

Consultation on Australian Guidelines for Infection and Prevention Control

New and revised clinical practice recommendations

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Summary of proposed changes

Table 1 Summary of new and revised clinical practice recommendations

Section	Change type	Key change
Part A - Conditional recommendation 21: Contact precautions	Revised	Removal of routine use of gloves and gowns; Personal protective equipment (PPE) use now based on assessment of anticipated exposure risk.
Part B - Good practice statement: Respiratory precautions	New	To provide guidance for the appropriate use of respiratory precautions based on a local risk assessment.
Part C - Conditional recommendation 24: Droplet precautions	Revised	Addition of protective eyewear as part of the minimum requirements for PPE for droplet precautions.
Part D - Good practice statement 26: Airborne precautions	Revised	Downgrade the recommendation to a good practice statement. Addition of protective eyewear as part of the minimum requirements for PPE for airborne precautions. Update terminology to particulate filter respirator (PFR).
Part E – Conditional recommendation 27: Airborne precautions (use of P2 respirators)	Removed	Remove repetition. Recommendations for the use of PRF is included in the Good practice statement 26.
Part F –Conditional recommendation 32: Contact precautions for multi-resistant organisms	Removed	Remove repetition. Recommendations for contact precautions for multi-resistant organisms is now included in the revised Conditional recommendation 21-Contact precautions.
Part G – Good practice statement: appropriate use of alcohol-based hand scrub for pre-operative and pre-procedure hand hygiene	New	Support healthcare workers to decide if alcohol-based hand scrub is a suitable option for pre-operative and pre-procedure hand antisepsis.
Part H – Good practice statement: appropriate handwashing basin placement	New	Support healthcare services determine appropriate hand-washing basin placement to reduce the risk for infection transmission and environmental colonisation from waterborne pathogens.

Part A

Conditional recommendation 21: Contact precautions (revised)

What is changing?

The key change to *Conditional recommendation 21: Contact precautions* is the removal of the routine use of gloves and gowns as part of contact precautions. Instead, use of gloves and gowns will be recommended in accordance with standard precautions, based on an assessment of anticipated exposure risk.

Why is it changing?

Evidence from the systematic review indicates that, in the context of contact precautions for specific multidrug-resistant organisms and in certain clinical settings, appropriate glove and gown use - such as limiting glove and gown use to situations with a risk of blood or body fluid exposure - does not increase the risk for infection. This includes both primary transmission (person-to-person) and secondary transmission (person-to-environment).

The revision of the recommendation for glove and gown use in *Conditional recommendation 21* will mean that glove and gown use may not be required even if a patient is being cared for under contact precautions.

Detailed comparison

Table 2 Conditional recommendation 21: Contact precautions – detailed comparison

Current (2019)	Proposed (2027)
It is suggested that appropriate hand hygiene be undertaken and personal protective equipment worn to prevent contact transmission. It is suggested that when working with patients who require contact precautions, healthcare workers should: - perform hand hygiene - put on gloves and gown upon entry to the patient-care area - if performing multiple tasks whilst in the patient-care area, apply the principles of standard precautions and remove gloves, perform hand hygiene and apply clean gloves between tasks when required to minimise risk of infection transmission - ensure that clothing and skin do not contact potentially contaminated environmental surfaces - remove gown and gloves and perform hand hygiene before leaving the patient-care area.	When contact transmission is suspected or confirmed, it is suggested that contact precautions be considered for all patients colonised or infected with a multi-resistant organism (MRO) or other infectious agents that are transmitted by direct contact. An onsite risk assessment should be performed to determine the minimum personal protective equipment (PPE) required to reduce the risk for infection transmission that considers the local context and/or the infectious agent. Healthcare workers who are working with patients that require contact precautions should, as a minimum: - use gloves and gowns if blood or body fluid exposure is anticipated, in line with standard precautions. If gloves are used, perform hand hygiene between activities and before applying clean gloves to minimise the risk of infection transmission. - patients that require contact precautions should be cohorted with other patients with the same infectious agent or allocated a single room with ensuite. - Use CONTACT PRECAUTIONS in addition to STANDARD PRECAUTIONS.
Research evidence Research question: Hand hygiene and personal protective equipment vs No hand hygiene and no personal protective equipment Population: Patients Intervention: Hand hygiene and personal protective equipment Comparator: No hand hygiene and no personal protective equipment Outcome: Incidence rate of healthcare-associated infections. Date of last evidence review: 2019	Research evidence Research question: How effective are the individual elements of transmission-based precautions (apron/gown, gloves, single room placement) against the transmission of multidrug-resistant organisms? Population: Healthcare workers and patients Intervention: PPE including, apron/gown, gloves or, and patient room allocation. Comparator: Standard precautions, no precautions, or another type of transmission-based precautions. (e.g., combination of these including contact and droplet, contact and airborne or droplet and airborne). Outcome: Infection or colonisation in the HCW and patient population. Date of last evidence review: 2025

Evidence to decision	Evidence to decision
Benefits and harms Substantial net benefits of the recommended alternative. The benefits of using hand hygiene and personal protective equipment (PPE) clearly outweigh any undesirable effects.	Benefits and harms Little difference between PPE use compared and no PPE use. The benefits of using hand hygiene and personal protective equipment (PPE) clearly outweigh any undesirable effects. The benefits of using gloves as per standard precautions outweigh the undesirable effects of unnecessary glove use for contact precautions (i.e. potential for not doing hand hygiene, increase in cost and waste generation associated with inappropriate glove use).^[1] The benefits of gown use for contact precautions outweighs the undesirable effects of no gown use for contact precautions (i.e. transmission of infection by indirect contact with the patient or care environment).^[1]
Certainty of evidence Low There is supportive evidence and a strong theoretical rationale to support this intervention. The Centers for Disease Control and Prevention provides 1B evidence to support the practice of wearing gloves and gowns for transmission-based precautions. This intervention is also supported by work, health and safety principles.	Certainty of evidence Low The systematic literature review examined the effectiveness of the elements of contact precautions (PPE and patient room allocation) compared to standard precautions only or no precautions against the transmission of multidrug-resistant organisms (MROs). The systematic review found that routine glove and gown use - beyond what is recommended as part of standard precautions - does not reduce transmission or colonisation of specific multidrug-resistant organisms.^[1] One study included in the systematic review indicated that the use of gloves and gowns for high-risk patient care activities (i.e. assisting with personal hygiene, dressing, wound care and changing linen) did reduce the transmission of <i>methicillin-resistant Staphylococcus aureus</i> (MRSA) in the care setting, and that standard precautions were adequate for all other care activities.^[2] The systematic review found the certainty of evidence for the effectiveness of contact precautions against the transmission of multidrug-resistant organisms to be low due to the reliance on non-randomised studies in varied patient populations.^[1] Studies included in the systematic review had mixed results for the effectiveness of contact precautions against MRO transmission in healthcare settings. Meta-analysis of the data indicated: • limited evidence that contact precautions (including glove and gown use) are effective at reducing the risk for the transmission of MRSA

- evidence that contact precautions (including glove and gown use) are effective at reducing transmission of *Acinetobacter* spp in intensive care units
- no significant increase in vancomycin-resistant enterococci (VRE), Extended Spectrum Beta-Lactamase (ESBL) or resistant *e. Coli* when contact precautions were discontinued. ^[1]

The effectiveness of contact precautions in the different care settings was influenced by the effectiveness of additional infection control strategies (such as routine screening, environmental cleaning).^[1]

This intervention is also supported by [work, health, and safety](#) principles, including providing appropriate PPE for staff for protection against infection and other occupational exposure.

