk of exposure for people (both workers and older people) who choose not to be or cannot be vaccinated. This may be by allocating a vaccinated aged care worker to provide care for an unvaccinated or infectious older person. The extent to which this can be implemented will depend on workforce availability.

Although there are different occupational vaccination recommendations and requirements for each state and territory, it is important that aged care organisations offer information to aged care workers on the benefits of vaccination. The aged care sector employs workers from many cultural and linguistic backgrounds. Some workers may have limited education on vaccination, which is why it is important that information on vaccination is provided.

### Using a risk matrix to assess risk

A risk matrix is a tool that can be used to assess the risk of an event, such as exposure to vaccine-preventable diseases. It considers the likelihood of occurrence and the consequences associated with the event. A risk matrix can generate a risk rating to describe the level of risk to the workforce from vaccine-preventable diseases. A workforce immunisation risk matrix was developed to support health services perform risk assessments for vaccine-preventable diseases.

## Vaccination programs for seasonal or recurring infections

Aged care organisations should have processes in place to respond to seasonal hazards for specific infections, such as influenza, as well as outbreaks and pandemics. Seasonal vaccination programs for vaccine-preventable diseases help provide members of the aged care workforce with protection against variants of seasonal viruses. Strains can change from season to season, and therefore it is important for aged care workers to be encouraged to receive the annual vaccination in response to these changes. Each aged care organisation must take precautions to prevent and control influenza and minimise infection-related risks. This includes identifying and complying with all relevant Commonwealth and state or territory legislation and regulatory requirements, offering free influenza vaccinations every year to the workforce and volunteers, and keeping records of their vaccinations. Aged care organisations must also show:

- how the benefits of vaccination have promoted and informed the workforce and volunteers
- the steps taken to encourage the workforce and volunteers to get vaccinated.

### Practice point

#### Annual influenza vaccination

Annual influenza vaccination is recommended before the onset of the influenza season, which typically starts in June for most parts of Australia. However, influenza can happen year-round. While vaccination is usually anticipated to provide protection throughout the season, the highest level of protection is generally achieved within the first 3-4 months after vaccination. Delaying vaccination until the start of winter may result in greater immunity later in the season but could also lead to missed vaccination opportunities and leave individuals unprotected if the influenza season starts early.

For more information, please refer to the Australian Immunisation Handbook.

### Resources

- Clinical guidance about COVID-19 vaccinations is provided by the Australian Technical Advisory Group on Immunisation.
- For more information, refer to the Department of Health, Disability and Ageing Mandatory flu vaccination program.

## Exclusion periods for aged care workers with acute infections

Aged care organisations should have comprehensive written policies regarding disease-specific work restrictions and exclusions. Any member of the aged care workforce who has an infectious disease has a responsibility to:

- consult with a medical practitioner to determine that they can perform their tasks without putting older people or other workers at risk
- undergo regular medical follow-up and comply with all aspects of informed clinical management regarding their condition.

These policies should encourage members of the workforce to seek appropriate preventive and therapeutic care and report any illnesses, medical conditions or treatments that can render them more susceptible to infection or exposures.

Members of the workforce should **not** be penalised if they are unwell and unable to work because of an infectious disease.

The overarching principle for exclusion periods is that aged care workers should not come to work if they have signs or symptoms of a potentially infectious disease that is transmissible in the workplace; examples include influenza, COVID-19 and gastroenteritis.



**Resources**

- More information regarding exclusion periods for the workforce can be found in Section 4.2.2 of the Australian Guidelines for the Prevention and Control of Infection in Healthcare.
- The Communicable Diseases Network Australia (CDNA) provides specific guidance on the management of workers infected with a variety of diseases. For more information, see CDNA's Series of National Guidelines.

## Aged care workers with specific circumstances

Aged care organisations must assist workers who experience circumstances that place them at greater risk of infection to develop management plans that ensure their wellbeing. When an aged care worker is known to be especially susceptible to infections, work duties are assessed to ensure that the welfare of that person, older people and other aged care workers is safeguarded. This may involve appropriate work placements, adjustments or restrictions, or deployment to a role involving less risk. Aged care workers in this situation may require counselling on what tasks they can perform, what they should avoid and the possible impact of their work on their health.

# Occupational exposures

Occupational exposures that might place an aged care worker at risk of hepatitis B virus, hepatitis C virus, HIV or human T-cell lymphotropic virus type 1 include percutaneous injuries (for example, a needlestick or cut with sharp object) or contact of a mucous membrane or non-intact skin (for example, exposed skin that is chapped, abraded or affected by dermatitis) with blood, tissue or other potentially infectious body substances.

Each aged care organisation requires a policy on the management of needlestick injuries, and on the ability to provide immediate post-exposure advice for sharps injuries and other blood or body substance incidents involving aged care workers, including drug therapy if needed. This is because generic policies may not be relevant to individual settings (for example, access to care, especially after hours). These policies should outline the arrangements organisations have in place to ensure post-exposure treatment can be provided with an appropriate healthcare professional if needed.

## Managing exposures

Some general components are relevant to all occupational exposures to blood and other body substances.

- The aged care worker should receive immediate care and treatment at the site of exposure.
- Treatment protocols should be applied – including removal of contaminated clothing, thorough washing of the injured area with soap and water, and flushing of affected mucous membranes with large amounts of water.
- A *risk assessment* of the exposure should be undertaken – including of the type of exposure, type and amount of fluid involved, infectious status of the source, and susceptibility of the exposed aged care worker.
- If the source of exposure can be identified, the worker should be tested (with consent) for hepatitis B surface antigen, hepatitis C antibody and HIV antibody.
- The elements of open disclosure should be used by the organisation when managing occupational exposures.
- The aged care worker should have baseline testing (for example, baseline serology and serum for storage) as required.
- Counselling and follow-up should be provided to the aged care worker.

## Post-exposure prophylaxis

Post-exposure prophylaxis (PEP) is the medical response given to prevent the spread of bloodborne infections following a potential exposure to HIV or hepatitis B. The decision to prescribe PEP for HIV or give immunoglobulin for hepatitis B should be made on a case-by-case basis and consider:

- risk assessing the exposure to the infection
- testing
- prescription of antiretroviral drugs (depending on the outcome of the exposure assessment)
- appropriate support and follow-up.

When PEP is recommended (by the GP or infectious disease physician), it should be prescribed and started as soon as possible – usually within 72 hours of the exposure. Eligibility for PEP or immunoglobulin and the type of regime prescribed is individualised and determined by several factors, including the transmission risk associated with the exposure.

## Resources

More guidance can be sourced from:

- the Australian Immunisation Handbook (Department of Health, Disability and Ageing)
- Catch-up vaccination (Australian Centre for Disease Control)
- COVID-19 (Australian Centre for Disease Control)
- Influenza (Australian Centre for Disease Control)
- Mandatory flu vaccination program (Department of Health, Disability and Ageing)
- Vaccination for people at occupational risk (Australian Centre for Disease Control)
- the Australian Guidelines for the Prevention and Control of Infection in Healthcare (ACSQHC).

**For more information, refer to the Australian Guidelines for the Prevention and Control of Infection in Healthcare. Specifically, for:**

- **staff health and safety, refer to Section 4.2**
- **members of the workforce in specific circumstances (for example, pregnant workers), refer to Section 4.2.4**
- **members of the workforce who carry a bloodborne virus and how this impacts their ability to perform exposure-prone procedures, refer to Section 4.2.5.**

# 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 than 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 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 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 2**.

