

Chapter 10 Infection prevention and control in specialised settings and patient groups

10.1 Background

As a direct effect of their impaired immune defences, immunocompromised patients have an increased risk of infections and are at risk of significant morbidity and mortality. This risk is compounded by the frequent requirement for indwelling vascular devices for the delivery of therapy, for example, dialysis and transfusion support, the high requirements for antibiotics, and frequent hospitalisation, which increase the potential for exposure to and/or acquisition of multi-drug resistant microorganism (MROs) or healthcare associated infections (HAIs). In addition, impaired immunity may lead to increased shedding of microorganisms, resulting in increased potential for disease transmission (Agrati et al., 2023).

A Health Organisation is to develop a risk mitigation strategy that includes the regular auditing and reporting of compliance with standard precautions, environmental cleaning, HAI surveillance outcomes and adherence to antimicrobial stewardship initiatives within the clinical areas, particularly where immunocompromised patients are accommodated. When compliance with standard precautions falls below acceptable levels, or an HAI is confirmed, remedial action to address breaches in infection prevention and control should be implemented.

A system for the early detection and screening of patients for risk factors and signs or symptoms of infection should be developed for the clinical services that manage immunocompromised patients. Screening for a number of infections including tuberculosis (TB), hepatitis B and C and MROs may be particularly relevant for those undergoing intensive immunosuppressive regimens. For information on the management of high consequence infectious diseases refer to NSW Health [Early Response to High Consequence Infectious Diseases](#) and CEC [High Consequence Infectious Diseases – Infection prevention and control Principles](#).

Respiratory viruses and other pathogens circulating in the community may be introduced into healthcare facilities by visitors (particularly young children) and health workers. Each Health Organisation is to implement local policies for leave or deployment of unwell health workers working in areas such as intensive care unit (ICU), oncology, transplant units, neonatal intensive care units (NICUs) and delivery suites, and for the exclusion of unwell visitors, participants in care, and young children from these clinical areas (Singh et al., 2014).

Annual influenza vaccination of health workers, other clinical personnel, students, and contacts with those who are immunocompromised is mandated for some risk categories and strongly recommended for other groups to reduce the potential for influenza transmission in extreme risk areas.

10.2 Management of tuberculosis in healthcare settings

Mycobacteria are a group of bacteria that can cause a variety of diseases. Some mycobacteria are grouped within the *Mycobacterium tuberculosis* complex because they cause tuberculosis (TB) disease.

Non-tuberculous mycobacteria can cause disease similar to TB; however, they do not usually require transmission-based precautions, noting that infection prevention and control requirements for Cystic Fibrosis (CF) patients with *Mycobacterium abscessus* complex should be determined by local experts in CF care and infection prevention and control. These decisions should be based on individual risk assessments, clinical presentation, and local protocols to ensure safe and effective management.

TB disease most commonly affects the lungs, referred to as pulmonary TB, but can also affect other organs or systems, referred to as extra-pulmonary TB. Lymph node TB is the second most common site of disease. Pulmonary TB and TB of the larynx (voice box) should be assumed to be infectious. Extra-pulmonary TB is generally non-infectious, assuming that concurrent pulmonary involvement has been actively excluded.

Pulmonary or laryngeal TB may be transmitted in healthcare settings to health workers and other patients. *M. tuberculosis* is spread via inhalation of small particle aerosols (airborne route).

When an individual with laryngeal or pulmonary TB coughs, sneezes, laughs, or sings, they release droplet nuclei containing *M. tuberculosis*. These particles are typically 1–5 micrometres in diameter, small enough to remain suspended in the air for extended periods. Depending on ventilation and airflow, these infectious particles can be carried throughout a room or even across different areas of a building. Transmission can also occur from aerosolisation of *M. tuberculosis* from other sites of disease.

Airborne precautions are indicated for all patients where laryngeal or pulmonary TB is suspected or confirmed. These patients should not be co-located with other patients. Where possible, home management should be considered for these patients.

Patients with TB are to be cared for according to relevant [NSW Health Tuberculosis policies and guidelines](#).

Airborne precautions are not required for individuals with extrapulmonary tuberculosis, where concurrent pulmonary involvement has been excluded.

For more information refer to [Department of health and Aged Care Infection control guidelines for the management of patients with suspected or confirmed pulmonary tuberculosis in healthcare settings](#).

10.2.1 TB infection without TB disease

Individuals diagnosed with TB infection identified through a tuberculin skin test (TST) or interferon-gamma release assays (IGRA) such as QuantiFERON-TB Gold Plus®—should undergo a clinical assessment for signs and symptoms of TB disease. Typical signs and symptoms of TB disease include prolonged cough (with or without haemoptysis), fever, unexplained weight loss, lymphadenopathy, unexplained night sweats and / or unexplained fatigue. A plain chest X-ray should be performed to exclude pulmonary TB disease.

Patients with TB infection (latent TB infection without active disease) are not infectious and do not pose a transmission risk to others. Therefore, if such individuals require care in a healthcare setting, there is no indication for isolation or the implementation of infection prevention and control precautions specific to TB.

10.2.2 Precautions for people with presumptive and confirmed TB disease

The period prior to a confirmed TB diagnosis is critical for infection prevention and control. Transmission is significantly more likely when TB is not initially suspected, or when appropriate precautions are not implemented early in a patient's interaction with the healthcare system.

Health workers should maintain a high index of suspicion for TB when assessing patients with respiratory symptoms and radiographic findings suggestive of TB such as pulmonary cavities or upper zone infiltrates, particularly in individuals with known risk factors (for example, birth in, or travel to, countries with a high TB incidence or known contact with an infected individual).

Hospital admission and airborne precautions

Prompt isolation of patients with presumed TB disease, including in Emergency Department settings, is a key administrative control strategy to reduce the risk of healthcare associated transmission. Early implementation of airborne precautions and timely diagnostic evaluation are essential components of effective TB infection prevention and control in hospital settings.

Patients with presumptive pulmonary or laryngeal TB should be asked to wear a surgical mask while awaiting placement in an appropriate airborne infection isolation room. Once inside a properly ventilated isolation room, mask use by the patient is no longer required. All individuals with presumptive or confirmed pulmonary TB should be educated on cough etiquette to reduce the risk of transmission. In cases of presumptive extrapulmonary TB, it should be assumed that pulmonary involvement may be present until definitively excluded. These patients should be isolated accordingly to prevent airborne transmission.

All infectious TB patients require isolation in airborne precautions in a negative pressure room. Where a negative pressure room is not available, patients should be placed in a single room with the door closed. Patients should not be co-located until cleared by local infection prevention and control teams who can collaborate with the local TB coordinator/TB service if uncertain.