Values and preferences

No substantial variability expected.

It is expected that all patients and staff of Australian healthcare facilities would highly value practising hand hygiene and using PPE to prevent contact transmission of infections.

Values and preferences

No substantial variation in values and preferences is expected.

It is expected that all patients and staff of Australian healthcare services would highly value the protective benefit of using PPE to prevent the risk of contact transmission of infection to themselves and others.

It is expected that all patients and staff of Australian healthcare services would highly value the protective benefit of using hand hygiene to prevent the risk of contact transmission of infection to themselves and others.

It is expected that Australian healthcare services and their staff would value the flexibility of a risk-based approach to glove and gown use that considers the local clinical context, including the type of care being provided and the potential for blood or body substance exposure.

Resources and other considerations

No important issues with the recommended alternative.

Any marginal increases in costs of compliance with hand hygiene and PPE are offset by the corresponding reduction in infection rates.

Resources and other considerations

No important issues with the resource implications were identified from the literature however there are some practical considerations for implementation.

This recommendation would require the provision of suitable PPE for the health workforce.

While contact precautions may be cost effective at the individual level, across an entire healthcare service, there may be significant resource considerations associated with implementing contact precautions. The costs associated with implementing contact precautions may include the cost of equipment and the cost of screening and case finding/contact tracing processes. Healthcare services should balance the service, economic, and environmental impact of PPE use

against infection transmission and patient outcomes.

Staff training and/or tools, such as checklists in patient care settings, may be necessary to ensure selection of appropriate PPE which considers clinical contexts, type of care, patient acuity, and the type of infectious agent. Communication of contact precautions is essential at all care transition points and should be handed over verbally and in writing. De-escalation of contact precautions also should be documented and included at handover.

Patients and their carers should be informed about the need for contact precautions. Information should be provided to patients and their carers that meets their needs and supports them to be actively involved in decisions about their care.

Rationale

The practice of wearing personal protective equipment is suggested for transmission-based precautions, including contact precautions. Personal protective equipment can protect healthcare workers against contaminated environmental surfaces and medical equipment, so gloves and gowns should be put on before entry into a patient's room and removed after leaving the patient-care area.

Rationale

As a **minimum**, gloves should be used as part of standard precautions when blood or body fluid exposure is anticipated to protect healthcare workers from exposure to possible infectious agents.

The decision to move beyond this and require routine glove use as part of contact precautions should be based on an assessment of the local clinical context, including:

- The ability of clinical and non-clinical staff to risk assess the need for gloves as part of standard precautions
- The willingness of staff to work without routinely wearing gloves
- Local hand hygiene practices and compliance.

The use of gowns as part of contact precautions provides protection against the transmission of some multidrug-resistant organisms, such as MRSA that are known to colonise and survive on environmental surfaces. Gowns protect healthcare worker's clothing and skin from becoming contaminated with the infectious agent while they are providing care and will reduce the risk of secondary transmission of the infectious agent.

Gloves and gown need to be removed after leaving the patient care area and disposed of in an appropriate waste receptacle. This will reduce the risk of these PPE acting as a vector to further spread infection into the healthcare environment.

Once gloves and gown are removed, hand hygiene should be performed to remove any infectious material that has transferred onto the hands during PPE removal.

Part B

Good practice statement: Respiratory precautions (new)

What is changing?

There is currently **no recommendation** for *respiratory precautions* in the 2019 version of the AICGs, there is information on mask and PFR use. A new ***Good Practice Statement for the appropriate use of respiratory precautions*** has been proposed.

Why is it changing?

The purpose of the **new *Good Practice Statement for the appropriate use of respiratory precautions*** is to help healthcare services and healthcare workers determine when it is appropriate to introduce respiratory precautions to reduce the risk of infection transmission from infectious respiratory particles in the healthcare setting. The overall objective of the **Good Practice Statement** is to enable healthcare services to implement respiratory precautions based on local conditions.

New good practice statement: Respiratory precautions

It is good practice for healthcare services to use a risk-based approach when deciding to implement respiratory precautions.

As a **minimum**, whenever there is potential for the transmission of a respiratory pathogen, healthcare workers should use a surgical mask and eye protection to reduce the risk of infection transmission. Additional interventions may be required based on the local context and/or the infectious agent

Research evidence

Research question

Is the respiratory precautions bundle more effective in preventing the transmission of respiratory infections (viral and bacterial), compared to:

- i. Droplet precautions, in addition to standard precautions.
 - ii. Airborne precautions, in addition to standard precautions.
 - iii. Combined droplet and airborne precautions, in addition to standard precautions
- **Population:** Healthcare workers and patients
 - **Intervention:** PPE including a mask (surgical masks or a particulate filter respirator), apron/gown and protective eyewear.
 - **Comparator:** Standard precautions, no precautions or another type of transmission-based precautions. (e.g., combination of these including contact and droplet, contact and airborne or droplet and airborne).
 - **Outcome:** Infection or colonisation in the HCW and patient population.

Date of last evidence review: 2025

Table 3 Evidence to decision – respiratory precautions

Evidence to decision

Benefits and harms

Little difference between respiratory precautions compared to droplet precautions or airborne precautions or no transmission-based precautions.

The benefits of using respiratory precautions to reduce the risk of respiratory infection transmission (viral/bacterial) outweighs the undesirable effects of using no respiratory precautions (i.e. transmission of respiratory viruses to healthcare workers, patients, and carers).

Certainty of the evidence

Very Low

The systematic review examined the effectiveness of the elements of respiratory precautions (masks – either surgical masks or particulate filter respirator [PFRs], apron/gown, protective eyewear), compared to droplet precautions or airborne precautions or no transmission-based precautions against the transmission of respiratory infections (viral/bacterial). The systematic review found that that respiratory precautions may reduce the transmission of respiratory infections in some clinical settings^[1], however the overall quality of evidence regarding the use of respiratory precautions is very low due to poorly controlled studies.