### 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 and suprapubic catheters, which are prone to infection
- living close to other people, such as in a residential 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 preserve the effectiveness 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:

- other – skin
- soft tissue or mucosal infection
- cystitis
- tinea
- pneumonia
- wound infection – nonsurgical
- cellulitis
- conjunctivitis
- other – respiratory tract infection
- cutaneous candidiasis
- other – urinary tract infection.

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: Antibiotic and the Australian Medicines Handbook)
- extensive prescribing of topical antimicrobials, especially clotrimazole
- prescribing of antimicrobials for conditions that do not require antimicrobials (for example, asymptomatic bacteriuria)
- frequent prescribing of PRN ('as needed') antimicrobials, which 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 urinary tract infections are among 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 To Dip or Not to Dip program of the Aged Care Quality and Safety Commission.

### Resources

- The National Centre for Antimicrobial Stewardship (NCAS) coordinates the Aged Care NAPS, which can be used for monitoring antimicrobial use in residential aged care. NCAS publishes annual reports on Aged Care NAPS, and data are included in reports prepared by the Australian Centre for Disease Control and previously by ACSQHC. The latest report is AURA report: Sixth Australian report on antimicrobial use and resistance in human health. Visit NCAS for information about participation in the survey.
- The Antimicrobial Stewardship Clinical Care Standard (2020) and the Guidance for implementation of the Antimicrobial Stewardship (AMS) Clinical Care Standard in aged care provides information on delivering appropriate care when prescribing antimicrobials.
- The Australian Commission on Safety and Quality in Health Care (ACSQHC) has a range of information about AMS in aged care available on its website, including a fact sheet about how to access Therapeutic Guidelines for advice on evidence-based prescribing for all medicines, including antimicrobials.

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 residential aged care homes than in acute care facilities such as hospitals. In residential aged care homes, there are logistical challenges associated with the provision and availability of medical care and pharmacy support, and with accessing external infectious diseases expertise and diagnostic facilities. AMS in aged care requires collaboration between aged care workers, various services, older people and visitors. 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, particularly Chapter 16
- the Australian Medicines Handbook
- Therapeutic Guidelines: Antibiotic
- Therapeutic Guidelines – Antibiotic Prescribing in Primary Care: Summary Table 2025.

**Table 30** outlines the components that should be included in an AMS program in both residential and centre-based aged care organisations and home and community-based aged care organisations.

**Table 30** Antimicrobial stewardship 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. | Yes | Yes |
| **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. | Yes | Yes |
| **Policies and prescribing guidelines** | AMS policies and procedures are based on evidence-based guidelines for the management of infections. | Yes | 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 healthcare professionals 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. | Yes | N/A |
| **Audit and feedback** | Prescribers such as 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 providers 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. | Yes | 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). | Yes | Yes |

| Program component | Description | RCB | HC |
|---|---|---|---|
| **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. | Yes | Yes |

AMS = antimicrobial stewardship; GP = general practitioner; HC = home and community aged care; IPC = infection prevention and control; N/A = not applicable; NAPS = National Antimicrobial Prescribing Survey; RCB = residential and centre-based aged care



### Home and community aged care

Home and community aged care providers 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

- More information on relevant antimicrobial strategies can be found in Chapter 16 of Antimicrobial Stewardship in Australian Health Care (the AMS book).
- 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 contributions 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 (GPs), 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 help 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 people 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.

# Chapter 11: Wound care, procedures and invasive devices

## Key points

- A clinical procedure is the set of steps required to perform a specific clinical activity safely. Invasive clinical procedures are performed by trained aged care workers (such as enrolled or registered nurses) and usually require clinical instruments such as catheters, scalpels and forceps to conduct the procedure.
- Effective wound care and infection prevention strategies are essential to maintaining wellbeing and quality of life.
- Using an aseptic technique protects older people from developing an infection from invasive clinical procedures.
- Many clinical procedures performed in aged care settings require the insertion, removal or management of invasive devices, such as urinary catheters and percutaneous endoscopic gastrostomy (PEG) tubes.
- Invasive medical devices are a common source of infections and provide a route for microorganisms to enter the body.
- Invasive devices should only be used when absolutely necessary and for the shortest period of time necessary.
- There should be clear documentation of the insertion and maintenance of the device and a plan for its removal, as well as daily review of the ongoing need for the device.
- Resources for the management of invasive devices in aged care outlined in this chapter cover:
    - indwelling urinary devices
    - enteral feeding tubes
    - suprapubic catheters
    - subcutaneous catheters
    - peripherally inserted vascular catheters (PIVCs)
    - peripherally inserted central catheter (PICC) lines
    - central venous catheter devices
    - stoma care
    - fistula care and management.

# Clinical procedures

A clinical procedure is a set of steps that is required to perform a specific clinical activity safely. In aged care, there are many clinical procedures that have a direct risk of spreading an infection to the older person. Invasive clinical procedures are those that are performed by a trained aged care worker (such as an enrolled or registered nurse) and usually require clinical instruments such as catheters, scalpels and forceps to conduct the procedure.

All clinical procedures involve some level of infection risk. Before performing a procedure, infection risks should be identified and minimised. All clinical procedures should have documented processes that show aged care workers how to perform the procedure safely and minimise the spread of infections. Aseptic technique as discussed in **Chapter 6** is a set of practices that helps to protect older people during invasive clinical procedures by employing infection control measures that minimise, as far as practicable, the presence of microorganisms.



**Resources**

Aseptic technique processes and equipment is discussed in more detail in **Chapter 6**.

## Wound prevention and management

Effective wound care and infection prevention strategies are essential to maintaining wellbeing and quality of life. Wound infections can occur when a significant number of microorganisms enter an area of broken skin and the body is unable to fight them off. If a wound is infected, it usually shows signs such as purulent discharge, spreading redness, increased pain, swelling and being hot to touch. Alternatively, the older person may present with systemic symptoms such as fever, tachycardia or changes in blood pressure. The process of a wound becoming infected is usually gradual and depends on the amount and type of the microorganisms on the wound and the older person's immune response. **Figure 3** shows the impact that microorganisms can have on wound healing.

Preventing avoidable wounds and the breakdown of skin are important to reduce harm to the older person. All clinical aged care workers should have a basic understanding of the signs and symptoms of wound infection to ensure a proactive approach to care, including appropriate escalation or intervention. Wound prevention and reducing the risk of the wound becoming infected can be achieved through:

- improving an older person's immune response through nutrition, enough sleep, and good management of pre-existing health needs
- taking steps to avoid pressure ulcers from developing
- keeping wounds clean and using appropriate dressings
- removing non-viable tissue (also known as debridement) by a qualified worker
- moisturising skin to assist with preventing skin from drying, cracking and tearing, and applying barrier creams to prevent incontinence-associated dermatitis
- implementing STANDARD and transmission-based precautions (such as hand hygiene, aseptic technique and personal protective equipment)

- maintaining good hygiene practices when providing wound care
- providing education to older people, families, and carers about wound care (especially about preventable wounds such as pressure injuries and skin tears) and preventive health care (such as diabetes management)
- providing falls prevention education, strategies, and programs.