For health workers, visitors and carers, a fit checked P2/N95 respirator must be worn while inside the isolation room to ensure adequate protection. Refer to 6.3.2 Airborne precautions.

In cases of presumptive extrapulmonary TB, it should be assumed that pulmonary involvement may also be present until definitively excluded. These patients should be isolated accordingly to prevent potential airborne transmission.

Home isolation considerations

Unless there are specific clinical or public health concerns, patients with a confirmed diagnosis of infectious TB disease should be considered for home isolation in consultation with the local TB Coordinator/TB service, provided the home environment is deemed suitable.

Key considerations include the home infrastructure and ability to isolate (including availability of separate bathrooms), whether children less than 5 years of age or immunocompromised people are living in the household, capacity of the local TB service to deliver or coordinate care, treatment and monitoring in the community.

10.2.3 De-isolation of people with presumptive TB where the diagnosis has been excluded or is considered highly unlikely

Patients with presumptive TB disease may be removed from isolation whether in hospital or in the community when infectious TB disease is considered clinically unlikely, and one or more of the following criteria are met:

- The patient has undergone testing with at least two (2) expectorated and/or induced sputum specimens (collected during the same procedure), or one (1) bronchial lavage specimen, and all specimens have returned negative results for acid-fast bacilli (AFB) on smear microscopy and are PCR-negative for *M. tuberculosis*.

Note: PCR testing for *M. tuberculosis* should be requested on at least one specimen.

AND/OR

- No procedures are being performed that could result in aerosolisation of infected tissue, such as surgical drainage or wound irrigation of TB-related lesions

AND/OR

- An alternative diagnosis has been confirmed that explains the clinical presentation.

The decision to de-isolate a patient must be clearly documented in the clinical record, including the rationale and supporting test results.

10.2.4 De-isolation of people with infectious TB

For patients with confirmed pulmonary or laryngeal TB who are in isolation either in hospital or in the community, decisions regarding de-isolation should be based on a comprehensive clinical assessment and guided by the following criteria:

- The patient is adherent to and tolerating the prescribed treatment
- The patient has received effective treatment* for at least two weeks
- There is clinical improvement, or the patient remains asymptomatic
- There is microbiological evidence of response to treatment, such as a reduction in AFB on follow-up smear microscopy in patients who were initially smear-positive.

*Effective treatment is defined as a regimen appropriate to the drug susceptibility profile (if known) and site of disease, resulting in a clinical response.

The isolation period for people that have multidrug resistant TB is often extended, particularly whilst in hospital. This is determined on a case-by-case basis usually in collaboration with the NSW TB Expert Panel.

All decisions to de-isolate a patient must be clearly documented in the clinical record, including the rationale and supporting clinical findings.

10.2.5 Decontamination of isolation rooms following occupation by a person with infectious TB

Isolation rooms used by patients with presumptive or confirmed infectious TB whether in the Emergency Department, inpatient wards, or prior to discharge to home isolation, must be appropriately decontaminated before reuse.

The required time for the room to remain vacant after patient transfer or discharge depends on the room's ventilation system, specifically the air changes per hour (ACH). This determines how quickly airborne pathogens, including *M. tuberculosis*, are removed from the environment.

To ensure safe re-entry and reuse of the room, please consult your local Engineering Department to confirm the ACH rating for the specific isolation room. This information will guide the appropriate duration for room vacancy and any additional cleaning protocols required. For more information refer to section 6.3.2 Airborne precautions.

10.2.6 Patients with confirmed TB requiring hospitalisation after commencing TB treatment

It is not uncommon for patients who have recently commenced anti-TB treatment to require hospitalisation due to adverse drug reactions or other medical complications. In cases where TB treatment is interrupted for a prolonged period, the patient's infectiousness may recur, necessitating reassessment of isolation requirements.

Decisions regarding isolation for hospitalised patients already on TB treatment should be made in consultation with the treating TB physician and/or the local TB coordinator/TB service, and guided by established isolation and de-isolation criteria, including clinical status, microbiological findings, and treatment adherence.

10.2.7 Contact tracing of tuberculosis in hospitals

In the event of TB in a patient, health worker or visitor, the infection prevention and control team and the TB coordinator in the local health district/network should be notified. The relevant TB coordinator/TB service will work with the Health Organisation to undertake contact investigation, screening and follow-up for patients, health workers and other contacts as required.

Contact tracing in hospitals should be undertaken in accordance with legislative requirements and the [NSW Health Guideline Tuberculosis contact investigations \(GL2019 003\)](#).

Facilities should ensure that roles and responsibilities between themselves and TB coordinator/services are clearly defined regarding contact tracing and screening within the facility.

This should include designating:

- an appointed position or unit within the facility to be the designated contact for confirmed tuberculosis case notification
- an appointed position or unit to be responsible for collating a list of contacts including staff, patients and visitors
- the responsibility for assessing the contacts
- the responsibility for conducting screening of identified contacts, as appropriate
- a mechanism for documenting and reporting the outcomes of a contact screening investigation.

10.2.8 Transplant screening for tuberculosis

All patients on the active transplant list for solid organ transplantation and bone marrow transplantation must be assessed for their risk of previous exposure to TB and should be screened as part of the transplant workup as per [NSW Health Guideline Testing, diagnosis and management of TB Infection \(GL2024 015\)](#) and local protocol.

10.3 Neutropenia

For patients who are predicted to have prolonged and profound neutropenia, such as allogeneic stem cell transplant recipients, a protective environment should be considered to reduce potential exposure to HAs and fungal spores, especially *Aspergillus*.

Protective environment

A protective environment is a set of prevention measures comprising engineering and design interventions that decreases the risk of exposure to environmental fungi and other infectious microorganisms for severely immunocompromised allogeneic hematopoietic stem cell transplant patients during their highest risk phase. This includes specific air quality requirements as well as a number of other considerations.

Specific air quality requirements include:

- HEPA filtration of incoming air
- twelve air changes or more per hour
- ventilation (or airflow that goes from the patient room to the corridor) – greater air pressure in the room than in the corridor
- well-sealed rooms
- air flow patterns require monitoring and documentation

- strategies to minimise dust.

Dried or fresh flowers and potted plants in the rooms are not recommended as they often contain environmental organisms that may be pathogenic in these vulnerable patients.

Hand hygiene is a very important practice and should be performed before and after patient contact, in between episodes of care, before and after PPE donning and doffing.

Personal protective equipment

As per standard precautions and risk assessment:

- health workers and visitors are to wear a surgical mask
- patient is to wear a mask when out of room, (surgical or P2/N95) – if appropriate.