The systematic review found that mask use - any type (surgical or PFR), in the context of respiratory precautions - was effective in reducing respiratory infection transmission among healthcare workers.^[1, 3]

Values and preferences

No substantial variation in values and preferences is expected.

It is expected that patient preferences and values would align with the use of respiratory precautions as a strategy to reduce healthcare-associated infections (HAIs), specifically respiratory viral infections.

It is expected that Australian healthcare services and their staff would value the flexibility of a risk-based approach to the implementation of respiratory precautions that considers the local clinical context, including:

- Local disease epidemiology

- Newly emerging respiratory viruses
- Low-risk or high-risk clinical settings
- The availability of single rooms
- Environmental factors that influence infection risk (e.g. crowded waiting rooms, poor ventilation).

Patient population, acuity, and type of care being provided (e.g. assisting a person with personal hygiene, physiotherapy).text

Resources and other considerations

No important issues with the resource implications were identified from the literature however there are some practical considerations for implementation.

This good practice statement would require the provision of appropriate personal protective equipment including masks (surgical and PFRs), apron/gowns, and protective eyewear for the health workforce. There is a need to consider the cultural and other barriers that may limit the effectiveness of this equipment.

While respiratory precautions may be cost effective at the individual level, across an entire healthcare service, there may be significant resource considerations associated with implementing respiratory precautions. The costs associated with implementing respiratory precautions may include the cost of equipment and fit testing, when required. Healthcare services should consider the service, economic, and environmental impact of implementing respiratory precautions, particularly during high patient volume events (e.g. outbreak).

Implementation of this Good Practice Statement requires a risk assessment that consider factors, including but not limited to:

- Local disease epidemiology
- Low risk or high-risk clinical settings
- The availability of single rooms
- Environmental factors that influence infection risk (e.g. crowded waiting rooms, poor ventilation)
- Patient population, acuity, and type of care being provided (e.g. assisting a person with personal hygiene, physiotherapy).

Staff training and/or tools such as checklists in patient care settings may be necessary to embed implementation of a risk-based approach to respiratory precautions.

Communication of respiratory precautions is essential at all care transition points and should be handed over verbally and in writing. De-escalation of respiratory precautions (i.e. symptoms have resolved, commencement of appropriate treatment, or confirmation that the pathogen is not a communicable disease) should also be documented and included at handover.

Patients and their carers should be informed about the need for respiratory precautions. Information should be provided to patients and their carers that meets their needs and supports them to be actively involved in decisions about their care.

Rationale

The purpose of respiratory precautions is to reduce the risk of infection transmission of infectious respiratory particles. Healthcare services may consider implementing respiratory precautions for novel respiratory infections or when there are widespread community outbreaks of respiratory infections.

Respiratory transmission can occur when an infected person coughs, sneezes, talks or sings.

The WHO [Global technical consultation report on proposed terminology for pathogens that transmit through the air](#) (2024) describes the transmission of infectious respiratory particles through the air as

those pathogens which are transmitted via airborne transmission (inhalation) or direct droplet disposition on exposed facial mucosa (mouth, nose, eyes).

Unlike droplet or airborne precautions, the implementation of respiratory precautions should not be solely guided by respiratory particle size. Respiratory precautions consider different respiratory infections will have different or mixed routes of transmission, which can be further influenced by individual patient and environmental factors, requiring tailored mitigation strategies. (WHO [Global technical consultation report on proposed terminology for pathogens that transmit through the air](#) (2024))^[4]

The use of a risk-based approach to implementing respiratory precautions ensures that healthcare services can safely implement this strategy in a way that is appropriate to the clinical environment and patient population. Healthcare services should implement a precautionary approach, which includes respiratory precautions in addition to standard precautions, as an interim measure for the containment of novel respiratory infections, where the route of transmission is unknown.^[5]

Gloves and gown are not routinely required for respiratory precautions; these PPE should be used if there is anticipated exposure to blood or bodily fluids in line with standard precautions.

Part C

Conditional recommendation 24: Droplet precautions (revised)

What is changing?

The key changes to *Conditional recommendation 24: Droplet precautions* are:

- the addition of protective eyewear as part of droplet precautions
- additional information on the minimum requirements for PPE use as part of droplet precautions.

Why is it changing?

Evidence from the systematic review found that mask use (any type - either surgical style or particulate filter respirator [PFR]) reduced the risk for infection transmission for healthcare workers in most clinical settings.

The revision of the recommendation for PPE use in *Conditional recommendation 24* will provide healthcare workers with the option to select an appropriate PPE based on a local risk assessment.

Detailed comparison

Table 4 Conditional recommendation 24: Droplet precautions – detailed comparison

Current (2019)	Proposed (2027)
It is suggested that a surgical mask should be worn when entering a patient-care environment to prevent droplet transmission.	When <u>droplet transmission</u> is suspected or confirmed, as the major route of transmission, it is suggested that, as a minimum, healthcare workers wear a surgical mask and protective eyewear when entering the patient care environment to prevent infection transmission. Healthcare workers who are working with patients that require droplet precautions should, as a minimum: • put on a surgical mask and protective eyewear • remove the surgical mask and protective eyewear and perform hand hygiene before leaving the patient care area • perform a risk assessment for any additional precautions that considers the local context and/or infectious agent.
Research evidence Research question: Droplet precautions vs Non-droplet precautions. • Population: Patients • Intervention: Droplet precautions • Comparator: Non-droplet precautions • Outcome: Incidence rate of healthcare-associated infections. Research question: Masks and protective eyewear vs No masks and protective eyewear. • Population: Healthcare workers • Intervention: Masks and protective eyewear • Comparator: No masks and protective eyewear • Outcome: Incidence rate of healthcare-associated infections. Date of last evidence review: 2019	Research evidence Research question: How effective are the individual elements of droplet precautions (masks, apron/gown, gloves, protective eyewear, use of single rooms for patient allocation against the transmission of respiratory infections (viral/bacterial)? • Population: Healthcare workers (HCW) and patients in any healthcare setting. • Intervention: PPE including masks, apron/gown, gloves or protective eyewear, and patient room allocation (single rooms). • Comparator: Standard precautions, no precautions, or another type of transmission-based precautions (e.g., combination of these including contact and droplet, contact and airborne or droplet and airborne). • Outcome: Confirmed infection or colonisation in the HCW and patient population. Date of last evidence review: 2025
Evidence to decision Benefits and harms Substantial net benefits of the recommended alternative.	Evidence to decision Benefits and harms Little difference between PPE use compared to no PPE use.