**Figure 3** The effects of increasing numbers of microorganisms




| Phase | Contamination | Colonisation | Local infection | Spreading infection | Systemic infection or sepsis |
|---|---|---|---|---|---|
| **MO* activity** | MOs are on the wound; however, there is no multiplication | MOs multiply on the wound. Biofilm may develop | MOs have invaded the local tissue | MOs have invaded the surrounding tissues | MOs have entered the bloodstream and may spread and/or damage tissues and organs |
| **Clinical progression** | No impairment to healing | Impaired healing | Impaired healing | Impaired healing | Impaired healing |
| **Clinical symptoms** | No obvious clinical signs of infection | Clinical signs of infection may not be obvious | Usually clinical signs of infection are localised to the wound | Usually obvious clinical signs of infection and may include systematic symptoms such as fever and body aches | The older person is usually severely unwell |

* MO = microorganism, also known as microbial burden.

Source: Adapted from Wounds International Wound Infection in Clinical Practice 2022.

It is important to understand the factors that may contribute to preventable wounds and infections so that interventions can be put in place. These interventions may include **auditing** (aseptic technique), **infection monitoring** and **feedback** to regularly review the incidence of wounds and the cause of preventable wounds.

More information on auditing, infection monitoring, and feedback can be found in **Chapter 8**.

## Invasive devices

Many clinical procedures performed in aged care settings require the insertion, removal or management of invasive devices. These devices provide a route for microorganisms to enter the body and are a common source of infections. Appropriate use of an invasive device is important in reducing the risk of that procedure. The procedure is the process of inserting or removing the device, and the invasive device is the piece of equipment that enters or leaves the body – such as a catheter.

Invasive devices are devices that in whole or part enter the body through an opening (such as the mouth or nose or through the skin) or through any surface of the body (through the skin such as a stoma). They include catheters inserted for drainage (for example, urinary catheters), catheters for intravascular access (for example, peripheral intravenous catheter via the skin) or devices for feeding (for example, a PEG tube).

Invasive devices that are inserted in hospital settings are often left in place for too long. It is likely that similar overuse or unnecessary prolonged use occurs in aged care. Before any invasive device is put in place, aged care workers should assess whether it is essential but also decide on when it should be removed and clearly document that plan.

### Reducing the risk of infection

To reduce the risk of infection-related to invasive devices, it is important to only use an invasive device when absolutely necessary. It is also important to ensure:

- the device is removed if it is no longer needed; for example, if an older person has an intravenous catheter inserted, when the clinical issue has been improved and the older person can consume fluid orally, the intravenous catheter should be removed and oral therapy started
- all relevant aged care workers are trained and competent in the skills required for safe insertion, maintenance and removal of devices
- older people and/or their carers who manage their own indwelling device have received training on how to safely maintain the device
- the most appropriate device is selected for the older person if a device is needed
- the device is checked at every shift or service and removed as soon as it is no longer necessary
- the insertion, maintenance and removal of the device is documented, as are daily inspections and the ongoing need for the device
- the older person’s clinical condition is monitored, including the insertion site and the device, for any signs and symptoms of infection
- the older person and/or their carer is aware of the infection risks associated with the device
- appropriate systems are in place to monitor infection rates associated with invasive devices in residential and centre-based aged care organisations
- processes and policies are developed that describe the proper insertion, use, management and removal of invasive devices.

## Management of an invasive device

Before inserting any invasive device, older people should always be assessed to decide if their condition can be managed without the device.

If an invasive device is required, there should be clear documentation of its insertion and maintenance, and a plan for its removal, as well as regular reviews that confirm the ongoing need for the device. Older people who have an invasive device in place should receive regular monitoring, including observations of the insertion site and the invasive device for signs and symptoms of infection. In general, the time that an invasive device is in place should be as short as possible. The longer the time the invasive device is in place, the greater the risk of infection or other complications related to the device.

Practical strategies that can be used to minimise the risk of device-related infection during insertion and while managing invasive devices include the use of single-use sterile equipment, appropriate skin preparation solutions (for example, normal saline), appropriate personal protective equipment and adherence to aseptic technique. An older person who has an invasive device should also be provided with education on the infection risk and the importance of self-care, hygiene and proper device maintenance.

The following steps can be taken to reduce the amount of time an invasive medical device is in place.

- Providers should use best clinical evidence to provide advice on the maximum dwell time for invasive devices in local policies or procedures.
- Healthcare professionals (this may be the general practitioner [GP] or nurse practitioner) who have ordered the insertion of an invasive device should include instructions for the removal of the device in the older person's care plan or clinical notes.
- The ongoing need for an invasive device should be reviewed routinely as part of the older person's care.
- The insertion site should be regularly reviewed and details about the site condition should be documented in the clinical care notes.
- If the older person develops signs of infection or other indications of complications related to the invasive device, their GP or nurse practitioner should be notified immediately to consider removal of the device, if safe.
- Remove the device as soon as it is no longer necessary.



**Practice point**

### An invasive device management plan

If an invasive device is inserted during an older person's hospital stay and there is no documented plan for removal, aged care providers should contact either the hospital (to request that a plan for removal is provided) or a healthcare professional (to review the plan; for example a GP or a nurse practitioner).

If the older person lives in the community, the home and community aged care provider should encourage and support the older person to contact the hospital for more information or a discharge plan.

# Types of invasive devices and clinical procedures in aged care

## Indwelling urinary catheters

An indwelling urinary catheter is a flexible, hollow tube passed into the bladder through the urethra and is used to empty urine from the bladder. Indwelling urinary catheters are used in several situations, including urinary retention or obstruction, injury or surgery affecting urinary function, and urinary incontinence management associated with wound care or end-of-life care.

Most bacterial infections that are linked to urinary catheterisation gain access to the body through the urinary tract either through:

- a break in aseptic technique when managing or inserting the catheter (the infection may come from the aged care worker's hands)
- a reflux of bacteria from a contaminated urine drainage bag.

Healthcare-associated UTIs are associated with a range of negative outcomes including an increased hospitalisation rate and increased length of stay in hospitals. The risk of infection is related to the method and duration of catheterisation, the quality of catheter care and host susceptibility.

### Resources

The longer a urinary catheter is in place, the greater the risk of a UTI. Aged care workers should know the signs and symptoms of a suspected UTI in an older person.

For more information on the clinical symptoms of a UTI, please refer to the Aged Care Quality and Safety Commission resources:

- Clinical pathway for older people in aged care homes: suspected UTI (with catheter)
- Clinical pathway for older people in aged care homes: suspected UTI (without catheter).

Several factors can reduce the risk of infection from indwelling urinary devices.

- **Assessing the need for catheterisation:** Limiting catheter use and reducing the amount of time they are in place are important strategies for reducing the risk of catheter-associated UTIs. All aged care workers should clearly document the indications for the catheter before insertion.
- **Education of aged care workers:** Aged care workers performing catheterisation or managing devices should be trained and competent in the technique and familiar with policies and procedures for insertion, maintenance and removal of indwelling urinary devices. Training should also include good record keeping practices about the insertion, maintenance and removal of catheters.
- **Educating older people:** It is important to provide older people and their carers with information about the need for catheterisation and details about the insertion and maintenance of their catheter and the plan for review and removal or changes.
- **Implementing appropriate monitoring:** Monitoring of indwelling catheters is recommended. This can include monitoring for compliance with indications for insertion and documenting of processes and infections. It is important to analyse monitoring data to understand the rate of infections and why the infections are occurring. This promotes continuous quality improvement interventions to prevent these infections. Auditing compliance with the use of the aseptic technique is also recommended. As part of appropriate monitoring, aged care workers should know how to recognise UTIs (clinical symptoms and signs). UTIs are frequently over-diagnosed in health care and can contribute to antibiotic overuse.