Note: Protective environment does not include the use of barrier precautions beyond those indicated for standard and transmission-based precautions.

10.4 Management strategies of specialised settings during construction or renovation

Construction activity, especially in the initial phases when excavation is being undertaken, can disturb fungal reservoirs, leading to aerosolisation of fungal spores into the facility. *Aspergillus fumigatus*, a common pathogenic fungal mould that produces airborne spores, is often in circulation during construction activities in hospital (Talento et al., 2019). Fungal spores are resistant to drying, can remain suspended in the air for long periods and can travel substantial distances from the source of generation.

Exposure to even a low spore load can result in infection in immuno-compromised individuals. Patients who are at the most risk of infection are those receiving bone marrow transplants, solid organ transplants, haematology, oncology and those receiving immunosuppressive medication.

To protect vulnerable patients, prior to any construction or maintenance activity, a Health Organisation is to undertake a risk assessment and implement a risk management strategy to minimise the risk of infection in immuno-compromised individuals.

The risk assessment should include the following:

- the extent of construction work
- the identification of the patient population at risk
- the location of the patient population in relation to the site and construction
- ventilation system types and potential impact
- traffic and supply routes
- determination of air monitoring requirements, methodology and frequency, including baseline measurements if required (air quality and dust monitoring)
- the identification of possible contaminants and their locations, as contaminants may be present in ceiling dust; service shafts (especially damp conditions); sprayed fire retardants, and bird droppings
- prophylactic treatment options for at risk patients, if required.

During construction/renovation Health Organisations should develop a local procedure based on risk assessment of the area involved and the patient groups will potentially be affected. Health Organisations are to provide patient and carer information.

Table 45 Risk assessment checklist

Task	Completed
Construction, renovation, installation, and maintenance activities must have a formal infection prevention and control risk assessment undertaken, and mitigation strategies planned and approved, prior to the commencement of any works.	☐
Engineering controls for risk mitigation are articulated in contracts agreed between the health service and external contractors.	☐
A risk assessment of the patient population group within the construction/renovation site is undertaken and appropriate controls to minimise individual risk implemented.	☐
Additional measures are implemented to minimise the risk of infection to these patient groups during construction, for example, air sampling, provision of P2/N95 respirator to high-risk patients to wear if transit near construction zone is unavoidable.	☐
The relevant stakeholders are consulted, such as infection prevention and control department, executive and the project team/engineering and maintenance in conjunction with Work Health and Safety coordinator.	☐
Strategies to minimise the risk of infection associated with construction activities, for example, dust control is implemented.	☐
Dust control measures and monitoring requirements indicated during the project including costs of monitoring.	☐
Clear processes are established if risk changes during the project and unforeseen risks occur, such as, additional dust monitors needed, contracts can be updated to include that additional expenses will be incurred by the contractor.	☐

10.5 Cystic fibrosis

Cystic fibrosis (CF) is a progressive, genetic disease that affects the lungs, pancreas, and other organs. CF can cause persistent lung infections and impaired lung function. Patients with CF are at risk of both acquiring and transmitting respiratory infections. Respiratory infection in patients with CF can be more significant than for other individuals and is associated with deterioration of lung function. Many different bacterial organisms, viruses and fungi can infect the respiratory tract of patients with CF. It is important that units that care for patients with CF (respiratory wards, non-CF respiratory wards and hospitals with CF clinics) partner with local infection prevention and control units to implement the additional measures described in this section. Adherence to these measures should be monitored and fed back to the unit to enable continual improvement.

10.5.1 Infection prevention and control principles

When caring for any patient (inpatient or outpatient) with CF, health workers are to employ:

- **Standard precautions**, particularly:

- hand hygiene before and after patient contact
- use of PPE, such as gloves, apron/gown and mask, for handling body substances/sputum, performing chest physiotherapy or if there is an increased risk of contamination to the health worker
- environmental cleaning
 - single rooms occupied by inpatients with CF must be terminally cleaned before their admission and after discharge
 - during inpatient admission, frequently touched surfaces should be cleaned routinely with a hospital grade disinfectant
 - all medical equipment used for CF patients and in clinics must be cleaned and disinfected with approved agents (as per manufacturers' IFU) before and after use
- **Respiratory hygiene**
 - patients (inpatient or outpatient) with CF are encouraged to wear a fluid resistant surgical mask (not a P2/N95 respirator) when ambulating around general hospital areas (anywhere except own bed area and gym with the physiotherapist)
 - prevent mixing of CF patients, regardless of their respiratory tract culture results, CF patients are to maintain $\geq 2\text{m}$ distance from each other in all settings, to reduce the risk of droplet transmission of pathogens between patients
 - cough etiquette should be encouraged among CF patients when attending any group activities
- **Pulmonary function tests (PFT)** are to be performed in one of the following areas to reduce transmission from one person with CF to another person with CF:
 - in the exam room at the beginning of the clinic visit, allowing sufficient time to elapse between CF patients (times will depend on air changes per hour in the room and will vary within and between facilities)
 - in a negative pressure room (airborne precautions room)
 - in a PFT laboratory with high-efficiency particulate (HEPA) filters
 - in a PFT laboratory without HEPA filters, allowing 30 minutes to elapse between individuals with CF.

The need to employ additional infection prevention and control precautions when caring for a patient with CF is dependent on the presence or absence of certain risk criteria. Table 46 describes the risk criteria and outlines the transmission-based precautions that should be employed, depending on the patient's risk level, for inpatient and outpatient settings.

In addition, for outpatient settings (including oral health):

- all contact between patients should be minimised and avoided if practical
- limit patient time in common waiting areas, at reception, in waiting rooms or at the pharmacy. Where this is unavoidable ensure the CF patient is wearing a fluid resistant surgical mask
- as soon as possible, patients should be placed in a single clinic room
 - patient flow and list for the clinic should be pre-planned before every clinic session

- Patients known to have *Burkholderia cepacia* complex or *M. abscessus* colonisation should not attend routine CF clinics but be seen in other non-CF clinics. If this is unavoidable, book appointment on alternate days of the CF clinic, implement strategies to reduce environmental contamination of the clinic room. The clinic room must be cleaned and left for a sufficient period before another patient with CF can enter the room (times will depend on air changes per hour in the room and will vary within and between facilities).

Note: Refer to Cystic Fibrosis Australia [Standards of care for Cystic Fibrosis](#).

