Australasian Health Facility Guidelines

Part D - Infection Prevention and Control
D.0002 - Building Elements

australasian health infrastructure alliance
GOVERNMENTS COLLABORATING TO DELIVER QUALITY HEALTH FACILITIES

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Australasian Health Facility Guidelines

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02 BUILDING ELEMENTS

02.01 Introduction

It is recommended that project staff refer to jurisdictional policies relating to infection prevention and control and hand hygiene, to fully inform requirements relating to the following building elements. Many of these policies and guidelines are listed in AHIA, 2015, AusHFG Part D, Section 1000 - References and Further Reading.

02.02 Hand Hygiene

GENERAL
Effective hand hygiene is one of the most important strategies in preventing HAIs. Healthcare organisations are required to develop effective governance and management systems to prevent and control HAIs, as described in Australian Commission on Safety and Quality in Health Care, 2012, Controlling Healthcare Associated Infections (Factsheet on Standard 3).

Hand hygiene is defined as a process that reduces the number of microorganisms on hands. It is a general term applied to the use of soap/solution (non-antimicrobial or antimicrobial) and water or a waterless antimicrobial agent, to the surface of the hands (e.g. alcohol-based hand rub). When performed correctly, hand hygiene results in a reduction of microorganisms on hands. For resources on hand hygiene refer to the Hand Hygiene Australia Website.

Hand hygiene may be classified as:

- routine/social, including patient care situations;
- aseptic procedures; or
- surgical procedures.

HAND WASHING
Hand washing in hand basins is generally reserved for situations when hands are visibly soiled, or as defined by jurisdictional hand hygiene policies. Descriptions of the various types of hand basins and their location are provided in the next section.

SOAP
All basins should be provided with near neutral pH soap. Clinical basins and scrub troughs should, in addition, be provided with antimicrobial liquid soap. Soap dispensers are to be the closed-cartridge type and are to be mounted on or above the splashback.

HAND DRYING
Single use cloth or paper towels will be provided at all hand basins. Locate towel dispensers adjacent to the splashback to prevent splash contamination. Dispensers should be smooth-surfaced and easy to clean to prevent dust or soil contamination.

Paper towel may be used in public amenities and beverage bays.

Hot air hand dryers are not recommended for installation in clinical areas of healthcare facilities. High speed hand dryers may be considered in non-clinical areas, such as public toilets.

ALCOHOL-BASED HAND RUBS
Alcohol based hand rub (ABHR) improves compliance with hand hygiene and is the hand hygiene product of choice for all standard aseptic non-touch technique procedures.

Hand Hygiene Australia recommends making ABHR available:

- at the foot of every patient bed or adjacent wall;
- affixed to mobile work trolleys (e.g. intravenous, drug and dressing trolleys);
- in high staff traffic areas (e.g. staff station, utility rooms and at the entrance to patient rooms);
- other multi-use patient care areas such as consultation rooms;
- at the entrance of each inpatient unit, outpatient clinic and other departments; and
- in public areas such as waiting rooms, receptions areas, hospital foyers, and near elevator doors in high traffic areas.

Dispenser systems should minimise the possibility of 'dripping' to avoid potential damage to wall and floor coverings.

GLOVES
A disposable glove dispenser, sufficient to hold all glove sizes (usually three sizes), should be located near areas where staff are likely to come into contact with blood and body fluids. The dispenser should allow re-stocking without the need to touch new gloves, and be located away from the splashback to prevent splash contamination.

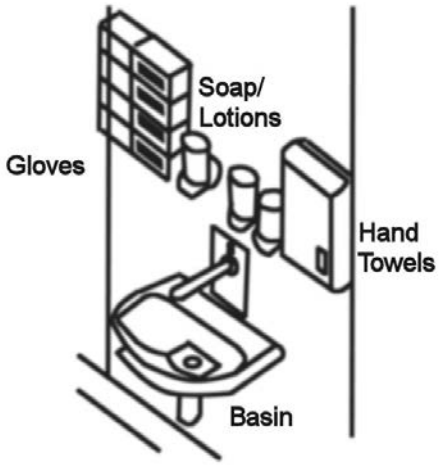
Glove dispensers will be located in areas such as inpatient bed rooms, emergency treatment bays and dialysis bays where staff are identified as being at risk of exposure to blood and body fluids at the point of care.