## Subcutaneous catheters

A subcutaneous catheter is a hollow, very thin tube inserted under the skin, directly into subcutaneous tissue (fat tissue) to deliver fluids or medicines for people who may have trouble swallowing or digesting medicines via the mouth.

Subcutaneous catheters are often used in palliative care to minimise the need for repeated injections.

Indwelling subcutaneous catheters can be used to deliver medicines as a bolus (once off) or via a continuous infusion (medicines delivered via a pump over a long period of time), which is usually delivered by a syringe driver.

### Resources

- Management of Subcutaneous Infusions in Palliative Care (Queensland Health)
- Guidelines for Subcutaneous Infusion Device Management in Palliative Care and other settings (Queensland Health, Centre for Palliative Care Research and Education)

## Suprapubic catheter

A suprapubic catheter is a tube that goes into the bladder through the lower abdominal wall above the symphysis pubis (pelvic bone). This tube is held in place by an internal balloon, and the tubing continuously drains urine from the bladder.

### Resources

- Supra Pubic Catheter (SPC) – Adult Clinical Guideline, Competencies & Patient Information Leaflet (NSW Agency for Clinical Innovation)
- Urinary catheter insertion or change: (7) Change of suprapubic catheter (Queensland Health)
- Best practice guideline: long-term suprapubic catheter related care at home (Continence Nurses Society Australia)

## Percutaneous endoscopic gastrostomies

A PEG tube is a short tube surgically inserted into the stomach through the abdomen to deliver long-term nutrition. Contamination of feeds (the type of food delivered through the PEG) is a key concern in aged care settings, with contamination largely occurring during the preparation or administration of feeds and being linked to serious clinical infection. Most evidence concerning enteral feeding (feeding directly into the stomach or intestine) relates to gastrostomy or PEG.

### Resources

- A Clinician's Guide: Caring for people with gastrostomy tubes and devices (NSW Agency for Clinical Innovation)

## Intravascular catheters

**Peripherally inserted vascular catheter:** A PIVC is a small, flexible tube that is inserted through the skin into a small vein in the arm, hand or foot (peripheral vein). A PIVC is also known as a peripheral venous line or peripheral intravenous cannula, and is commonly referred to as an 'IV' or a 'drip'. PIVCs are usually inserted into the arm. They allow medicines, hydration fluids, radiographic contrast media and blood products to be given directly into the bloodstream. They are associated with much higher rates of serious infections (for example, bloodstream infections) if left in place for more than 72 hours or inserted with poor technique and/or in an emergency.



### Resources

- Vascular access device clinical management for infection prevention (Queensland Health)
- Management of Peripheral Intravenous Catheters Clinical Care Standard (ACSQHC)
- Peripheral Intravenous Catheter (PIVC) Infection Prevention and Control Clinical Guideline (SA Health, Government of South Australia)

**Peripherally inserted central catheter line:** A PICC is a long, flexible tube that is usually inserted in one of the large veins in the upper arm in a hospital setting using a local anaesthetic. The tube finishes in a large vein above the heart. PICCs are used to administer medicines into the bloodstream without continually needing to insert a needle or intravenous catheter. PICCs can often be in place for months at a time and can be managed in either a residential and centre-based aged care setting or a home environment.

For many clinical conditions, including the treatment of infections, oral therapy can be as effective as intravenous therapy. Even if intravenous therapy is needed initially, the sooner the older person can be changed to oral therapy, and the catheter removed, the greater the reduction in the risk of acquiring serious infections.



### Resources

- Peripherally Inserted Central Catheter (PICC) Dressing Management Clinical Guideline (SA Health, Government of South Australia)

**Central venous catheter devices (CVC):** A CVC can be a long or short tube inserted in the internal jugular, subclavian or femoral vein to deliver long-term intravenous medicine. There are a variety of reasons why a CVC may be inserted. Those managed outside of an acute care setting (such as the hospital) will usually be for outpatient chemotherapy treatment or haemodialysis/renal replacement therapy.

There are a variety of types of CVCs available. Most commonly, aged care workers will be required to manage ports that are implanted underneath the skin with no exit site. The tube (or catheter) sits in a large vein to deliver medicine; however, the end of the tube exits the vein into the subcutaneous tissue and is attached to a subcutaneous infusion port that is in the upper chest of the older person.

Serious and life-threatening bloodstream infections are commonly associated with CVCs. If their use can be avoided, then that infection risk is eliminated.

### Resources

Central Venous Access Device: Clinical practice guide (NSW Health Agency for Clinical Innovation)

## Stoma care

The word stoma translates to ‘mouth’ or ‘opening’. A stoma is an opening on the body where an internal organ is attached to an exit site, allowing an exit site for body substances. Stomas are created for people who have experienced an injury or disease and cannot breathe or toilet normally. They include tracheostomies and colostomies.

### Resources

- Clinical Guidelines for Stomal Therapy Nursing Practice (Australian Association of Stomal Therapy Nurses)

## Fistula care and management of dialysis

An arterio-venous (AV) fistula is a vein that is created by connecting an artery and vein together. An AV fistula is a common access point used for haemodialysis (a blood cleaning process when the kidneys can no longer clean the blood on their own) that allows greater blood flow and makes inserting needles easier.

### Resources

- Fistula – caring for your fistula once you have started dialysis (Department of Health, Tasmania)
- Haemodialysis Access (National Kidney Foundation)

# Appendix 1: Australian Standards relating to IPC

| Standard | Australian/International Standard |
|---|---|
| **Sharps management** | AS 23907:2023 Sharps injury protection – Requirements and test methods – Sharps containers (ISO 23907-2:2019, MOD) |
| | AS 3825:2020 Procedures and devices for the removal, containment and disposal of scalpel blades from scalpel handles |
| **Risk management** | AS ISO 31000:2018 Risk management – Guidelines |
| **Ventilation** | AS 1324.1-2001 Air filters for use in general ventilation and airconditioning, Part 1: Application, performance and construction |
| | AS 1324.2-2003 Air filters for use in general ventilation and airconditioning, Part 2: Methods of test |
| | AS 1668.2:2024 The use of ventilation and airconditioning in buildings, Part 2: Mechanical ventilation in buildings |
| | AS 1668.4:2024 The use of ventilation and airconditioning in buildings, Part 4: Natural ventilation of buildings |
| | AS 4260-1997 High efficiency particulate air (HEPA) filters – Classification, construction and performance (Reconfirmed 2018) |
| **PPE** | AS 4381:2015 Single-use face masks for use in health care |
| | AS/NZS 1337.6:2012 Personal eye protection, Part 6: Prescription eye protectors against low and medium impact |
| | AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment |
| | AS/NZS 1715:2009 RUL 1:2023 Ruling to AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment |
| | AS/NZS 1716:2012 Respiratory protective devices |
| **Linen management** | AS/NZS 4146:2000 Laundry Practice |
| **Cleaning** | AS 5369:2023 Reprocessing of reusable medical devices and other devices in health and non-health related facilities |
| | AS/NZS 5369:2023 Amd 1:2026 Reprocessing of reusable medical devices and other devices in health and non-health related facilities (amendment) |
| | AS/NZS 3733:2018 Textile floor coverings – Cleaning maintenance of residential and commercial carpeting |
| **Waste management** | AS 3816:2018 Management of clinical and related wastes |
| | AS/NZS 3816:2018 Amd 1:2025 Management of clinical and related wastes (amendment) |