Table 46 Levels of precautions for CF patients

Risk level	Risk criteria	Inpatient management	Outpatient management
Tier 1	Any patient with a diagnosis of CF (suppurative lung disease) and: no pathogens in their sputum no detection of any bacteria listed in level 2 risk criteria.	Standard precautions where possible, patients should be managed in ensuite single rooms. Otherwise, CF patients should not share a room with other CF patients or patients with respiratory illness*.	- Own room in CF outpatient clinic - Room to be terminally cleaned prior to next patient.
Tier 2	Any patient with a diagnosis of CF (suppurative lung disease) and: - Non-tuberculous mycobacteria - Mucoid or non-mucoid pseudomonas resistant to aminoglycosides and beta lactams MRO (MRSA, ESBL, VRE, CPO)	- Patients with a known MRO are to be managed as per local risk assessment - Below neck PPE (apron/gown and gloves as per risk assessment) - Droplet precautions (above neck PPE) - Isolate in single room with ensuite* - Shared equipment is to be cleaned and disinfected as per manufacturers' IFU after use.	- Droplet precautions - Own room with door closed - Room to be terminally cleaned and disinfected after use - Shared equipment to be cleaned and disinfected as per manufactures' IFU after use.
Tier 3	Any patient with a diagnosis of CF (suppurative lung disease) and: <i>Burkholderia cepacia</i> complex <i>Mycobacterium abscessus</i>	- Droplet precautions (above neck PPE – surgical mask and eye protection) - Below neck PPE as per risk assessment - Isolate in single room with ensuite* - Patients known to have <i>B. cepacia</i> complex or <i>M.</i>	- Droplet precautions - Own room with door closed - Room to be cleaned and disinfected after use - Shared equipment to be cleaned and disinfected as per manufactures' IFU after use.

	• <i>Mycobacteria avium</i> Other (unusual resistant organisms).	<i>abscessus</i> must be admitted to single rooms with ensuites, located on separate wards from other patients with CF. • If multiple patients with either organism are admitted simultaneously, they must be accommodated in individual rooms on different medical wards to prevent cross-transmission. • In paediatric units where rooming options are limited, patients with <i>B. cepacia</i> complex should not be cared for by the same nursing staff assigned to patients with <i>M. abscessus</i>, to reduce the risk of transmission between organisms.	
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* Familial cohorting is permitted, as the risk of transmission is comparable to the home environment.

Additional precautions can be applied based on risk assessment and facility discretion. Health workers are to ensure that the patient and their carers/participants in care are provided with information on why any additional precautions are required and any actions that they are required to undertake. Patients with other non-CF like lung conditions and accompanied immune deficiencies should be risk assessed similarly to above.

10.5.2 Clearance screening

Patients with CF do not fit the normal MRO clearance recommendations. Clearance for patients with CF will need to be determined on a case-by-case basis by the patient's clinical team, Infection prevention and control with consideration being given to aetiology, epidemiology and other key clinical factors.

10.6 Haemodialysis

Haemodialysis has been associated with blood stream infection, blood borne virus (BBV) acquisition and transmission of MROs.

The increased risk of infection in this patient population is mainly due to:

- accessing catheters regularly for treatment
- the immunocompromised status
- proximity to other dialysis patients during treatment
- nonadherence to recommended infection prevention and control practices by caretakers and health workers.

Bloodstream and bloodborne virus (BBV) infections can arise during haemodialysis from several sources. These include events such as venous access, issues within the dialysis system like the extracorporeal circuit, breaches in established protocols, inadequate monitoring for contaminants, failures in reprocessing equipment, or insufficient training and education of staff.

The risk of infection in the haemodialysis setting may be reduced by:

- adherence to standard precautions, including routine cleaning and reprocessing of shared equipment
- adherence to procedures for cleaning, disinfection and maintenance of equipment according to manufacturers' instructions
- a patient education program that includes teaching patients, participants in care and visitors on their role in the prevention of infections
- routine screening, monitoring and follow up of patients undergoing dialysis
- appropriate vaccination for all susceptible haemodialysis patients and health workers.

Patients that are hepatitis B surface antigen positive (HBsAg) should be treated in a separate room (or another area away from susceptible patients, if room is not available) with dedicated equipment and, where possible, nursing staff (Centers for Disease Control and Prevention, 2001).

A dedicated room can be reused for other patients after it has been cleaned and disinfected. The dedicated equipment can be reused for seronegative patients after being cleaned and disinfected as per manufacturer's instructions (CARI Dialysis Guidelines, 2018 [Infection Control for Haemodialysis Units](#)).

There is insufficient evidence to justify the routine isolation of dialysis patients positive for HCV or HIV (Garthwaite et al., 2019). Isolation should be considered if high prevalence (>30%) of HCV is observed (Gallego et al., 2006).

10.7 Interventional radiology settings

Interventional radiology (IR) techniques are used to treat a wide variety of diseases involving minimally invasive, diagnostic and interventional procedures, performed under image guidance including digital subtraction angiography, computed tomography, ultrasound and magnetic resonance imaging. Although the risk of infection during these procedures is generally reduced when compared with their surgical equivalents, the risk of infectious complications remains. The risk of infection potentially increases as this technology and its complexities advance. Interventional radiology techniques are required to adopt infection prevention and control principles.

10.7.1 IR worklists

When developing IR worklists:

- always prioritise clinical need and urgency over disease or MRO status
- where flexibility is possible, arrange the IR work list so that clean and clean-contaminated procedures are performed prior to contaminated procedures (Chan et al., 2012).

10.7.2 IR equipment

Many procedures within NSW Health are performed under ultrasound guidance, including the insertion of central venous access devices. While surface probes are most commonly used, intra-cavity probes may also be required for procedures such as transrectal prostate biopsies.

To ensure patient safety and prevent cross-contamination, disposable sterile probe sleeves or sheaths must be used and disposed of according to local waste management protocols. Regardless of sheath use, all ultrasound probes must be reprocessed between patient uses in accordance with the manufacturer's Instructions for Use (IFU), the requirements of AS5369:2023, and the Australasian Society for Ultrasound in Medicine (ASUM) Guidelines. If a probe is used on a semi-critical site (for example, mucous membranes or non-intact skin), high-level disinfection (HLD) is mandatory.

The probe/transducer must be cleaned and disinfected as per IFU and risk assessment, regardless of sheath or cover use. Only disposable sheaths that are compatible and approved for use with the ultrasound device should be used. Always follow the manufacturer's IFU for cleaning, disinfection, and storage of reusable ultrasound devices. See section 11.12 for information of covers and sheaths.

Reprocess used devices as per AS 5369:2023 *Reprocessing of reusable medical devices and other devices in health and non-health related facilities* and Australasian Society for Ultrasound in Medicine (ASUM) [Guidelines for Reprocessing Ultrasound Transducers](#).