The benefits of wearing a surgical mask for patients known or suspected to be infected with agents transmitted by respiratory droplets clearly outweigh any undesirable effects.

The benefits of wearing a mask when caring for patients known or suspected to be infected with agents transmitted by respiratory particles clearly outweighs any undesirable effects (i.e. transmission of infection, mucosal membrane (mouth/nose) exposure to respiratory particles).

The benefits of wearing protective eyewear to prevent splash or sprays of respiratory droplets into healthcare workers eyes outweighs any undesirable effects (i.e. transmission of infection, mucosal membrane (eyes) exposure to respiratory particles).

Certainty of the evidence

Moderate

There is evidence (CDC Category 1B) to support the recommendation that masks should be worn upon entry into a patient-care environment.

Certainty of the evidence

Low

The systematic review examined the effectiveness of the elements of droplet precautions (PPE and patient room allocation) compared to standard precautions only or no precautions against the transmission of respiratory infections (viral/bacterial). The systematic review found that mask use (in the context of droplet precautions) was effective in reducing infection transmission among healthcare workers.^[1, 3] The systematic review found the certainty of evidence for the effectiveness of droplet precautions against the transmission of respiratory infections (viral/bacterial) to be low due to the reliance on non-randomised studies in varied patient populations.^[1]

The systematic literature review did not examine the effectiveness of protective eyewear against the transmission of respiratory infections. However, protective eyewear has been shown to reduce the risk for respiratory infection in healthcare workers.^[6-8] Protective eyewear is used as part of standard precautions to protect healthcare workers' eyes from blood and body fluid splashes and sprays, including respiratory droplets from coughing, as part of droplet precautions^[9], and as part of airborne precautions for aerosol-generating procedures.^[1]

This intervention is also supported by [work, health, and safety](#) principles, including providing appropriate PPE for staff for protection against infection and other occupational exposure.

Values and preferences

No substantial variability expected.

It is expected that all patients and staff of Australian healthcare facilities would highly value using surgical masks as personal protective equipment to prevent droplet transmission of infections.

Values and preferences

No substantial variation in values and preferences is expected.

It is expected that all patients and staff of Australian healthcare services would highly value the implementation of droplet precautions to stop the spread of infectious agents.

It is expected that all patients and staff of Australian healthcare services would highly value the protective value of using a mask and

	protective eyewear together to reduce their risk of acquiring an infection via droplet transmission. Resources and other considerations No important issues with the recommended alternative. This practice would require the provision of surgical masks. Staff training and/or tools such as checklists in wards may be necessary to ensure uptake of advice.
Rationale More studies are needed to improve understanding of droplet transmission under various circumstances.	Resources and other considerations No important issues with the resource implications were identified from the literature however there are some practical considerations for implementation. This practice would require the provision of suitable masks and protective eyewear that meet current Australian Standards for respiratory protection. While droplet precautions may be cost effective at the individual level, across an entire healthcare service, there may be significant resource considerations associated with implementing droplet precautions. The costs associated with implementing droplet precautions may include the cost of equipment. Healthcare services should consider the economic and environmental sustainability of PPE use against infection transmission and patient outcomes. Staff training and/or tools, such as checklists in patient care settings, may be necessary to ensure selection of appropriate PPE which considers clinical contexts, type of care, patient acuity, and the type of infectious agent. Communication of droplet precautions is essential at all care transition points and should be handed over verbally and in writing. De-escalation of droplet precautions (i.e. symptoms have resolved, commencement of appropriate antimicrobial treatment, or confirmation that the pathogen is not a communicable disease) also should be documented and included at handover. Patients and their carers should be informed about the need for droplet precautions. Information should be provided to patients and their carers that meets their needs and supports them to be actively involved in decisions about their care. Patients should be provided with a mask to wear (if tolerated) and encouraged to use respiratory hygiene and cough etiquette to reduce infection transmission. Rationale As a minimum, masks and protective eyewear should be used for droplet precautions. The type of mask used by a healthcare worker should be based on the nature of care being provided, the type of clinical settings, availability of single rooms or other environmental factors that influence infection risk. When droplet precautions are required, perform hand hygiene and put on a clean mask and protective eyewear immediately before entry into a patient's room to prevent exposure to respiratory droplets. The mask and protective

eyewear should be removed after leaving the patient care area. The mask should be disposed of in an appropriate waste receptacle. Reusable protective eyewear should be cleaned after each use. This will reduce the risk of these PPE acting as a vector to further spread infection into the healthcare environment. Once the mask and protective eyewear are removed, hand hygiene should be performed to remove any infectious material that has transferred onto the hands during PPE removal.

Gloves and gowns are not routinely required for droplet precautions; these PPE should be used if there is anticipated exposure to blood or bodily fluids in line with standard precautions.

Part D

Good practice statement 26: Airborne precautions (revised)

What is changing?

The key changes to *Recommendation 26: Airborne precautions* are:

- changing from a recommended action to a good practice statement
- the addition of protective eyewear as part of airborne precautions
- updated wording from P2 respirator to particulate filter respirator (PRF)
- addition information on the minimum requirements for PPE use by healthcare workers for airborne precautions.

Why is it changing?

Evidence from the systematic literature review found that mask use (any type - either surgical style or particulate filter respirator [PFR]) reduced the risk for infection transmission for healthcare workers in most clinical settings.

The revision of the recommendation for PPE use in *Good practice statement 26* will provide healthcare workers with the option to select an appropriate mask based on a local risk assessment.

Detailed comparison

Table 5 Good practice statement 26: Airborne precautions – detailed comparison

Current (2019)	Proposed (2027)
It is recommended that airborne precautions, in addition to standard precautions, are implemented in the presence of known or suspected infectious agents that are transmitted person-to-person by the airborne route.	When <u>airborne transmission</u> is suspected or confirmed and is regarded as a high-risk (i.e. aerosol generating procedures), it is suggested that, as a minimum, healthcare workers wear a particulate filter respirator (PFR) and protective eyewear when entering the patient care environment. Healthcare workers who are working with patients that require airborne precautions should, as a minimum: • put on a PFR and protective eyewear • remove the PFR and protective eyewear and perform hand hygiene before leaving the patient care area.
Research evidence Research question: Airborne precautions vs Non-airborne precautions. • Population: Patients • Intervention: Airborne precautions • Comparator: Non-airborne precautions • Outcome: Incidence rate of healthcare-associated infections Date of last evidence review: 2019	Research evidence Research question: How effective are airborne precautions against the transmission of respiratory infections (viral and bacterial)? • Population: Healthcare workers (HCW) and patients in any healthcare setting. • Intervention: PPE including masks, apron/gown, gloves or protective eyewear, and patient room allocation (single rooms). • Comparator: Standard precautions, no precautions, or another type of transmission-based precautions (e.g., combination of these including contact and droplet, contact and airborne or droplet and airborne). • Outcome: Confirmed infection or colonisation in the HCW and patient population. Date of last evidence review: 2025
Evidence to decision	Evidence to decision
Benefits and harms Substantial net benefits of the recommended alternative. The benefits of implementing airborne precautions for patients known or suspected to be infected with infectious agents transmitted	Benefits and harms Little difference between airborne precautions in addition to standard precautions, compared to standard precautions only, no precautions or other precautions. The benefits of implementing airborne precautions for patients known or suspected to be infected with infectious agents transmitted by the

person-to-person by the airborne route clearly outweigh any undesirable effects.

airborne route, including novel respiratory infection (viral/bacterial) clearly outweigh any undesirable effects (i.e. transmission of infection).