AS = Australian Standard; AS/NZS = Joint Australian/New Zealand Standard; IPC = infection prevention and control; ISO = International Standard

# Appendix 2: Apply and adapt the five principles of aseptic technique to the unique challenges of home and community settings

| Principles | Considerations in the home environment |
|---|---|
| **Planning the clinical procedure** | • Always conduct an environmental risk assessment first to determine if it is safe to perform the procedure<br>• Using the risks identified in the environmental risk assessment, identify the safest space in the home to perform the procedure<br>• Prepare the space where the procedure will occur – for example, ensure there is a flat surface and wipe down surfaces with a neutral detergent wipe<br>• Check that equipment is intact and in-date before attending the visit, if possible – if equipment is kept in the older person's home, always check the equipment before starting the procedure<br>• Check how to dispose of waste appropriately according to the local area |
| **Reduce environmental risks** | Perform the procedure:<br>• on a hard, flat surface (such as a table or chair) so that the area can be easily cleaned<br>• in a quiet room where there will be minimal disruptions, away from pets or other people<br>• away from turbulent airflow; this can be done by closing windows, reducing foot traffic, and turning off fans<br>• away from food, drinks, chemicals and cleaning supplies |
| **Hand hygiene** | Aged care organisations should always ensure workers have access to alcohol-based hand rub. The environmental risk assessment should identify whether hand washing facilities are appropriate to use (consider access to clean water, paper towels and soap) |
| **Maintaining a clean workspace** | Aged care workers should:<br>• make sure the space where the clinical procedure will occur is as clean as possible<br>• use a sterile dressing pack to establish the workspace (aseptic field) and reduce the risk of interruptions (consider interference from the older person, open windows, pets and other environmental factors)<br>• use the most suitable technique for the procedure – for example, a non-touch technique or sterile gloves. |

| Principles | Considerations in the home environment |
| --- | --- |
| **Access to appropriate equipment** | • The aged care worker should consider the equipment (including personal protective equipment; PPE) required to protect the older person, the workspace and themselves during the clinical procedure<br>• Aged care organisations should make sure aged care workers have access to the appropriate equipment – see the IPC kit (infection prevention and control kit for home and community aged care organisations) in **Chapter 6** |

# Appendix 3: IPC resources for training and education

| Topic | Resources |
|---|---|
| **Clinical governance** | • Aged Care Act 2024 (Department of Health, Disability and Ageing)<br>• Aged Care Quality Standards (ACQSC)<br>• Australian Guidelines for the Prevention and Control of Infection in Healthcare (ACSQHC)<br>• Clinical Educators Guide for the prevention and control of infection in healthcare (ACSQHC)<br>• Hierarchy of controls in infection prevention and control (ACSQHC)<br>• Infection prevention and control workbook 2024 (ACSQHC)<br>• Support for the implementation of the Preventing and Controlling Infections Standards (ACSQHC)<br>• Options for implementation of preventing and controlling infections in primary care: community health services (ACSQHC)<br>• Options for implementation of AMS primary care - community health services (ACSQHC)<br>• Effective incident management systems: best practice guidance (ACQSC)<br>• Governing for Reform in Aged Care Program (ACQSC)<br>• IPC governance and operation self-assessment checklists (ACQSC)<br>• Supporting visitors and partners in care with IPC (ACQSC) |
| **Education and training** | • Aged Care Infection Prevention and Control Training Tool (ACSQHC)<br>• Hand Hygiene presentation (ACSQHC)<br>• National Hand Hygiene Initiative Learning Management System hand hygiene and infection prevention and control modules (ACSQHC)<br>• Infection Prevention and Control Week (ACSQHC)<br>• Aged Care Learning Information Solution (Alis) online learning – education and training for aged workers and providers to better understand their obligations and provide safe, high-quality care (ACQSC) |
| **Antimicrobial stewardship** | • AMS Book – Chapter 16 – Antimicrobial stewardship in community and residential aged care (ACSQHC)<br>• Antimicrobial Stewardship Clinical Care Standard – Clinician fact sheet (ACSQHC)<br>• Antimicrobial Stewardship Clinical Care Standard – Consumer Guide (ACSQHC) |

| Topic | Resources |
|---|---|
| | • Antimicrobial Stewardship Clinical Care Standard – Indicator Monitoring Tool (ACSQHC)<br>• Antimicrobial Stewardship in Australian Health Care (ACSQHC)<br>• AMS clinician/provider resources (ACQSC)<br>• AMS consumer resources (ACQSC)<br>• National Antimicrobial Prescribing Survey (NAPS) |
| **Aseptic technique** | • NSQHS Standards Implementation guide for Action 3.11 Aseptic Technique (ACSQHC)<br>• Principles of aseptic technique: Information for healthcare workers (ACSQHC) |
| **Invasive devices** | • Management of Peripheral Intravenous Catheters Clinical Care Standard (ACSQHC)<br>• Consumer guide: Management of Peripheral Intravenous Catheters Clinical Care Standard (ACSQHC) |
| **IPC leads** | • CDNA Series of National Guidelines (SoNGs) (Australian Centre for Disease Control)<br>• Infection Prevention and Control Leads (Department of Health, Disability and Ageing)<br>• Australian Guidelines for the Prevention and Control of Infection in Healthcare (ACSQHC)<br>• Infection prevention and control in aged care (ACSQHC)<br>• Infection prevention & control (ACQSC)<br>• Infection prevention and control in aged care: Cognitive decline and dementia (ACQSC)<br>• Infection Prevention and Control Leads: Updates for providers (ACQSC)<br>• Risk Management (ACQSC) |
| **Hand hygiene** | • Hand hygiene eLearning modules – NHHI (ACSQHC)<br>• Hand hygiene expert insight videos (ACSQHC)<br>• Hand hygiene fact sheet for patients and carers (ACSQHC)<br>• The 5 Moments for Hand Hygiene in aged care – fact sheet (ACSQHC)<br>• The 5 Moments for Hand Hygiene in aged care – poster (ACSQHC) |
| **Transmission of infections** | • Information Sheets – Gastroenteritis Kit for Aged Care (Department of Health, Disability and Ageing)<br>• Poster – Gastroenteritis Kit for Aged Care (Department of Health, Disability and Ageing)<br>• Standard and transmission-based precaution posters (ACSQHC) |