10.7.3 IR environment

Installation of positive pressure air change ventilation should be considered when planning new IR facilities. There is evidence to suggest that the number of viable airborne microorganisms in a surgical suite is directly proportional to the number of persons present in the procedure room. It is therefore prudent to limit the traffic in the IR suite to essential personnel only.

The IR suite should be treated as a sterile environment. The personnel who work in this clinical area need to follow aseptic practices and follow appropriate procedure room attire requirements.

IR procedures, particularly sterile and clean procedures, should be performed under positive pressure air change ventilation. If this is not available, the doors to the procedural room should remain closed during procedures to decrease the transmission of microorganisms into the suite and potentially onto the sterile field, which may contribute to infections secondary to the procedure. Traffic into and around the room should also be restricted.

Sterile, clean and clean-contaminated procedures should follow absolute sterile technique. This includes at the minimum:

- scrub attire that is intended for wear only in the IR suite and to be worn as per operating theatre attire
- hair coverings and masks to be worn while in the suite and when open instruments/trays are present
- sterile gowns and gloves for those participating in the sterile field and procedure
- the use of sterile drapes in a manner that allows adequate coverage of the sterile field and site
- a semi-restricted area to serve as a barrier between the unrestricted area and the fully restricted area (suite) when interventional procedures are being performed.

Contaminated and dirty procedures should follow sterile technique procedure when feasible and appropriate. The level of infection prevention and control may depend on the urgency of the procedure. However, for an emergency procedure at the very least a clean environment with sterile instrumentation must be available.

The IR setting is rated as an extreme risk functional area; therefore, environmental cleaning is important in the prevention of cross infection. Cleaning in IR settings should be in line with the NSW

Health [Cleaning of the Healthcare Environment](#) policy directive. Particular attention should be made to the cleaning of arm boards and ceiling mounted equipment. The IR procedure suite and work surfaces should be cleaned and disinfected thoroughly after every procedure to decrease the amount of dust and microbial burden.

10.7.4 Aseptic technique in IR

Prevention of surgical site infections (SSIs) in the IR procedure suite involves multiple aspects, which focus primarily on the adherence to aseptic practices (surgical asepsis) related to personnel attire, appropriate hand hygiene, gowning, gloving, preparing, draping, maintaining a sterile field, and cleaning of the IR suite. The responsibility for reducing microbial burden within the IR procedure suite to the lowest level possible must be shared by all members of the IR team.

To ensure that aseptic technique is used in IR:

- thorough skin preparation should be performed on clean skin using an appropriate antiseptic (such as 2% chlorhexidine in 70% alcohol). If there is a contraindication to chlorhexidine, a suitable alternative should be used (for example, povidone-iodine)
- if hair removal is required, hair should be clipped rather than shaved immediately prior to the procedure
- appropriate attire should be worn including caps, masks, sterile gown, and sterile gloves
- sterile drapes are to be used to create a barrier between the surgical field and potential sources of microorganisms
- maintain asepsis of key sites and key parts of catheters, prostheses and implantable devices.

10.8 Respiratory and sleep study clinics

It is evident that the burden of disease associated with respiratory and sleep disorders is great, given their high prevalence and significant associated morbidities. All healthcare organisations, regardless of the level of care provided, must make infection prevention and control a priority and must be equipped to observe standard and transmission-based precautions.

10.8.1 Nebulisers

Nebulisation, combined with disease symptomatology, such as coughing, have been a risk for the aerosolised spread of certain transmissible diseases. Therefore, to minimise the likelihood of the aerosolised transmission, it is recommended that effective alternatives, such as metered dose inhaler with spacer, are used where possible.

Where it is not feasible to use a metered dose inhaler and spacer, a nebuliser can be used in a designated room or area where other patients and visitors have limited access. Health workers attending to a patient using a nebuliser should wear a P2/N95 respirator and eye protection.

Aerosol delivery equipment used to administer inhaled medications includes the nebuliser, positive expiratory pressure devices added to the nebuliser, and valved holding chambers (spacers). Where available single patient use respiratory equipment should be used. When use of equipment for multiple patients is unavoidable, a risk assessment should be performed and cleaning carried out according to the manufacturer's instructions. These devices are semi-critical medical devices, and reusable parts must be cleaned, disinfected, rinsed with sterile water, and air-dried.

10.8.2 Use of filters on respiratory devices

Where available, single-use respiratory equipment should be used. Single-use respiratory equipment designed for use on one person only, does not require a filter. If single use equipment is

not available, a filter is to be used for blow-and-inhale procedures. The use of filters does not interfere with the quality of the recordings. Certain types of equipment, such as older types of spirometers which have positive pressure when in use, require a filter.

10.8.3 Resuscitation devices

Health workers should use resuscitation devices, such as masks, during cardiopulmonary resuscitation (CPR) to prevent direct contact between the mouth of the resuscitator and the person being resuscitated. Health Organisations should ensure that individual resuscitation devices are available and accessible in all patient areas. Where possible, single use resuscitation devices should be used. Reusable manikins used for teaching CPR must be reprocessed after each use as per manufacturers IFU.

CPR training provided or approved by the Health Organisation should include instruction on the use of all resuscitation devices.

10.8.4 Semi-critical resuscitation devices

Semi-critical equipment used for clinical procedures in the sleep and/or respiratory investigation labs are to be cleaned and disinfected or sterilised between each patient use according to manufacturer's IFU to prevent and minimise the occurrence or transmission of infection.

10.9 Maternity settings

In Australia, where childbirth is safe for most women, maternal death is rare, however, the maternal mortality ratio (MMR) in Australia in 2022 was 4.8 deaths per 100,000 women giving birth (14 maternal deaths) [[AIHW](#)]. Most maternal infections and their consequences can be avoided by implementing appropriate infection prevention and control practices, antenatal screening and appropriate antibiotic use.

10.9.1 Prevention of vertical transmission

Universal screening for Hepatitis B virus (HBV) is recommended by the Australasian Society of Infectious Diseases for all pregnant women regardless of previous testing or vaccination. The recommended screening test for HBV is hepatitis B surface antigen (HBsAg), and this should be offered at the first antenatal visit. Health Organisations should have a referral process in place for mothers with BBVs to ensure they are referred to appropriate clinical services during the antenatal period.

The [National Hepatitis C Virus \(HCV\) Testing Policy](#) recommends selective antenatal screening for HCV based on identified risk factors. For identified risks refer to [Antenatal Testing and Blood-Borne Viruses](#) (BBVs).