HAND CREAM / LOTION
Locate a moisturising cream/lotion dispenser at or near each hand basin. Dispensers should be non-refillable. Hand cream/lotion should be compatible with all hand hygiene products.

ARRANGEMENT OF DISPENSERS AT CLINICAL BASINS
Dispensers should be arranged in a consistent manner across healthcare facilities, as shown in the concept drawing in Figure 1. Glove dispensers should be located to the staff members' left and hand towels to the right. Soap and hand cream/lotions dispensers should be mounted over the basin to 'catch' drips.

Refer to room layout sheets (RLS) (Bay – Hand Washing) for detailed information.

Figure 1: Arrangement of Dispensers at Basins



SIGNAGE
Clear visible signs reminding all staff and visitors to attend to hand hygiene should be provided.

WASTE RECEPTACLES
Locate waste receptacles at each hand basin for disposal of single use towels. The bins should be of adequate size, non-touch design and easy to clean.

MIRRORS

Mirrors should not be installed above hand basins in food preparation areas, nurseries, clean and sterile supply areas and other areas where infection prevention and control would be compromised by staff touching their hair.

Mirrors may be installed in anterooms, near PPE bays and near the entry to surgical scrub rooms, to assist staff to correctly don caps, masks and to check their hair is appropriately covered.

PPE BAYS
Transmission-based precautions should be implemented when standard precautions may be insufficient to prevent transmission of infection.

Transmission-based precautions are recommended for specific patients known (or suspected) to be infected or colonised with disease agents that cause infections in health care settings that cannot be contained by standard precautions alone.

Rooms identified to care for patients requiring transmission-based precautions should have personal protective equipment (PPE). PPE should be located outside:

- each single bedroom or pair of single rooms; or
- each two or four-bedded room (where cohorting is common).

A dedicated hand wash basin is not needed as basins are available in clinical corridors. PPE and associated products will routinely include:

- a bracket for ABHR;
- gowns; and
- a disposable gloves dispenser.

In negative pressure isolation rooms, PPE is stored in the anteroom.

Some health services have developed custom solutions to accommodate PPE, as shown in the photo in Figure 2. This type of system can be stocked when required and is easily mounted on a wall reducing the need for trolleys or recessed bays.

Figure 2: Example of a customized PPE container (source: Queen Elizabeth Hospital, South Australia)

02.03 Hand Basin Types and Uses

GENERAL
The following descriptions are based on Room Data and Room Layout Sheets (Bay – Hand Washing) for Standard Components provided in Part B.

HAND BASINS
Hand hygiene compliance is significantly improved when hand basins are visible and accessible.

Clinical hand basins must be reserved for hand washing.

Depending on their use, hand basins may be defined as:

- clinical - large 'scrub' (Type A);
- clinical - medium (Type B);
- non-clinical - small or medium (including vanities) (Type C); and
- surgical scrub troughs.

Hand basins are required in all patient care areas and in all areas where careful attention to hygiene is essential such as kitchens, laundries, pharmacies, laboratories and amenities for patients, visitors or staff. Reticulated, free-flowing warm and cold water will be provided. Plugs should not be provided other than to hand basins in patient ensuites (e.g. vanity basins).

Splashbacks will be required behind all basins. The splashback should be large enough to contain splashes and prevent moisture seepage. The surface should be water resistant and easy to clean.

For advice regarding weight tolerance for basin attachment also refer to the Handwash Facilities section (Clause 710.086.00) of AHIA, 2010, AusHFG Part C: Section 710, Space Standards and Dimensions.

HAND BASIN DESIGN
Design should ensure that hand basins:

- have no overflow;
- have curved sides, to minimise splashing;
- are large enough to enable good hand hygiene techniques;
- are either sealed to the wall or far enough away from the wall to allow effective cleaning;
- have a waterproof splashback;
- have suitable taps;
- do not include integrated plugs; and
- have water delivered at a suitable temperature to allow hand washing under running water.