| Topic | Resources |
|---|---|
| **Immunisation and disease screening** | • Immunisations for health care workers (Department of Health, Disability and Ageing)<br>• Information for aged care providers, workers and residents about COVID-19 vaccines (Department of Health, Disability and Ageing)<br>• Mandatory flu vaccination program (Department of Health, Disability and Ageing)<br>• Infection prevention and control resources for consumers (ACSQHC)<br>• NSQHS Standards Workforce Immunisation Risk Matrix (ACSQHC)<br>• Vaccination for people at occupational risk (the Australian Immunisation Handbook) |
| **Cleaning practices** | • Coronavirus (COVID-19) Information about routine environmental cleaning and disinfection in the community (Department of Health, Disability and Ageing)<br>• Environmental cleaning and infection prevention and control resources (ACSQHC)<br>• Reprocessing of reusable equipment and devices (ACSQHC)<br>• Safe management and use of shared toys and therapy equipment in the healthcare settings (ACSQHC)<br>• Therapeutic Goods Administration's Guidance on the regulation of listed disinfectants in Australia (Therapeutic Goods Administration) |
| **Outbreak management** | • National Guideline for the Prevention, Control and Public Health Management of Outbreaks of Acute Respiratory Infection in Residential Aged Care Homes (Australian Centre for Disease Control)<br>• Managing infectious respiratory diseases in aged care (Department of Health, Disability and Ageing)<br>• First 24 hours checklist – Management of acute respiratory infections or outbreaks in residential aged care homes (Department of Health, Disability and Ageing)<br>• Outbreak Coordinator's Handbook – Gastroenteritis Kit for Aged Care (Department of Health, Disability and Ageing)<br>• Dealing with infectious outbreaks (ACQSC) |
| **Risk assessment and management** | • Risk communication module (ACSQHC)<br>• Use of the hierarchy of controls in infection prevention and control – fact sheet (ACSQHC)<br>• Effective incident management systems: Best practice guidance (ACQSC)<br>• Quality standards in home services (ACQSC)<br>• Managing risks (Safe Work Australia)<br>• A guide to working safely in people's homes (Queensland Health) |

| Topic | Resources |
|---|---|
| **Standard and transmission-based precautions** | • COVID-19 advice for the health sector (Department of Health, Disability and Ageing)<br>• Personal protective equipment – Introduction to aged care video (Department of Health, Disability and Ageing)<br>• How to wear a mask (Department of Health, Disability and Ageing)<br>• Infection prevention and control workbook 2024 (ACSQHC)<br>• Optimising ventilation for infection prevention and control in healthcare settings (ACSQHC)<br>• Standard and transmission-based precautions posters (ACSQHC)<br>• Use of standard and transmission-based precautions (ACSQHC)<br>• Additional information for providers on requirements for influenza and infection control (ACQSC)<br>• Infection prevention and control in the context of COVID-19: a guideline (World Health Organization) |
| **Consumer resources** | • How to wear a mask (Department of Health, Disability and Ageing)<br>• Help protect residents – COVID-19 (Department of Health, Disability and Ageing)<br>• Hand hygiene: cleaning hands with sanitiser – a video for partners in care (ACQSC)<br>• Hand hygiene: washing hands with soap – a video for partners in care (ACQSC)<br>• Information and resources for the safe management of visitor access (ACQSC)<br>• Partnerships in care – Partner information package (ACQSC)<br>• Sector Code for Visiting in Aged Care Homes (COTA) |
| **Safe food handling** | • Safe Food Australia – A guide to the Food Safety Standards (Food Standards Australia & New Zealand)<br>• NSW Food Authority<br>• Food safety (Department of Health, Victoria)<br>• Food safety regulation (Queensland Government)<br>• Food safety (SA Health)<br>• Food safety for food businesses (Department of Health, Western Australia)<br>• Food safety (Department of Health, Tasmania)<br>• Food safety and regulations (Northern Territory Government)<br>• Food safety for businesses (ACT Government) |

ACQSC = Aged Care Quality and Safety Commission; ACSQHC = Australian Commission on Safety and Quality in Health Care; AMS = antimicrobial stewardship; CDNA = Communicable Diseases Network Australia; IPC = infection prevention and control; NHHI = National Hand Hygiene Initiative; NSQHS = National Safety and Quality Health Service

# Glossary

**Advance care plan.** Stated preferences about health and personal care, and preferred health outcomes. An advance care plan is usually the result of a process of planning for future health and personal care, whereby the person's values and preferences are made known so that they can guide decision-making at a future time when the person cannot make or communicate their decisions.

**Aged care organisation.** An organisation that has been approved to provide residential, centre-based, home and/or flexible care. Approved organisations receive government funding for the delivery of care.

**Aged care worker.** An individual who provides services to older persons.

A *clinical aged care worker* is an individual who provides clinical or care services to older people such as bathing, showering, dressing, feeding, toileting, medication support or administration, invasive device management or wound care.

A *non-clinical aged care* worker provides services to older people that do not include clinical and personal care. This may include food services, domestic assistance, home maintenance, transport or social support.

**Alcohol-based hand rub.** A medicinal alcohol-containing preparation designed to reduce the number of viable microorganisms on the hands without the use or aid of running water. Aged care organisations should use alcohol-based hand rub products that are listed on the Australian Register of Therapeutic Goods (ARTG).

**Antibiotics.** Substances that kill bacteria or inhibit the growth of bacteria.

**Antibody.** A protein produced by the body's immune system that destroys infections and other harmful microorganisms.

**Antimicrobial.** A chemical substance that inhibits or destroys bacteria, viruses or fungi, and can be safely administered to humans and animals.

**Antimicrobial resistance.** If an antimicrobial fails to kill a microorganism at the antimicrobial concentrations that are usually effective over time with standard dosing, the microorganism is exhibiting antimicrobial resistance to that antimicrobial.

**Antimicrobial stewardship.** An ongoing effort by an aged care service to reduce the risks associated with increasing antimicrobial resistance and to extend the effectiveness of antimicrobial treatments. It may incorporate several strategies, including monitoring and review of antimicrobial use.

**Antisepsis.** The use of chemical, thermal and/or physical methods to prevent infection by destroying or inhibiting the growth of harmful microorganisms.

**Asepsis.** Freedom from infection or infectious (pathogenic) material.

**Aseptic technique.** A set of practices aimed at minimising contamination; specifically used to protect the older person from infection during procedures. Many of the other work practices that form standard precautions are required for aseptic technique; however, adherence to these practices alone does not constitute aseptic technique. Sterile single-use equipment or instruments must be used according to manufacturer's instructions and in such a way that the sterility of the item is maintained.

**Audits (clinical).** A systematic review of clinical care against a predetermined set of criteria.

***Australian immunisation handbook*.** Among other advice, provides recommendations on which diseases aged care and healthcare organisations should prioritise in their workforce screening and vaccination programs.

**Australian Register of Therapeutic Goods (ARTG).** Goods that comply with TGA Order 104 – standard for disinfectants of the Therapeutic Goods Administration (TGA), the federal agency that regulates medicines and devices that can be used in healthcare delivery in Australia. TGA conducts pre-market evaluation of new ingredients and new specific claims.

**Care area.** The room or area in which care takes place.

**Care environment.** All inanimate surfaces that are touched by or in physical contact with the older person (such as bed rails, bedside table, bed linen, invasive devices, dressings, personal belongings and food) and surfaces frequently touched by aged care workers while caring for the older person (such as monitors, knobs and buttons).

**Carer.** A person who provides personal care, support and assistance to another individual who needs it because they have a disability, medical condition (including a terminal or chronic illness) or mental illness, or they are frail or aged. An individual is not a carer merely because they are a spouse, de facto partner, parent, child, other relative or guardian of an individual, or live with an individual who requires care. A person is not considered a carer if they are paid, a volunteer for an organisation, or caring as part of a training or education program.

**Chain of infection.** A series of interlinked events that must occur for the transmission of infectious agents.

**Clinical care.** Care that includes the prevention, treatment and management of illness or injury, as well as the maintenance of psychosocial, mental and physical wellbeing.