Universal antenatal screening for Human Immunodeficiency Virus (HIV) is recommended in the [National HIV Testing Policy](#). For more information refer to National HIV testing policy.

Vertical transmission of infectious diseases

A neonate has an increased potential of vertical transmission of infectious diseases when its skin integrity has been breached *in utero*. To minimise this risk, avoid the following medical procedures if possible:

- HIV positive or HCV PCR RNA positive or HBsAg or HBeAg positive
 - fetal scalp electrode monitoring and fetal blood sampling on babies of mothers who are HIV positive or HCV PCR RNA positive or HBsAg or HBeAg positive. It may be performed on HCV PCR RNA negative mothers

- Herpes simplex virus (HSV) or *Group B Streptococcus* positive
 - fetal scalp electrode monitoring and fetal blood sampling on babies of mothers who are HSV active or *Group B Streptococcus* positive who have not been given appropriate antibiotics 30 minutes prior to the procedure.

10.9.2 Prevention of blood-borne virus

After birth, initial skin-to-skin contact and the first breastfeed are important and a priority. This should occur prior to cleansing the baby of blood and body substances (Widström et al., 2019). Blood and other body substances must be removed from the baby's skin and eyes as soon as practicable. Standard precautions must be adhered to by all health workers, visitors and family (except the mother) when handling the baby until the baby has been bathed ([United Nations Children's Fund](#)).

Additional considerations are needed when cleaning baths are used in birthing suites. Equipment such as a long-handled sponge mop may facilitate cleaning. If reusing the bath plug, ensure the plug and any attachment can be cleaned. The following cleaning procedure is recommended for baths to address risks associated with exposure to blood and body substances:

1. Empty water out of the bath. Plugs are required to be attached to a chain for easy removal
2. Rinse bath with water
3. Clean bath using long handled sponge mop with a neutral detergent and hospital grade disinfectant
4. Important to allow the required contact time as recommended by manufacturers' instructions before rinsing bath with water
5. When cleaning baths in birthing suite replace the bath plug and ensure the plug is included in the cleaning process.

10.10 Mental health, drug and alcohol settings

The infection prevention and control program are adapted to account for the patient's physical health status and mental acuity, the focus of treatment and the facilities/layout of the unit. Infection prevention and control equipment, such as trolleys for PPE and brackets for hand rub, that are left in areas accessible to patients need to be carefully reviewed for safety, for example, ligature risk.

Health Organisations and health workers providing care in this setting should:

- identify potential infection risks, and develop safe work practices to mitigate these risks
- encourage patients to perform hand hygiene by facilitating hand hygiene education and providing patients and health workers with safe access to hand hygiene facilities
- encourage and facilitate patients to maintain their personal hygiene.

10.11 Residential, rehabilitation and long-term care settings

Infectious diseases have the potential to spread readily in residential, rehabilitation (including Hospices) and long-term care settings, as residents live in proximity, typically with communal facilities, for example, dining rooms and lounges.

In residential, rehabilitation and long-term care settings, the infection prevention and control program should be adapted according to the patient's physical health status, mental acuity, requirement for a home-like environment and the facilities/layout of the premises. For more information refer to the Australian Commission of Safety and Quality in Healthcare [Infection](#)

[prevention and control in aged care](#), [The Aged Care Infection prevention and control Guide](#) (the Guide) and Australian Government Department of Health and Ageing [Managing infectious diseases in aged care](#).

Vaccination is an effective way to stop people from acquiring vaccine preventable diseases. Refer to the [Australian Immunisation Handbook](#) for further advice on use of vaccines.

In the aged care context, the infection prevention and control program must also address the [Aged Care Quality and Safety Commission](#) Accreditation Standards.

Services may be available to assist and support keeping patients within a residential, rehabilitation or long-term care facility when there is an infectious disease outbreak to reduce the need to transfer patients to acute hospital facilities. In consultation with the relevant public health unit (PHU) and NSW Ambulance local management, it may be appropriate to request extended care paramedics or specialist paramedics to assist in managing aspects of an infectious disease outbreak (for example, patient assessment, rehydration and ongoing monitoring on site) in these settings or similar services may be available within some NSW LHDs/SHNs.

10.11.1 Using extended paramedic services in residential and long-term care facilities

In consultation with the relevant PHU and NSW Ambulance local management, it may be appropriate to request [Extended Care Paramedics](#) or [Specialist Paramedics](#) to assist in managing an outbreak of an infectious disease within residential or long term care facilities. This has the potential to provide definitive care (for example, patient assessment, rehydration and ongoing monitoring as needed) on site and avoid or reduce the need to transfer patients to other healthcare facilities.

10.12 Ambulatory care settings

Each Health Organisation may be responsible for a diverse array of speciality ambulatory care clinics and services.

Ambulatory care settings that involve unique infection prevention and control risks include:

- Renal outpatient clinics
- Oncology and cancer care outpatient units
- Bone marrow transplant clinics
- Outpatient units that perform medical procedures
- CF clinics
- Day surgery
- High risk foot services/clinics
- Day rehabilitation.

Each setting requires:

- a risk management plan in place that identifies potential infection risks for outpatient settings, including an environmental assessment, and detailed strategies to mitigate these risks. This may include developing strategies to enable early detection of patients with infectious diseases prior to attendance at an outpatient clinic/service or at entry points of a facility and employing patient placement procedures for presenting patients who require isolation or designated toilet facilities

- resources to implement the risk management plan to be employed
- health workers to observe other infection prevention and control principles, such as antimicrobial stewardship and occupational vaccination
- an assessment of the requirement for transmission-based precautions dependent on the patient populations treated and procedures performed
- promotion of hand hygiene, respiratory hygiene and cough etiquette to patients and their participants in care and the provision of resources, for example, alcohol-based hand rub, tissues and rubbish bins.

Infections may cause morbidity and mortality in many of the patients who require frequent services from these clinics and units, particularly those that are immunocompromised, thus infection prevention and control is a key patient safety priority.

During pregnancy, the clinical consequences of acquiring a communicable disease may be more severe. Therefore, any outpatient settings where pregnant women are likely to attend should identify potential infection risks to pregnant women and ensure that these risks are minimised or eliminated as much as practically possible.

10.13 Oral health settings

Health workers working in oral health care settings are at risk of being exposed to high concentrations of aerosols and splatter during dental procedures and may be at risk of infection transmission. Oral health care must be delivered in a manner consistent with the NSW Health Infection prevention and control in Healthcare Settings policy directive, Australian Commission on Safety and Quality in Healthcare [Oral healthcare for adult inpatients](#), [National Safety and Quality Primary and Community Healthcare Standards](#) and [Australian Dental Association Infection Control](#).