Hand basins should be made of a hard, non-scratch material (usually porcelain) and be easy to clean. Polycarbonate or other moulded plastic materials are not suitable.

Drainage design should be easy to access internally and externally for regular cleaning of 'S' bends to remove biofilm build-up.

TYPE A - CLINICAL BASIN - LARGE (SCRUB BASIN)
The Type A clinical scrub basin is required in selected areas requiring clinical hand washing prior to undertaking selected procedures that may occur in non-operating room settings (e.g. delivery room).

The basin is a large wall-mounted type, with hands-free taps that may be wall mounted elbow taps, foot/knee operated or electronic sensor taps, with warm and cold water delivered by a common spout. Tap placement should allow washing up to the elbow.

Refer Standard Components: Room Data and Room Layout Sheet - Bay Hand washing Type A.

TYPE B - CLINICAL BASIN - MEDIUM

This hand basin is used in areas requiring hand hygiene by staff and visitors for patient care situations and aseptic procedures. The basin is a medium wall-mounted type. The taps may be either wall-mounted or basin-mounted with elbow or wrist hands-free operation, and warm/cold free-running water.

Refer to Standard Components: Room Data and Room Layout Sheet - Bay Hand washing Type B.

TYPE C - NON-CLINICAL BASIN - SMALL / MEDIUM

The Type C basin is required in public, patient and staff amenities.

Type C is a small wall-mounted basin, which may be part of a vanity unit. The taps may be wall-mounted or basin-mounted. Supply warm and cold water. Cold water-only may be provided to Type C facilities in areas such as public amenities.

For ease of cleaning and use taps should be lever operated as commercially available.

Refer to Standard Components: Room Data and Room Layout Sheet - Bay Hand washing Type C.

Basins in accessible toilets must comply with Standards Australia, 2010, AS 1428 (Set) 2010 Design for access and mobility Set (SAI Global).

SCRUB SINK/TROUGH
This is a long sink that can accommodate one or more staff scrubbing for a surgical procedure (see Standard Components: Room Data and Room Layout Sheets - Scrub Up / Gowning).

TAPS AND WATERSPOUTS
The use of spray taps and hoses is not supported in clinical environments as they create aerosols.

A domestic style single lever operation is considered an appropriate substitute for a wrist operated tap.

Clinical basins and scrub sinks or troughs should have waterspouts fitted with anti-splash devices. Clinical basins and scrub sinks/troughs should have sufficient space between the waterspout and the basin, sink or trough to enable adequate washing up to the elbow.

Alignment of the waterspout should ensure the water flow does not run directly into the drain aperture, thus avoiding aerosol splashback to the hands and face of the user. The waterspout will be positioned to ensure the water flow hits at the front of the basin, sink or trough. For this reason, the selection of basins and tap ware should be coordinated and approved by clinical staff as a single unit.

For further details relating to taps and waterspouts, refer to the Standard Components of hand basins and scrub sinks.

Healthcare facilities should comply with Standards Australia, 2005, AS/NZS 3718:2005 Water Supply—Tap Ware.

02.04 Hand Hygiene - Schedule and Placement

The following table indicates recommended basin and alcohol based hand rub dispensers for particular rooms/spaces. For rooms not listed refer to a similar area.

Room/Space	Basin Type	Placement Details
Acute Inpatient Bedrooms (single & multi-bed)	B	A hand basin to be provided within each single, double or four bed room. Each bedspace will have access to alcohol based hand rub. Alcohol based hand rub will be available at the entry to each pair of single rooms