The benefits of wearing a mask (either surgical or particulate filter respirator [PFR]) and protective eyewear for patients known or suspected to be infected with agents transmitted by respiratory particles, or during aerosol generating procedures clearly outweigh any undesirable effects (i.e. transmission of infection, mucosal membrane (mouth/nose) exposure to respiratory particles).

Certainty of the evidence

Moderate

The Centers for Disease Control and Prevention¹ strongly recommends (Category 1A) applying airborne precautions.

The Public Health Agency of Canada¹ strongly recommends the implementation of airborne precautions for patients known or suspected to be infected with infectious agents transmitted person-to-person by airborne route, such as infectious pulmonary tuberculosis.

Certainty of the evidence

Very low to low

The systematic review examined the effectiveness of the elements of airborne precautions (mask use, protective eyewear, and patient room allocation), in addition to standard precautions, compared to standard precautions only, no precautions or other transmission-based precautions against the transmission of respiratory infections (viral/bacterial). The systematic review found that airborne precautions reduce the transmission of respiratory infections relative to the reported comparator.^[1] The systematic review found the certainty of evidence for airborne precautions against the transmission of novel respiratory viruses (e.g., COVID-19) to be very low.^[1]

The systematic review found that mask use - any type, in the context of airborne precautions - was effective to reduce respiratory infection transmission among healthcare workers, however there was no overall benefit for a PFR over surgical style masks for reducing the risk of infection transmission by respiratory transmission.^[1, 3] The overall quality of evidence regarding the use of PFRs is low due to poorly controlled studies.

The systematic review did not examine the effectiveness of protective eyewear against the transmission of respiratory infections. However, protective eyewear has been shown to reduce the risk for respiratory infection in healthcare workers.^[6-8] Protective eyewear is used as part of standard precautions to protect healthcare workers' eyes from blood and body fluid splashes and sprays, including respiratory droplets from coughing as part of droplet precautions and as part of airborne precautions for aerosol generating procedures.^[1] The use of protective eyewear is a key element of airborne precautions.^[9]

This intervention is also supported by [work, health, and safety](#) principles, including providing appropriate PPE for staff for protection against infection and other occupational exposure.

Values and preferences

No substantial variability expected.

It is expected that all patients and staff of Australian healthcare facilities would highly value the implementation of airborne precautions to stop the spread of infectious agents.

Values and preferences

No substantial variation in values and preferences is expected.

It is expected that all patients and staff of Australian healthcare services would highly value the implementation of airborne precautions to stop the airborne spread of infectious agents, include novel respiratory diseases.

It is expected that staff of Australian healthcare services would highly value the protective benefit of airborne precautions to reduce their risk of acquiring an infection via airborne transmission.

It is expected that staff of Australian healthcare services would highly value the protective benefit of airborne precautions to reduce their risk of acquiring a novel respiratory infection, where the route of transmission is unknown.

Resources and other considerations

No important issues with the recommended alternative.

This practice would require implementing standard precautions, as well as minimising exposure of other patients and staff to the infectious agent. This requires the provision of appropriate personal protective equipment and training for staff on their correct use.

Resources and other considerations

No important issues with the resource implications were identified from the literature however there are some practical considerations for implementation.

This practice would require the provision of P2 and N95 respirators that meet current Australian Standards for respiratory protection for staff use.

While airborne precautions may be cost effective at the individual level, across an entire healthcare service, there may be significant resource considerations associated with implementing airborne precautions. The costs associated with implementing airborne precautions may include the cost of equipment. Healthcare services should consider the service, economic, and environmental sustainability of implementing airborne precautions in addition to standard precautions, particularly during high patient volume events (e.g. outbreak).

Staff training and/or tools may be necessary at patient entry points (e.g. emergency departments, general practice, community health centres, outpatient clinics) to ensure rapid deployment of airborne precautions where a novel respiratory infection is suspected. De-escalation of precautions (also known as 'step down') requires confirmation of infection and transmission route.

Communication of airborne precautions is essential at all care transition points and should be handed over verbally and in writing. De-escalation of airborne precautions (i.e. symptoms have resolved, commencement of appropriate antimicrobial treatment, or confirmation that the pathogen is not a communicable disease) also should be documented and included at handover.

Patients and their carers should be informed about the need for airborne precautions.

Information should be provided to patients and their carers that meets their needs and supports them to be actively involved in decisions about their care.

Rationale

The implementation of airborne precautions in the presence of known or suspected infectious agents that are transmitted by the airborne route is an effective measure to reduce the spread of infection.

Rationale

As a **minimum**, a PFR and protective eyewear should be used for airborne precautions. The decision to use either a surgical style mask or a PFR should be based on the nature of care being provided (e.g. aerosol-generating procedures), the type of clinical settings, availability of single rooms or other environmental factors that influence infection risk. The use of PFRs and protective eyewear will protect healthcare workers against the transmission of respiratory infections (viral/bacterial) via respiratory droplets.

The World Health Organization (ref: [WHO Statement on transmission-based precautions](#)) describes airborne transmission as the spread of an infectious agent caused by the dissemination of droplet nuclei that remain infectious when suspended in air over long distances and time. Airborne transmission can be further categorised into obligate or preferential airborne transmission:

- Obligate airborne transmission refers to pathogens that are transmitted only by deposition of droplet nuclei under natural conditions (e.g. pulmonary tuberculosis).
- Preferential airborne transmission refers to pathogens that can initiate infection by multiple routes but are predominantly transmitted by droplet nuclei (e.g. measles and chickenpox).
- Opportunistic airborne transmission refers to agents that naturally cause disease through other routes, but under special circumstances may be transmitted via fine particle aerosols. (ref: [WHO Statement on transmission-based precautions](#)).