**Clinical governance.** Clinical governance is a set of structures, cultures and processes that are implemented to support safe, quality clinical care and good health outcomes for older people. Clinical governance should be included into the broader corporate governance framework when an aged care service delivers clinical care and should include infection prevention and control.

**Clinical waste.** Waste material that consists wholly or partly of human or animal tissue, blood or body substances, excretions, drugs or other pharmaceutical products, swabs/dressings, syringes, needles or other sharp instruments.

***Clostridioides difficile* infection.** A disease of the large intestine caused by toxins produced by the spore-forming bacterium *Clostridioides difficile*.

**Colonisation.** The sustained presence of replicating infectious agents on or in the body without causing infection or disease.

**Combined precautions.** The combination of a specific set of transmission-based precautions used to protect an individual from a microorganism. Combined precautions are a combination of contact and respiratory precautions.

**Contact precautions.** A set of practices used to prevent transmission of infectious agents that are spread by direct or indirect contact with the older person or their environment.

**Continuous quality improvement.** As per the Aged Care Quality and Safety Commission, continuous quality improvement is a systematic, ongoing effort to raise an organisation's performance in achieving outcomes for older people under the Aged Care Quality Standards.

**Decontamination.** Use of physical, thermal or chemical means to remove, inactivate or destroy pathogens on a surface or item so that they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use or disposal.

**Direct care.** Providing hands-on assistance or support to an older person.

**Disinfectant.** A substance:

- that is recommended by its manufacturer for application to an inanimate object to kill microorganisms
- that is not represented by the manufacturer as suitable for internal use.

**Disinfection.** Reduction of the number of viable microorganisms (by physical, thermal or chemical means) to a level previously specified as appropriate for its intended further handling or use.

**Environmental cleaning.** Environmental cleaning is a basic part of standard precautions and is an essential part of any infection prevention and control (IPC) program. It involves removing dirt and germs from surfaces by rubbing or scrubbing the surface with warm water and detergent, followed by rinsing and drying. If a surface is suspected or is known to have been contaminated by a multidrug-resistant organism (MRO) or blood or other body fluids, or when transmission-based precautions are required (such as during an outbreak), then routine cleaning should be followed by the use of a disinfectant so that surfaces are cleaned and disinfected.

**Environmental risk assessment.** An assessment that considers access to the home, bathrooms or kitchens within the home, falls hazards, biological or harmful chemicals (including smoking), poor ventilation, animals, plants, mental behaviour or cognitive health concerns, fire and electrical hazards. Also known as a home or community risk assessment.

**Fit checking.** A quick check to ensure that a respirator or mask fits each time it is put on.

**Fit testing.** A method of ensuring that a respirator is fitted correctly and suitable for use by a specific individual.

**Guidelines.** Clinical practice guidelines are systematically developed statements to assist aged care providers and consumer decisions about appropriate health care for specific circumstances.

**Hand hygiene.** A general term applying to processes aiming to reduce the number of microorganisms on hands. This includes application of a waterless antimicrobial agent (for example, alcohol-based hand rub) to the surface of the hands and use of soap/solution (plain or antimicrobial) and water (if hands are visibly soiled) followed by patting dry with single-use towels.

**Hazard.** Anything that can potentially cause harm.

**Hierarchy of controls.** A model used in work health and safety management. It is a step-by-step approach to controlling risk, classifying strategies that control risk from most to least effective (these are known as ‘controls’).

**Home care service.** Also referred to as home and community aged care service. A service or a flexible care service through which care services are provided in a home or community setting.

**Hospital-grade disinfectant with specific claims.** A disinfectant listed on the Australian Register of Therapeutic Goods (ARTG) with specific claims that it is suitable for general purpose disinfection of hard surfaces, and for purposes not involving instruments or surfaces likely to come into contact with broken skin. Refer to TGA Order 104 (standard for disinfectants) for more information.

**Immunocompromised.** Having an immune system that has been impaired by genetic disorders, disease, age or treatment.

**Incident.** An event or circumstance that resulted, or could have resulted, in unintended or unnecessary harm to an older person or consumer; or a complaint, loss or damage. An incident may also be a near miss.

**Infection.** Occurs when a microorganism enters the body, increases in number and causes a reaction in the body. This may cause tissue injury and disease.

**Infection prevention and control.** Known as IPC, the strategies used to prevent the spread of infectious agents.

**Infection prevention and control lead(s).** A person or group of people responsible for leading the infection prevention and control (IPC) system in an organisation.

**Invasive device.** Devices inserted through skin, mucosal barrier or internal cavity. Includes central lines, peripheral lines, urinary catheters, chest drains, peripherally inserted central catheters and endotracheal tubes.

**Local health service networks.** In this Guide, local health service networks refer to the key partners that can support an IPC system in aged care including local hospitals, public health units, primary health units, general practitioners (including specialist medical practitioners) and other specialist services, including allied health.

**Methicillin-resistant *Staphylococcus aureus*.** Strains of *Staphylococcus aureus* that are resistant to many of the antibiotics commonly used to treat infections. Epidemic strains can spread easily from person to person.

**Microorganisms.** Most infectious agents are microorganisms. These exist naturally everywhere in the environment and not all cause infection (for example, the 'good' bacteria present in the body's normal flora). Parasites, prions and several classes of microorganism – including bacteria, viruses, fungi and protozoa – can be involved in either colonisation or infection, depending on the susceptibility of the host.

**Multidrug-resistant organisms.** In general, bacteria that are resistant to one or more classes of antimicrobial agents and are usually resistant to all but one or two commercially available antimicrobial agents.

**N95 mask.** A type of particulate filter mask designed to filter out small respiratory particles. An N95 mask must comply with National Institute for Occupational Safety and Health standards.

**Neutral detergent solution.** A detergent product that is intended to be used in the cleaning of surfaces or other medical devices, diluted with water as per the manufacturer's instructions.

**Older people.** In this Guide, older people refers to anyone receiving an aged care service.

**P2 mask.** A type of particulate filter mask. This mask is close fitting and capable of filtering respiratory particles. A P2 respirator must comply with AS/NZS 1716:2012.

**Particulate filter respirator.** A type of mask that protects a person by filtering particles out of the air the person is breathing. There are many types of respirators with different levels of protection.

**Person-centred care.** An approach to the planning, delivery and evaluation of health care that is founded on mutually beneficial partnerships among aged care organisations and older people. Person-centred care is respectful of, and responsive to, the preferences, needs and values of older people, families and carers. Key dimensions of person-centred care include respect, emotional support, physical comfort, information and communication, continuity and transition, care coordination, involvement of carers and family, and access to care. Also known as consumer-centred care.

**Personal protective equipment.** A variety of barriers used alone or in combination to protect mucous membranes, skin and clothing from contact with infectious agents. Includes gloves, masks, respirators, protective eyewear, face shields and gowns.

**Policies.** Statements of intent, providing guidance related to expected standards to be achieved, based on regulatory and contemporary practice.

**Procedure (clinical).** A set of steps that is required to undertake a specific clinical care activity safely.

**Process.** A series of actions or steps taken to achieve a particular goal.

**Reprocessing.** A set of actions to make sure that each piece of reusable equipment is safe for use. This includes cleaning, inspecting and assembling, functional testing (if applicable), disinfecting (if required), packaging and labelling, and storing.

**Residential and centre-based aged care service.** An aged care service that is provided in a care environment such as a residential and centre-based aged care home, respite or a day therapy centre that is designed to meet the physical, mental and social needs of a person with sustained self-care deficits.