		with PPE where indicated. In the case of rooms with anterooms, this PPE will be stored within this room.
Birthing rooms	A	Access to a hand basin is required in each room in addition to alcohol based hand rub.
Critical care - adult, paediatric & neonatal:- enclosed rooms/ open bays	A	A hand basin be provided in each single room or shared between a pair of open patient bays. In NICU – SCN, one hand wash bay per four bed spaces is adequate. Each bedspace will have access to alcohol based hand rub.
Day medical bed bays (oncology, dialysis etc)	B	A hand basin to be provided for every four patient bays. Each patient bay will have access to alcohol based hand rub.
Day Procedure rooms (endoscopy etc)	A	A hand basin to be provided for each Procedure Room unless a scrub trough is provided
Imaging Rooms - angiography - other	 A B	A hand basin be provided for each angiography room, unless a scrub trough is provided. A hand wash basin should be provided in all other imaging rooms (e.g. general x-ray). Each imaging room will have access to alcohol based hand rub
Patient Bay - Recovery - Stage 1 - Stage 2/3	 A B	A hand basin to be provided for every four patient bays. Each patient bay will have access to alcohol based hand rub.
Patient Bay - Resuscitation	A	A hand basin to be provided for every patient bay. Each patient bay will have access to alcohol based hand rub.
Emergency Department	B	A hand basin to be provided for every four patient treatment bays. Each bedspace will have access to alcohol based hand rub
Treatment/ Procedure Room	A	A hand basin to be provided in each room. Each room will have access to alcohol based hand rub.
Dental Surgery	B	A hand bay to be provided for each closed dental surgery or shared between two open surgeries. Each dental surgery will have access to alcohol based hand rub.
Consult Room	B	A hand basin to be provided for each Consult Room. Each room will have access to alcohol based hand rub.
Clean Utility Room	B	A hand basin to be provided for each room.

		Access to alcohol based hand rub will also be provided.
Clean-up room / Dirty utility room	B	A hand basin to be provided for each room. Access to alcohol based hand rub will also be provided.
Mortuary	B	
Post mortem (autopsy)	A	A hand basin to be located in each autopsy room.
Pathology Laboratory	B	Allocation will be dependent on layout of laboratory areas.
Isolation anteroom / airlock / inpatient unit corridors	B	While staff may need access to a hand wash basin in the corridor, it is likely that in most circumstances, access to alcohol based hand rub will be adequate given access to hand wash basins in patient care and other support areas is provided. It is recommended that Type A hand wash basins are located in airlocks that support Q Class rooms.
Entry to or from a clinical unit (e.g. inpatient unit)		Alcohol based hand rub is recommended.
Beverage Bay / Food servery (if provided)	C	Unless one is located in close proximity.
Formula Rooms	B	
Sterile Supply Unit	B	
Cleaners Room	C	
Maintenance Areas	C	
Disposal Room	-	Ideally, a basin should be provided in close proximity to this room to provide access. Alcohol based hand rub is recommended.
Staff /Public /Visitor Toilets	C	
Parent room / Baby change room	C	
Patient ensuite	C (or vanity)	Basin and taps to comply with AS 1428.1
Operating Room	Scrub trough	Provided for each Operating Room or shared between two rooms.

02.05 Baths and Showers

Bath surfaces should be non-porous and easy to clean. Spa baths are generally not favoured owing to the potential for water backflow and bacterial contamination.

Ensure the shower hose is short enough so that the shower head does not reach the floor when it is removed from its bracket.

In specialty areas such as an ICU, where patients may be showered on shower trolleys, a longer hose may be necessary. Alternatively two shower outlets may be preferred.

Hoses should not be installed as part of a delivery bath/pool as the hose may fall into pool water and become contaminated with pathogens.

02.06 Isolation Rooms

INTRODUCTION
This Guideline describes and identifies requirements for patients requiring transmission-based precautions, or for patients who require protection from external sources.

TYPES OF ISOLATION ROOMS
There are four types of isolation room. The isolation room types and uses are detailed in Table 2.

Table 2: Isolation Room Types

AusHFG	As detailed in HB260 (Standards Australia 2003c)
Class S - Standard	Standard isolation - Type 4
Class P - Positive pressure	Patient protection - Type 3
Class N - Negative pressure	Respiratory isolation - Type 5
Class Q - Quarantine	Quarantine isolation - Type 5 plus airlock

The isolation room used in Table 2 refer to definitions used in Standards Australia, 2003, HB 260:2003 Hospital Acquired Infections - Engineering Down the Risk.