When airborne precautions are required, perform hand hygiene and put on a clean PFR and protective eyewear immediately before entry into a patient's room to prevent exposure to respiratory particles. The PFR and protective eyewear should be removed after leaving the patient care area. The PFR is to be disposed of in an appropriate waste receptacle. Reuseable protective eyewear should be cleaned after each use. This will reduce the risk of these PPE acting as a vector to further spread infection into the hospital environment. Once the PFR and protective eyewear are removed, hand hygiene should be performed to remove any infectious material that has transferred onto the hands during PPE removal.

Gloves and gowns are not routinely required for airborne precautions; these PPE should be used

if there is anticipated exposure to blood or bodily fluids in line with standard precautions.

Airborne precautions are considered to confer the highest level of protection against respiratory infections ([CDC- transmission-based- precautions](#)) but without studies to conform this, the need to use airborne precautions for novel respiratory infections should be reassessed regularly and if appropriate de-escalated to droplet, contact or standard precautions once the route of transmission is confirmed to minimise the long-term impact of prolonged use of airborne precautions on patients, healthcare workers and service delivery.

Part E

Conditional Recommendation 27: Airborne precautions (remove)

What is changing?

It is recommended that *Conditional recommendation 27: Airborne precautions (use of P2 respirator)* is **removed** from the Guidelines.

Why is it changing?

Conditional recommendation 27 now contradicts the advice provided in the updated *Good practice statement (Recommended Action) 26*, which now allows for the use of either surgical masks or PFRs for airborne precautions based on the local context, and includes the use of P2 & N59 respirators).

Information about fit checking and testing of particulate filter respirators (PFRs) is currently included in the narrative text of the AICGs. Removal of *Conditional recommendation 27* will reduce the potential for confusion about the mask use for airborne precautions.

The wording of *Conditional recommendation 27* and evidence to decision framework below is from the current edition of the Guideline.

CURRENT Conditional recommendation 27

It is suggested that a correctly fitted P2 respirator is worn when entering the patient-care area when an airborne-transmissible infectious agent is known or suspected to be present.

Research evidence

Research question:

Airborne precautions vs Non-airborne precautions

- **Population:** Patients
- **Intervention:** Airborne precautions
- **Comparator:** Non-airborne precautions
- **Outcome:** Incidence rate of healthcare-associated infections.

Research question

Masks and protective eyewear vs No masks and protective eyewear.

- **Population:** Healthcare workers
- **Intervention:** Masks and protective eyewear
- **Comparator:** No masks and protective eyewear
- **Outcome:** Incidence rate of healthcare-associated infections.

Date of last evidence review: 2019

Table 6 Evidence to decision – Conditional recommendation 27

Evidence to decision

Benefits and harms

The benefits of wearing a correctly fitted P2 respirator when an airborne transmissible agent is known or suspected clearly outweigh any undesirable effects.

Certainty of the evidence

The overall quality of evidence regarding the use of face masks is low due to poorly controlled studies.

The epic3 Guidelines¹ present Class D evidence (general practice statements) stating that it is best practice to use correctly fitted respirators in situations where a risk assessment deems it necessary.

The Public Health Agency of Canada¹ present CII evidence (general practice statements) stating that it is best practice for healthcare workers to wear respirators when caring for patients with airborne infections.

Values and preferences

It is expected that all patients and staff of Australian healthcare facilities would highly value the use of a P2 respirator to prevent airborne transmission of infections.

Resources and other considerations

This practice would require the provision of P2 respirators and fit testing of respirators to the healthcare staff.

Rationale

This advice is based on limited empirical evidence, but on sound theoretical principles and supported by expert advice. Wearing a correctly fitted PFR when entering the patient-care area of a patient under airborne precautions is justified to reduce healthcare-associated infection.

Part F

Conditional recommendation 23: Contact precautions for multi-resistant organisms (remove)

What is changing?

It is recommended that *Conditional recommendation 32: Contact precautions for multidrug resistant organisms* is **removed** from the Guidelines.

Why is it changing?

If retaining *Conditional recommendation 32*, the advice provided, would be exactly the same as that provided in the revised version of *Conditional recommendation 21: Contact precautions (PPE use for contact precautions)*. Other information on patient placement and equipment use is covered in the narrative text in *Section 3.2.2 Contact precautions*, as well as *Conditional recommendations 20 (contact precautions)* and *Conditional recommendation 22 (equipment use for contact precautions)*.

Removal of *Conditional recommendation 32* will reduce repetition of information in the Guidelines.

The wording of *Conditional recommendation 32* and evidence to decision framework below is from the current edition of the Guidelines.

CURRENT Conditional recommendation 32

It is suggested that contact precautions be considered for all patients colonised or infected with a multi-resistant organism (MRO) where there is anticipated patient and/or environmental contact, including:

- performing hand hygiene and putting on gloves and gowns before entering the patient-care area
- using patient-dedicated or single-use non-critical patient-care equipment
- using a single-patient room or, if unavailable, cohorting patients with the same strain of MRO in designated patient-care areas (upon approval from the healthcare facility's Infection Control Team)
- ensuring consistent cleaning and disinfection of surfaces in close proximity to the patient and those likely to be touched by the patient and healthcare workers.

Research evidence

Research question:

Transmission-based precautions vs Non-transmission-based precautions

- **Population:** Patients colonised or infected with an MRO
- **Intervention:** Transmission-based precautions
- **Comparator:** Non-transmission-based precautions
- **Outcome:** Incidence rate of healthcare-associated infections (MROs).

Date of last evidence review: 2019

Table 7 Evidence to decision – Conditional recommendation 27

Evidence to decision

Benefits and harms

Small net benefit, or little difference between alternatives

The benefits of implementing contact precautions for patients colonised or infected with a multi-resistant organism (MRO) include a decrease in transmission of methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococci (VRE). However, the evidence on the effectiveness of contact precautions is not conclusive, and few studies have directly compared the benefits of contact precautions above and beyond standard precautions.

Some of the reported harms of contact precautions for patients include:¹ reduced patient contact with healthcare workers, increased number of preventable adverse effects, decreased patient satisfaction with their quality of care and delays in access to radiological examinations.

Certainty of the evidence

Low

This recommendation has been adapted from the United States Centers for Disease Control and Prevention *Management of Multidrug-Resistant Organisms in Healthcare Settings* (2006).

	The quality of evidence is low, and there is significant variability amongst results regarding both the benefits and harms of contact precautions for MROs.
Values and preferences	Substantial variability is expected or uncertain. As contact precautions have been found to be associated with a range of negative patient outcomes, including prolonged hospital stays and fewer patient visits, not all patients and staff may value the implementation of contact precautions for patients colonised or infected with MROs.
Resources and other considerations	No important issues with the recommended alternative While contact precautions may be cost effective at the individual level, across an entire healthcare facility, there may be significant resource considerations associated with implementing contact precautions. The costs associated with implementing contact precautions may include the cost of equipment and the cost of screening processes.