10.14 Ophthalmic and optometry settings

The cornea and conjunctiva are classified as semi-critical sites and are highly susceptible to infection. For example, epidemic keratoconjunctivitis. Optometrists and optometric practice staff should adopt measures to minimise the risk of transmission of infection. Equipment used on semi critical sites require high level disinfection (HLD). Refer to [Infection control guidelines for optometrists 2016](#) for more information. Equipment (retinal camera) used to screen for Retinopathy of Prematurity (ROP) in low-birth weight neonates require cleaning and disinfection as per manufacturer's IFU to promote safety.

Contact lenses are not to be shared. Diagnostic contact lenses should be reprocessed in accordance with the manufacturer's IFU. Single use or disposable ophthalmic equipment should be used if adequate cleaning or reprocessing cannot be achieved. Products used for cleaning and disinfecting ophthalmic equipment that is used on the external eye must not be harmful to the eye. After cleaning or reprocessing, the equipment must be rinsed thoroughly and dried to ensure no chemical residue is present to prevent eye damage.

10.15 Community and home settings

A Health Organisation may provide care to patients in a range of settings outside hospitals, including private homes and community health centres.

The Health Organisation responsible for providing these services is to ensure that appropriate infection prevention and control practices, such as hand hygiene products, disposable paper towels, equipment cleaning solutions or wipes, PPE and sharps containers, are available to health workers working in these settings.

The Health Organisation and health workers should also ensure that the risk of infection transmission within the community is minimised by provision of hand hygiene products and education of patients on hand hygiene, personal hygiene, respiratory and cough etiquette, cleaning and healthy lifestyle.

At the minimum, health workers working in these settings are to adhere to standard and transmission-based precautions. Health workers working in home and community settings may experience difficulties in accessing facilities and resources typically found in a hospital. Due to these constraints, the Health Organisation should apply a risk assessment approach to identify potential infection risks for its specific community settings and develop safe work practices to mitigate these risks.

Antenatal and maternal care provided in home settings must follow strict infection prevention and control protocols to ensure the safety of both families and health workers. Standard precautions such as hand hygiene, appropriate use of PPE, and safe disposal of clinical waste are essential. All equipment used must be cleaned and disinfected using a TGA approved product according to the manufacturer's instructions and relevant standards, with risk assessments guiding the level of disinfection required.

10.16 Ambulance, paramedic and patient transport services

The transport of patients within or between healthcare organisations should be based on clinical need and urgency, rather than infection status. All agencies involved in patient transport must adhere to standard precautions, including appropriate cleaning and disinfection of vehicles and equipment between each patient. The guidance in this handbook applies equally to NSW Ambulance, paramedics and patient transport services.

The Health Organisation booking transport should notify all agencies involved of the patient's history including infectious status. Refer to section 7.10.1 Transporting a patient with an MRO. The Health Organisation booking the transfer should ensure the patient performs appropriate personal hygiene prior, where possible. This may include hand hygiene, showering and use of clean clothing prior to transport.

It is the responsibility of the transporting agency to ensure health worker staff have undertaken appropriate training and education to enable them to employ the appropriate transmission-based precautions in addition to standard precautions, during transport. A recommended framework for training is outlined in the national unit of competency [HLTINF001 - Comply with infection prevention and control policies and procedures](#).

10.17 Mortuary and care of the deceased

Standard precautions are recommended when handling the deceased body and if the deceased is known or suspected to be infected, continue transmission-based precautions after death. The washing and dressing of a body (hygienic preparation) should not be carried out if the deceased is known or suspected to be infected by invasive streptococcal infection, anthrax, rabies or high consequences infectious diseases (HCIDs) including viral haemorrhagic fevers (VHFs). The viewing of the body should also be avoided when the deceased is suspected or known to be infected with HCIDs, however a local risk assessment should be undertaken to inform any decision making. More information can be found on NSW Health [Final arrangements of the deceased](#).

For more information on handling of bodies refer to [NSW legislation Public Health Regulation 2022 Division 2 Handling of bodies](#).

Prescribed infectious diseases

Additional handling and labelling requirements apply to the bodies of deceased persons with prescribed infectious diseases. Prescribed infectious diseases means any of the following diseases:

- (a) avian influenza in humans
- (b) diphtheria
- (c) Middle East Respiratory Syndrome Coronavirus
- (d) plague
- (e) respiratory anthrax
- (f) Severe Acute Respiratory Syndrome
- (g) Smallpox
- (h) tuberculosis
- (i) a viral haemorrhagic fever, including Lassa, Marburg, Ebola and Crimean-Congo fevers.

In accordance with the Public Health Regulation 2022:

Bodies to be placed in body bags

- (1) A responsible person must ensure the body of a dead person is not removed from a place unless:
 - a) the body has been placed and secured in a bag or wrapping in a way that prevents the leakage of anybody exudate or other substance, and
 - b) the name of, or an identification of, the dead person is clearly and indelibly written on the top outer surface of the bag or wrapping, and
 - c) if the person has reason to believe that the body is infected with a prescribed infectious disease—the bag or wrapping is clearly and indelibly marked with the words “PRESCRIBED INFECTIOUS DISEASE—HANDLE WITH CARE”.

10.17.1 Post-mortem care

When handling the bodies of deceased persons, or when undertaking a post-mortem examination, standard precautions are always required.

Depending on the known or suspected infection status of the deceased person, transmission-based precautions may also be required and should be maintained until the body has been completely enclosed for transport.

Procedures for handling bodies of the deceased, the use of body bags and removal of bodies from body bags are outlined in the [NSW Public Health Regulation 2022: Part 8 Disposal of bodies](#).

If the death is reportable to the Coroner under the Coroners Act 2009 (NSW), the body must be managed as per the [PD2024_036 Coroners Cases and Coroners Act 2009](#).

Prior to death, if the deceased had or may have had a prescribed infectious disease as listed under clause 79 of the Public Health Regulation 2022 (NSW), then a label stating clearly and indelibly “Prescribed Infectious Disease - Handle With Care” (stock code NH606645), available from the State Forms Catalogue must be attached to the body and the body must be placed only in a plastic body bag.

The body must then be placed in a second plastic body bag with a second label with the same information affixed outside. Neither label should specify the condition. The body must not be washed with antiseptic solution.

10.17.2 Post-mortem examination

Practices used for post-mortem examinations are to minimise the risk of exposure of health workers to infectious diseases and minimise the risk of infection being passed from the autopsy room to other areas in the healthcare facility. Engineering controls and changed work practices should be adopted as part of standard precautions.