Isolation rooms Class S and Class N, when not required for the care of infectious patients, can accommodate other patients once the room is vacated and cleaned as per the infection prevention and control policy of the facility.

The risk of utilising these Class N rooms for patients other than those with infectious conditions is that doors can be left open, compromising the door seals. In addition, negative air pressure may be turned off, which may further compromise the integrity of the mandatory mechanics required for infection prevention and control.

Patients with airborne transmitted infections, such as varicella, measles, and tuberculosis will not be accommodated in Class P isolation.

Controls for pressurised isolation rooms should be located to minimise the risk of tampering. Staff should be able to easily view pressure gauges.

CLASS S - STANDARD ISOLATION ROOM

A Class S/ Type 4 isolation room is a single room with an ensuite that is not shared. The room is used for patients who require isolation to minimise the potential for infections being transmitted by contact or droplets to other patients and staff.

A Type B hand basin is required within the room. Self-closing doors to help control room temperature are recommended. A PPE bay may be provided outside the door and may be shared with an adjoining room.

There are no specific requirements for air conditioning.

CLASS P - POSITIVE PRESSURE ISOLATION ROOM
A Class P isolation room is a single room with an ensuite that is not shared. This room is used to reduce the risk of airborne transmission of infection to susceptible patients with prolonged granulocytopenia, such as allogeneic bone marrow recipients.

A Type B hand basin is required within the room and self-closing doors to control room pressures.

The positive pressure air handling system within the room operates at a higher pressure, with respect to adjacent rooms/spaces, and air supply is high efficiency particulate air (HEPA) filtered. Air exhausted from these rooms is not infectious and therefore does not require filtration. For details of air changes etc., refer to Section 6.6 of AS 1668.2 (Protective Isolation Rooms).

An enclosed anteroom is not required, but sufficient and appropriate storage space should be provided outside the room for PPE. Waste disposal should be provided inside the room.

For further information refer to Standards Australia, 2002, AS 1668.2:2002 The Use of Ventilation and Airconditioning in Buildings, Part 2.

CLASS N - NEGATIVE PRESSURE ISOLATION ROOM
A Class N isolation room is a single room with an ensuite that is not shared. It is used for patients who require isolation to reduce airborne transmission of disease (e.g. varicella, measles, pulmonary or laryngeal tuberculosis).

A Type B hand basin within the room and a self-closing door are required, with sufficient and appropriate storage for clinical waste.

The design of the room must provide separate entry doors to allow for movement of the patient in and out of the room. The anteroom is only for use by staff and visitors.

The air handling system in Class N isolation rooms operates at a lower pressure with respect to adjacent areas such as the anteroom and corridor. Air in negative pressure rooms will be exhausted to the outside in accordance with AS 1668.2 to prevent air recirculation. Ideally, supply air into the room should be located on the ceiling above the foot of the bed. The exhaust air to be located at the head of the bed.

The discharge points should be located as far as possible from air intakes and from where people congregate or work. If external exhaust is not possible, air should be recirculated through HEPA filters. Provision of a dedicated exhaust system to each room, separate to the common exhaust air system, will reduce the risk of contamination.

HPUs that require one or more Class N rooms include:

- emergency unit;
- intensive care units (adult, paediatric, neonatal);
- respiratory units;
- paediatric inpatient units; and
- infectious diseases units.

Procedural areas such as bronchoscopy rooms and sputum induction rooms may require similar negative pressure air handling systems.

The air handling systems designed for airborne infection isolation should be connected to the emergency backup power in case of power failure. These rooms have additional seals to prevent inadvertent escape of pathogens, therefore with no ventilation in the event of sustained power failure; isolation of airborne patients with infectious conditions becomes a patient safety risk.

For more information also see Standards Australia, 2002, AS 1668.2:2002 The Use of Ventilation and Airconditioning in Buildings, Part 2.