Rationale

Implementing transmission-based precautions when a patient has been colonised or infected with a multidrug-resistant organism is justified to reduce healthcare-associated infection. When deciding whether to implement transmission-based precautions, the benefits and harms should be considered, alongside any associated costs.

Part G

Good practice statement: Appropriate use of alcohol-based hand scrub for pre-operative and pre-procedure hand hygiene (new)

What is Changing?

A new **Good Practice Statement** has been developed to support healthcare workers decide when the use of alcohol-based hand scrub (ABHS) is a suitable option for pre-operative and pre-procedure hand antisepsis.

Why is it changing?

The use of ABHS is becoming more common in healthcare services, however, there is a gap in information about the appropriate use of this product in the guidelines.

New good practice statement: Appropriate use of alcohol-based hand scrub for pre-operative and pre-procedure hand hygiene

Healthcare workers should adopt a risk-based approach to inform the use of alcohol-based hand scrub for pre-operative and pre-procedure hand hygiene in simple procedures. Consideration should be given to the local clinical context, the nature of the procedure, and the characteristics of the patient population. Current evidence suggests that alcohol-based hand scrub may not be suitable for all clinical settings or procedures, particularly those involving complex or high-risk surgery.

Research evidence

Research question:

What is the effectiveness of waterless models of care in reducing risk of healthcare-associated infections and environmental colonisation/contamination?

- **Population:** patients, operating theatres, procedural suites
- **Intervention:** non-water-based hand hygiene (alcohol-based hand scrub) for pre-operative and pre-procedure hand hygiene
- **Comparator:** water-based hand hygiene (soap and water) for pre-operative and pre-procedure hand hygiene
- **Outcome:** surgical site infections

Date of last evidence review: 2025

Table 8 Evidence to decision

Evidence to decision

Benefits and harms

Little difference between alcohol-based hand scrub compared to water-based hand hygiene (soap and water)

The benefits of using alcohol-based hand scrub as an option for pre-operative and pre-procedure hand antisepsis outweighs the undesirable effects of healthcare-associated infections (HAIs) (i.e. surgical site infections).

The benefits of using alcohol-based hand scrub include ease of product use and water and time savings.

The use of alcohol-based hand scrub for pre-operative and pre-procedure hand antisepsis **may not** be sufficient for all procedures and in all clinical settings, therefore conventional water-based scrubbing with soap and water should remain the preferred option for these situations.

Indirect benefits such as cost and time savings, and less skin irritation compared to mechanical scrubbing with soap and water (with brushes, soap, and water) were identified as benefits associated with the use of alcohol-based hand scrubs.

Certainty of the evidence

Low

The systematic review examined the effectiveness of waterless models of care found no significant difference in the rates of surgical site infection (SSI) or bacterial skin concentrations of colony forming units between alcohol-based hand scrub and soap and water hand scrubbing (including the use of antimicrobial soap).^[2]

The systematic review on the effectiveness of alcohol-based hand scrub included studies on the use of alcohol-based hand scrub for pre-operative hand antisepsis for ophthalmic^[3], orthopaedic,^[4] cardiac^[5] and general surgery,^[6, 7] as well as ward based pre-procedural hand hygiene.^[8] The overall evidence from each study indicated that alcohol-based hand scrubs improved the quality and reduced duration of preparation compared to water-based hand scrubbing, and reduced microbial count on the hands of healthcare workers, however there was no difference in SSIs.^[3-8]

A Cochrane review found no clear evidence that alcohol-based hand scrub is superior to water-based scrubbing with antimicrobial soap and for

	reducing SSIs.^[9] Chlorhexidine gluconate, included in alcohol-based hand scrubs did reduce the number of microorganisms on healthcare workers hands compared to povidone iodine scrubs; however, it is unclear whether this has a direct impact on SSIs. Types of surgeries were not described in the review. Most studies included in the Cochrane review were informed by low or very low quality evidence.^[9] The certainty of evidence was low based on the methodologies used in the studies included in the systematic review.^[2]
Values and preferences	No substantial variation in values and preferences is expected. It is expected that patient preferences and values would align with this intervention to reduce HAIs, including SSIs. Healthcare workers would value the use of hand hygiene products that reduce the risk for skin irritation/damage. Healthcare services would value the cost and time saving benefits associated with alcohol-based hand scrubs. Several studies identified cost savings by switching from povidone-iodine and chlorhexidine to alcohol-based hand scrubs. Alcohol-based hand scrubs were cheaper per use and reduced supply costs (soap, brushes).^[10-13] Although the cost of operating theatre time varies between facilities, the greater efficiency of alcohol-based hand scrubs has the potential to generate significant savings for both institutions and patients.^[2, 12] Daily cost savings were estimated at \$0.4094 AUD for alcohol-based antiseptics versus \$2.047 AUD for traditional methods, resulting in annual savings of \$401.21 AUD.^[10] Carannante et al. (2024) reported that over two years, alcohol-based scrubbing cost \$384.48 AUD compared to \$3,204 AUD for brushes used in water-based scrubbing.^[13] Posso et al. (2025) estimated annual supply cost savings of \$4,760.08 AUD from switching to alcohol-based hand scrub, with potential total annual savings of \$2.002 million AUD when perioperative time costs were included.^[11] Javitt et al. (2020) similarly reported that institution-wide adoption of waterless scrubs at an ophthalmologic centre in the US could save between \$431,200 AUD and \$535,920 AUD per operating room annually, with the majority of savings attributed to reduced operating room time costs.^[14] The use of alcohol-based hand scrub may not be appropriate to all clinical settings (i.e. services where alcohol-based products may be harmful to patients or the community they service - for example drug and alcohol rehabilitation, mental health services). The use of alcohol-based hand scrub may not be suitable for all procedures. (i.e. complex, high-risk surgery).
Resources and other considerations	No important issues with the resource implications were identified from the literature however there are some practical considerations for implementation. If considering the use of alcohol-based hand scrub as an option for pre-operative and pre-procedure hand antisepsis, healthcare services should use a risk-based approach to implementing these products that considers infection risks influenced by the local clinical context, type of procedures being performed, and patient population (risk for infection/harm associated with the use of alcohol-based products). Cultural beliefs and practices may impact the uptake of alcohol-based hand scrub and should be considered.