Precautions may also include adopting engineering controls and changed work practices. For example:

- work surfaces contaminated during post-mortem procedures should be cleaned with a neutral detergent or degreaser solution
- instruments and equipment used in post-mortem procedures must be reprocessed as described in as per *AS 5369 Reprocessing of reusable medical devices and other devices in health and non-health related facilities*
- instruments and equipment used on cases of [Creutzfeldt-Jakob disease](#) should be handled in accordance with national guidelines for infection prevention and control
- engineering controls such as ventilation and safety devices for autopsy equipment should be in place
- sharps injuries may be minimised by using the minimal number of sharp instruments, using cut-resistant gloves and blunt dissection tools and techniques
- employing airborne precautions when performing aerosolising procedures during post-mortem.

10.18 Cryotherapy

Care should be taken to ensure that liquid nitrogen canisters do not become contaminated during cryotherapy procedures. Evidence indicates that if contamination occurs, viruses and bacteria may be able to survive in liquid nitrogen (Bajerski et al., 2021).

Where the practice of decanting liquid nitrogen is used for routine removal of warts, sufficient liquid nitrogen should be decanted into a new disposable cup or dish, or one that can be sterilised after each patient use (decanting of any liquids/solutions are not routinely recommended due to increased risk of cross contamination, where possible alternative mode of delivery should be adopted).

Where decanting is the only means of delivery, a risk-based approach should be undertaken to mitigate any cross-contamination risk. A new disposable cotton-tipped applicator should be used for each application.

The residual and disposable cup or disk should be discarded after each patient use. For reusable equipment follow manufacturer's instructions for use.

Similar precautions should be taken with carbon dioxide and other cryotherapy systems used in the treatment of skin conditions.

10.19 Pets and therapy animals

The NSW Health [Animal Visits and Interventions in Public and Private Health Services in NSW](#) guideline outlines the appropriate measures to be taken in implementing a program of animal assisted intervention in NSW.

Pets as therapy

This refers to casual 'meet and greet' activities that involves animals and handlers visiting patients and their families at the bedside or in common areas. Specially trained volunteers, or professionals, with animals that meet specific criteria, deliver these more casual visitation programs.

Animal assisted therapy

This is a structured mode of tailored individual therapy run under professional supervision with animals trained for the role. Such programs are designed to improve the physical, social, emotional and/or cognitive functioning of the patient, as well as providing educational and motivational effectiveness for participants.

Companion animal

A companion animal refers to a dog, cat or any other animal prescribed in the [NSW Companion Animal Act 1998 No. 87](#). Companion animals are usually domesticated animals who have some training and acceptable behaviour for human/animal interaction.

A Health Organisation that is implementing a program of animal assisted intervention should consider their responsibilities under the Companion Animal Act 1998 and Companion Animal Regulations, requirement for animal welfare and veterinary screening for animals in the Companion Animals (Outdoor Dining Areas) Act 2010 No 33. Consideration should be given to:

- infection prevention and control principles during animal visit
- safe management of animals in the healthcare setting
- hygiene requirements
- training and health requirements of animals and handlers
- transportation of animals to and from the Health Organisation
- environmental controls during and following animal visits.

The implementation of therapy dogs and animal visitations need careful consideration to address potential risks of zoonotic transmission to patients and health workers when pets are present within a Health Organisation.

Animals can serve as a vector for infections and, in particular multi-resistant organisms, posing a potential risk of cross contamination with pathogenic organisms that may impact on patients. There are also considerations where these risks may be heightened in specific high-risk environments. Areas where animal visits or animal activities would be considered unsuitable include:

- sterile areas
- patient Treatment areas
- patient or ward isolation units
- kitchen and food preparation areas
- intensive care and high dependency areas
- immunosuppressed patients.

Points of consideration for animal visits should include:

- Health Organisations should establish a policy for assistance animals that aligns with relevant Commonwealth, State, and local council legislation. Similarly, any organisation that

allows facility pets or personal pet visits must develop a policy that complies with these legislative requirements

- In addition to complying with relevant State and local council legislation, the policy should address the types of animals permitted, certification requirements for both animals and their trainers/handlers, training for organisational staff, and education for animal trainers/handlers on organisational policies and procedures, hygiene standards for both animals and patients, and guidelines for animal access
- The Health Organisations infection control professional is notified when a patient is admitted with an accredited assistance animal to establish any specific requirements
- All animals visiting or permanently residing in Health Organisations are screened for parasites, skin problems and are fully vaccinated (a veterinary immunisation certificate should be provided)
- All animals are restricted from entering operating theatres, intensive care areas, cardiac catheterisation labs, dental surgeries, MRI scanners, sterilising departments and food preparation areas
- Animal access for isolated patients and immuno-suppressed patients is negotiated based on individual patient/client requirements
- Obtaining an accurate history from patients/staff for phobias and allergies, regular grooming of the animal to reduce the risk of allergic reaction, vaccination records, and so forth
- Selecting well-trained and well-behaved animals to minimise the risk of animal bites or injuries.

Hand Hygiene is essential for all participants:

- handlers must wash their hands and use alcohol-based hand rub (ABHR) before and after entering patient's areas and between patient visits
- animals must be cleaned and checked for parasites and general health prior to each visit
- animals should not be allowed near patients with open wounds or burns
- patients, staff and visitors must wash their hands or use alcohol-based hand rub before and after handling an animal
- animal handlers should wash their hands with soap and warm water after toileting animals and after disposing of soiled or dirty towels, using alcohol-based hand rub if necessary
- a new towel must be placed under the animal where an animal is placed on a bed to interact with a patient
- visits by an animal that is unwell or shedding a lot of hair should be postponed until the animal is well again
- volunteers and handlers are to always stay with the visiting animal
- be respectful of an individual's wishes where patients do not want a visit due to cultural and religious belief or may find them offensive.

10.19.1 Animals as patients

Animals may be present within Health Organisations for medical research, patient therapy and companionship and, in rare circumstances, for clinical treatment.

The risk for zoonotic transmission should be considered when animals are present within a Health Organisation. In particular, the risk of cross-contamination between animal and human is to be assessed when the facilities of a Health Organisation are being used for the clinical treatment of an animal. For those Health Organisations who provide or are considering providing this service, a risk assessment should be undertaken that considers:

- whether the room/area used for animal care can be made safe for human patients after animal treatment
- which disinfecting or sterilising procedures need to be done to ensure the safety of human patients
- animals must not be treated in clinical areas where invasive procedures on humans are undertaken
- where animal treatment requires the use of reusable medical equipment, such equipment must be dedicated for animal care only. Even if adequately reprocessed, equipment which has been dedicated for animal care must not be used for human patient care.