CLASS Q - QUARANTINE ISOLATION ROOM
A Class Q isolation room is a single room with a dedicated ensuite that is not shared and includes all design requirements as described for a negative pressure room. In addition, the quarantine isolation room will require an anteroom designed to function as an absolute airlock (refer to clause 820.006.075 below).

Inclusion of an electronic communication system (intercom) between the isolation room and the airlock will assist in eliminating or reducing unnecessary traffic into the room.

One hospital in each Australian capital city will have designated Class Q rooms providing facilities for patients with highly infectious pathogens such as haemorrhagic fevers and pneumonic plague. These patients require a further level of containment over and above the standard negative pressure isolation room.

COMBINED ALTERNATING PRESSURE ISOLATION ROOMS
Combined alternating pressure rooms (enabling the room to have either negative or positive pressure) are NOT recommended due to concerns such as:

- the difficulty in the configuration of appropriate airflow for two fundamentally different purposes;
- the risk of operator error;
- the need for complex engineering; and
- the absence of failsafe mechanisms.

CALCULATION OF NUMBERS OF SINGLE ROOMS - GENERAL
When redeveloping healthcare facilities, project planning teams should use available service planning and incidence data to determine the number and type of single rooms required, and the mix of isolation rooms. Assessment of actual demand for patient isolation should include:

- number of patient admissions with infections known or suspected to require isolation;
- the type and duration of isolation required;
- clustering of cases that may be influenced by seasonal and other trends; and
- type of units where patient isolation may be necessary.

Estimates of numbers and types of isolation rooms should consider:

- trends in disease in the general population and the particular population served (e.g. settlement of refugees in rural areas);
- demographic trends in the population served;
- specialties of the healthcare facility; and
- projected changes in future clinical activities.

Data collected over one year or longer will provide more reliable estimates and assist in determining peak needs for diseases with marked seasonal variations.

Retrospective data (based on discharge) should be used with caution as the data may not include suspected, but unconfirmed, cases of certain infections requiring isolation, thereby causing an underestimation of requirements. For planned new facilities, data from comparable facilities serving comparable populations may be available in place of retrospective data.

When calculating requirements for persons known or suspected of having infections that require airborne precautions, it is important to collect data on patients suspected of having tuberculosis or other transmissible diseases, and/or contacts that require isolation because they are in the potentially infectious period. Patients

will require isolation until confirmed as uninfected by clinicians, or until the treatment or the clinical course of the infection renders the patient no longer infectious.

Consider the need for one negative pressure room per 100 acute beds as a minimum. Actual requirements will be dependent on an assessment of the health services baseline infection rate and recent trends. Also see Standards Australia, 2003, HB 260:2003 Hospital Acquired Infections - Engineering Down the Risk.

The requirement for Class P isolation rooms should be determined by collecting data on local threats from pathogens such as Aspergillus, as well as evidence (from within and beyond the facility) on the ability to protect vulnerable patients. This will depend on the clinical specialties within the facility or catchment area.

DESIGN PRINCIPLES FOR ISOLATION ROOMS

The aim of environmental control in an isolation room is to control the airflow, thereby reducing the number of airborne infectious particles that may infect others within the environment. This is achieved by:

- controlling the quality and quantity of intake and exhaust air;
- diluting infectious particles in large volumes of air;
- maintaining differential air pressures between adjacent areas; and
- designing patterns of airflow for particular clinical purposes.

The location and design of isolation rooms within a particular HPU (department or inpatient unit) should ideally enable their isolation from the rest of the unit. Multiple isolation rooms should be clustered and located away from the main entrance of the unit.

An exception is an emergency department where it is recommended that designated isolation rooms be located near the entry to prevent spread of possible airborne infection throughout the unit.
Consideration may be given to one whole floor level, or a defined section of inpatient accommodation, being designed with separate air-conditioning and exhaust systems to enable healthcare facilities to accommodate an infectious outbreak.

When planning isolation rooms consider:

- sufficient and appropriate storage space for waste receptacles inside the room;
- sufficient and appropriate storage space for PPE outside the room;
- provision of an observation window with a privacy blind between double glazing (to allow staff to observe patients without entering the isolation room);
- provision of a communication system such as a phone or intercom to allow communication between staff, patients, interpreters, visitors etc. without leaving the room; and
- suitable surface finishes (ceiling, walls, floor coverings etc.).