	Other barriers, such as, individual bias or understanding about efficacy of alcohol-based hand scrubs may impact the uptake of alcohol-based hand scrub and should be considered. Resource considerations for the use of alcohol-based hand scrub should include: • Suitability of the product for clinical settings where water consumption may be an issue. • Reduction in plastic and materials (brushes, sponges, individually wrapped towels) associated with water-based hand scrubbing. • Waste/plastic associated with the use of alcohol-based hand scrub containers. • Cost and time savings • Areas where there might be an increased risk of inappropriate consumption of these products e.g. communities or healthcare services where drug and alcohol abuse is common, or in some rehabilitation/mental health services. Healthcare services should balance the economic and environmental impact of alcohol-based hand scrub use against infection transmission and patient outcomes. Training may be necessary to ensure that staff are able to correctly apply a risk-based approach to determine if alcohol-based hand scrub is appropriate for the setting and task.
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Rationale

This advice is based on limited evidence, but on sound theoretical principles.

It is not suggested that healthcare services replace conventional water-based pre-operative or pre-procedure hand scrubbing with alcohol-based hand scrub.

The use of alcohol-based hand scrub for pre-operative or pre-procedure hand antisepsis **may not** be an appropriate option for all invasive procedures and in all clinical settings (i.e. complex, high-risk surgery). Alcohol-based hand scrub may be a suitable option for minor surgeries or ward-based procedures in some clinical settings.

Therefore, before a healthcare service implements the use of alcohol-based hand scrub as an option for pre-operative or pre-procedure hand antisepsis, healthcare services should use a local risk assessment that considers:

- The ability of clinical staff to risk-assess the need for alcohol-based hand scrub as part of preoperative or pre-procedure hand antisepsis.
- The willingness of staff to use alcohol-based hand scrub.
- Local hand hygiene practices and compliance
- The nature of care being provided (e.g. types of procedure, patient acuity).

Part H

Good practice statement: Appropriate handwashing basin placement (new)

What is changing?

A new **Good Practice Statement** has been developed to support healthcare services determine appropriate sink placement in new builds and during renovations.

Why is it changing?

There is growing evidence that waterborne pathogens colonise environmental surfaces and patient care equipment, in turn can lead to outbreaks of infectious agents in healthcare services.

This good practice statement will help to address a gap in information in the guidelines about the how the appropriate placement of handwashing basin can help reduce the risk for infections associated with waterborne pathogens in healthcare settings.

New good practice statement: Appropriate placement of handwashing basins to reduce the risk of infection transmission in health service facilities.

It is good practice for healthcare services to use a risk-based approach to assess the appropriate placement of handwashing basins in clinical settings to reduce the risk of infection and environmental colonisation by waterborne pathogens.

When new clinical departments are being built, consideration should be given to the placement of handwashing basins. The handwashing basin should be positioned at a sufficient distance to prevent water splashes from reaching the patient's bed or clinical care equipment but close enough so staff can wash their hands if contaminated by blood or body fluids.

Handwashing basins should only be used for hand washing. Hand washing basins should never be used to dispose of medications, parental feed, food or liquids for consumption, blood or body fluids or any other fluids associated with patient care.

Research evidence

Research question:

What is the effectiveness of waterless models of care in reducing risk of healthcare-associated infections and environmental colonisation/contamination?

- **Population:** patients, intensive care units
- **Intervention:** handwashing basin placement
- **Comparator:** routine use of handwashing basin
- **Outcome:** environmental and patient colonisation

Date of last evidence review: 2025

Table 9 Table 9 Evidence to decision

Evidence to decision	
Benefits and harms	Little difference between implementing waterless models of care compared to routine use of handwashing basins in clinical settings. The benefits of using a risk-based approach to assess the appropriate location of handwashing basins may outweigh the undesirable effects of healthcare-associated infections and environmental colonisation by waterborne pathogens (including gram-negative pathogens). Indirect benefits associated with the appropriate location of handwashing basins may include improvements in hand hygiene and uptake of other waterless hygiene interventions (i.e. waterless patient hygiene). Harms associated with inappropriate use or location of handwashing basins, such as the disposal of biological fluids/medications, storage of hygiene or patient care equipment, can increase the risk for undesirable outcomes including increase the risk of healthcare-associated infections and environmental colonisation by waterborne pathogens. Other indirect benefits associated with appropriate location of handwashing basins include improved adoption of alcohol-based hand rub for hand hygiene, and improved awareness about basin and drainage system design and maintenance.^[2]
Certainty of the evidence	Low The systematic review on the effectiveness of waterless models of care found that using a risk assessment to inform the location of handwashing basins may reduce environmental colonisation by waterborne pathogens in some clinical settings.^[2] All studies included in the systematic review had a high risk of bias; many studies were completed in response to outbreaks of waterborne pathogens in intensive care units, and many studies were conducted in countries with different requirements for healthcare facility design and may not be generalisable to all clinical settings.^[2] The Australasian Health Facilities Guidelines recommend a risk-based approach to the placement and design of handwashing basins which considers the potential for water to be splashed onto patients and equipment.
Values and preferences	No substantial variation in values and preferences is expected.

It is expected that patients and staff of Australian healthcare services would value a reduction in infection and colonisations associated with appropriate handwashing basin placement.

It is expected that an environmentally sustainable approach to water conservation would be valued by communities where there are water security concerns.

Decisions about handwashing basin placement should occur during design phases of redevelopments, renovation and new builds and should include consideration of the long-term impact on clinical care and service delivery associated with placement of handwashing basins.

Resources and other considerations

No important issues with the resource implications were identified from the literature however there are practical considerations for implementation.

To ensure the appropriate placement of handwashing basins, healthcare services should consider:

- the design and purpose of the basin (general hand washing, scrub basin)
- the proximity of the basin to patients (beds and chairs) and clinical equipment (including, but not limited to linen, sterile stock, and patient care equipment)
- the potential for water to splash onto patients and clinical equipment
- patient risk factors including the type of care provided in the clinical setting
- the impact of the handwashing basin location on healthcare worker and patient hand hygiene
- the appropriateness of alcohol-based hand rub as an alternative to hand washing in a clinical setting
- staff training to improve practices around fluid disposal and sink decontamination.

Healthcare services should ensure that the design, type, and components used for handwashing basins in the clinical setting are consistent with the recommendations of the current version of [the Australasian Health Facility Guidelines](#).

Healthcare services should consider the economic and environmental impact of appropriate placement of handwashing basins against infection transmission and patient outcomes.

The use of other waterless models of care (water avoidance, waterless hygiene products) may not be appropriate to all clinical settings and may not be suitable for long term use.

Rationale

This advice is based on limited evidence, but on sound theoretical principles.

Healthcare services should use a risk-based approach to inform the location of handwashing basins that considers the local clinical context, type of clinical care provided in the healthcare facility, the design of the clinical environment and the needs of the patient population. Using a risk-based approach to handwashing basin placement will support the healthcare service to implement risk mitigation strategies that are suitable to their specific clinical context.

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Waterless models of care

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