**Respiratory precautions.** A set of practices used for older people known or suspected to be infected with agents transmitted from person to person by the airborne or droplet route.

**Reusable equipment.** Equipment used multiple times or for multiple people and intended by the manufacturer to be appropriately cleaned, disinfected (if needed) and reused. Reusable equipment can include blood pressure cuffs, stethoscopes, nail clippers, commode chairs and hoists.

**Risk.** The chance of something happening that will have a negative impact. Risk is measured by the consequences of an event and its likelihood.

**Risk assessment.** The assessment, analysis and management of risks. It involves recognising which events may lead to harm in the future and minimising their likelihood and consequences.

**Risk management.** The design and implementation of a program to identify and avoid or minimise risks to older people, employees, volunteers, visitors and the organisation.

**Screening.** A process of identifying older people who are at risk or already have a disease or injury. Screening requires enough knowledge to make a clinical judgement.

**Sharp device or instrument.** Instruments used in delivering healthcare that can inflict a penetrating injury – such as needles, lancets and scalpels.

**Single-use equipment.** Equipment to be used on a single occasion for one older person only and then discarded after use. Single-use equipment should not be reused on the same older person or on any other older person.

**Sodium hypochlorite.** A chlorine-based disinfectant.

**Standard precautions.** Work practices that provide a first-line approach to infection prevention and control and are used for the care and treatment of all older people. Standard precautions include hand hygiene, use of personal protective equipment (masks, gloves, gowns, protective eyewear) to prevent blood or body fluid exposure, routine cleaning aligned to risk, safe use and disposal of sharps, reprocessing of reusable equipment and devices, respiratory hygiene and cough etiquette (including physical distancing), aseptic technique and linen and waste management.

**Statement of Aged Care Rights.** Outlines the rights of consumers of Australian Government–funded aged care services to be consulted and respected. Provides the same rights to all consumers, regardless of the type of subsidised care and services they receive. The Statement of Rights is made under the Aged Care Act 2024.

**Surgical mask.** Loose-fitting, single-use item that covers the nose and mouth. Includes products labelled as dental, medical procedure, isolation and laser masks.

**Training.** The development of knowledge and skills.

**Transmission-based precautions.** Extra work practices used in situations when standard precautions alone may not be enough to prevent transmission of infection. Transmission-based precautions are used in conjunction with standard precautions and include contact and respiratory precautions or a combination of these precautions based on the route of transmission of infection.

**Work health and safety.** The structure, processes and culture that help to maintain the health and safety of everyone in the workplace.

**Workforce.** All people working in an aged care service and any other employed or contracted, locum, agency, student, volunteer or peer workers. The workforce can be members of the aged care service or medical company representatives providing technical support who have assigned roles and responsibilities for care of, administration of, support of, or involvement with older people in the aged care service.

# Abbreviations and acronyms

| Abbreviation | Term |
|---|---|
| **ABHR** | Alcohol-based hand rub |
| **ACP** | Advance care plan |
| **ACQSC** | Aged Care Quality and Safety Commission |
| **ACSQHC; the Commission** | Australian Commission on Safety and Quality in Health Care |
| **Aged Care NAPS** | The Aged Care National Antimicrobial Prescribing Survey |
| **AICGs** | Australian Guidelines for the Prevention and Control of Infection in Healthcare |
| **AMR** | Antimicrobial resistance |
| **AMS** | Antimicrobial stewardship |
| **ARTG** | Australian Register of Therapeutic Goods |
| **ARTG-listed** | Australian Register of Therapeutic Goods–listed |
| **AS/NZS** | Joint Australian/New Zealand Standard |
| **AURA** | Antimicrobial Use and Resistance in Australia |
| **AV** | Arterio-venous |
| **CAUTI** | Catheter-associated urinary tract infection |
| **CDC** | Australian Centre for Disease Control |
| **CDNA** | Communicable Diseases Network Australia |
| **CPAP** | Continuous positive airway pressure |
| **CVC** | Central venous catheter device |
| **GP** | General practitioner |
| **IPC** | Infection prevention and control |
| **ISO** | International Standard |
| **MC&S** | Microscopy, culture, and sensitivity |
| **MDI** | Metered dose inhaler |

| Abbreviation | Term |
|---|---|
| **MO** | Microorganisms |
| **MRO** | Multidrug-resistant organisms |
| **NHHI** | National Hand Hygiene Initiative |
| **NIV** | Non-invasive ventilation |
| **PCI** | Plan for continuous improvement |
| **PEG** | Percutaneous endoscopic gastrostomy |
| **PEP** | Post-exposure prophylaxis |
| **PFR** | Particulate filter respirator |
| **PHN** | Primary Health Network |
| **PHU** | Public Health Unit |
| **PICC** | Peripherally inserted central catheter |
| **PIVC** | Peripherally inserted vascular catheter |
| **PPE** | Personal protective equipment |
| **RSV** | Respiratory syncytial virus |
| **SIRS** | Serious Incident Response Scheme |
| **UTI** | Urinary tract infection |
| **WHS** | Work health and safety |

# Amendments to the Aged Care IPC Guide

The Australian Commission on Safety and Quality in Health Care (ACSQHC) published the Aged Care IPC Guide (the Guide) in August 2024 and continues to maintain the Guide on its website. The development of this Guide was supported by a Reference Group that included members with expertise in aged care and IPC. This Reference Group was dissolved after the Guide was first released in August 2024.

The second edition strengthens alignment with the Aged Care Quality Standards and incorporates feedback received since the original publication. These updates ensure the Guide continues to meet the needs of the aged care sector and support the workforce in delivering safe, high-quality care. The Reference Group was re-established to support the second edition of the Guide. The ACSQHC also consulted relevant professional bodies to provide advice and expertise.

### How queries and requests for change are processed

The ACSQHC maintains a log of all queries about the content of the Guide. Upon receiving a query, the ACSQHC will respond directly to the sender. If changes are required to the content of the Guide, the following will be considered.

- If the change is a minor edit or clarification that does not require a review of the evidence, the Guide will be amended and the details of the amendment will be summarised in the **Table of amendments** below.
- If the change is potentially substantial, the ACSQHC will seek advice from experts, such as its IPC Advisory Committee, about whether a change should either be made immediately or be deferred until a full review of the Australian Guidelines for the Prevention and Control of Infection in Healthcare (AICGs) is completed.

When updates are made or a revision process is undertaken for the AICGs, the Guide will be reviewed to determine whether amendments are required.

All changes made to the Guide will be recorded in the version history log below.

### Table of amendments

| Amendment | Date updated | Version |
|---|---|---|
| Updated **Table 15** in **Chapter 4** to align information about Adenovirus (respiratory), Rhinovirus and RSV with the AICGs. | January 2025 | 1.1 |
| Guide reordered to align with the Aged Care Quality Standards. Inclusion of new chapter on IPC Lead (**Chapter 3**).<br><br>Content of current **Chapter 4** updated to align with recommendations from the Australian Dental Association and Aged Care Quality and Safety Commission.<br><br>Updated what is now **Table 17** in **Chapter 6** and what are now **Tables 22a** and **22b** in **Chapter 7** to align with AICGs. Inclusion of new **Table 10** on types of face and eye protection and their characteristics to address feedback received after publication.<br><br>General editorial review including update of hyperlinks and references to Australian Standards. | October 2026 | 2.0 |

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