ENGINEERING REQUIREMENTS

Details of engineering requirements and services for isolation rooms are available from a number of sources including:

- CDC, 2003, Guidelines for Environmental Infection Control in Health-Care Facilities;
- NHS Estates, 2013, Infection Control in the Built Environment (HBN 00-09);
- Standards Australia, 2003, HB 260:2003 Hospital Acquired Infections - Engineering Down the Risk;
- Standards Australia, 2002, AS 1668.2:2002 The Use of Ventilation and Airconditioning in Buildings, Part 2; and
- Victorian Advisory Committee on Infection Control, 2007, Guidelines for the Classification and Design of Isolation Rooms in Health Care Facilities.

ANTEROOMS

Anterooms allow staff and visitors to change into, and dispose of, personal protective equipment used on entering and leaving rooms when caring for infectious patients. Clean and dirty workflows within this space should be considered so that separation is possible.

Anterooms increase the effectiveness of isolation rooms by minimising the potential escape of airborne nuclei into a corridor area when the door is opened.

For Class N isolation rooms the pressure in the anteroom is lower than the adjacent ambient (corridor) pressure, and positive with respect to the isolation room. The pressure differential between rooms should be not less than 15 Pascal.

Anterooms are provided for Class N isolation rooms in intensive care units, emergency departments, birthing units, infectious diseases units, and for an agreed number of patient bedrooms within inpatient units accommodating patients with respiratory conditions. The need for anterooms for Class N/ Type 5 rooms in other HPUs should be considered on a case-by-case basis.

An anteroom should not be shared between rooms.

An anteroom will not be used to move the patient in and out of the room. The patient entry doors will instead be used.

AIRLOCKS FOR Q CLASS ROOMS

Anterooms in Class Q rooms act as full airlocks with two interlocking doors that cannot be opened simultaneously. The airlock will need to be large enough to incorporate additional disposal facilities as well as allowing bed movement with doors interlocked.

Ensuring that the pressure in the airlock is lower than the adjacent ambient (corridor) pressure, and positive with respect to the isolation room. The pressure differential between rooms should be no less than 15 Pascals. The door to the airlock from the corridor is to be well sealed with good quality seals on each side. The airlock should have supply air (no exhaust) with a door grille between the airlock and the isolation room.

FUNCTIONAL CLASSIFICATION OF ISOLATION ROOMS

The functional classification of isolation rooms is provided in Table 3.

Table 3: Functional Classification of Isolation Rooms

	Class P	Class S	Class N	Class Q
Key ventilation criteria	Greater air pressure in the room than in the corridor.	No air pressure difference between room and the adjacent corridor.	Lower air pressure in the room than in the adjacent corridor or anteroom.	Lower air pressure in the room than in the adjacent airlock.
Transmission based rationale	To prevent transmission of pathogens from the outside environment to profoundly immuno-compromised patients.	To prevent contact or droplet transmission.	To prevent airborne transmission.	Quarantine of patients with highly transmissible pathogens to prevent airborne transmission.
Examples for use (noting this is not a complete list)	To prevent infections such as aspergillus (fungal infection) in allogeneic bone-marrow transplant recipients.	VRE / MRSA Gastroenteritis Cutaneous anthrax Hepatitis A	Measles and Varicella, suspected or proven. Pulmonary or laryngeal tuberculosis.	Highly infectious pathogens such as haemorrhagic fevers, pneumonic plague.

			Suspected contact of measles, Varicella, and SARS if symptomatic	

For further information refer to section B5.2 of NHMRC, 2010, Australian Guidelines for the Prevention and Control of Infection in Healthcare (2010).

02.07 Non-Patient Areas

Waiting areas in non-inpatient units, including ambulatory care units and community health centres, should be designed and arranged so it is possible to separate patients who have been diagnosed with, or are suspected of having, a communicable disease.