Infection Prevention and Control in Healthcare Settings

Summary This Policy Directive outlines the mandatory infection prevention and control requirements for NSW Health organisations (including inpatient, outpatient, outreach).

Document type Policy Directive

Document number PD2023_025

Publication date 15 September 2023

Author branch Clinical Excellence Commission

Branch contact (02) 9269 5500

Replaces PD2017_013

Review date 15 September 2028

Policy manual Patient Matters Manual for Public Health Organisations

File number H23/59071

Status Active

Functional group Clinical/Patient Services - Governance and Service Delivery, Infectious Diseases, Medical Treatment, Nursing and Midwifery
Corporate Administration - Governance
Personnel/Workforce - Occupational Health and Safety
Population Health - Communicable Diseases, Infection Control

Applies to Local Health Districts, Board Governed Statutory Health Corporations, Specialty Network Governed Statutory Health Corporations, Affiliated Health Organisations, NSW Health Pathology, Public Health System Support Division, Cancer Institute, Community Health Centres, NSW Ambulance Service, Dental Schools and Clinics, Public Hospitals

Distributed to Ministry of Health, Public Health System, Divisions of General Practice, NSW Ambulance Service, Environmental Health Officers of Local Councils, Private Hospitals and Day Procedure Centres, Health Associations Unions, Tertiary Education Institutes

Audience All Staff of NSW Health

Secretary, NSW Health

NSW Health

POLICY DIRECTIVE

Infection Prevention and Control in Healthcare Settings

POLICY STATEMENT

Effective infection prevention and control is central for reducing the burden of healthcare associated infections and providing a safe working environment within the healthcare settings. All health workers must comply with infection prevention and control requirements to prevent, identify, manage, and control healthcare associated infections.

SUMMARY OF POLICY REQUIREMENTS

This Policy Directive outlines the mandatory infection prevention and control requirements for NSW Health Organisations including inpatient, outpatient, outreach.

All NSW Health Organisations must implement the requirements that are set out in this Policy Directive, including:

- clinical governance oversight of infection prevention and control program
- legal and legislative framework
- requirements for the infection prevention and control program.

Local infection prevention and control documents are to align with the principles outlined in this Policy Directive and are consistent with the principles and practice outlined within the following NSW Health publications:

- *Infection Prevention and Control Practice Handbook*
- *COVID-19 Infection Prevention and Control Manual*
- *Respiratory Protection Program Manual*
- NSW Health Policy Directive *Cleaning of the Healthcare Environment* (PD2023_018).

REVISION HISTORY

Version	Approved By	Amendment Notes
PD2023_025 September-2023	Deputy Secretary, System Sustainability and Performance Division	Updated to include references to the: • *COVID-19 Infection Prevention and Control Manual* • *Respiratory Protection Program Manual*.
PD2017_013 June-2017	Deputy Secretary, Governance, Workforce and Corporate	Updated and amalgamation of: • Infection Control Policy [PD2007_036] • Infection Control Program Quality Monitoring [PD2005_414] • Infection Control Policy Prevention and Management of Multi-Resistant Organism [PD 2007_084] • Hand Hygiene Policy [PD2010_058] • Infection Control Policy – Animals as Patients in Health Organisations [PD2009_030] Replace PD2017_013 • Infection Prevention and Control PD.

CONTENTS

1. BACKGROUND

This Policy Directive is for NSW Health Organisations [including Affiliated Health Organisations] (AHO) so they can effectively prevent, manage, and control healthcare associated infections (HAIs) and minimise adverse health impacts on their patients, visitors, carers, health workers and contractors. Effective infection prevention and control is central to providing high quality healthcare for patients and a safe working environment for those that work in healthcare settings.

This Policy Directive must be read in conjunction with the:

- *Infection and Prevention Control Practice Handbook* [1]
- *Infection Prevention and Control Manual COVID-19 and other Acute Respiratory Infections* [2]
- *Respiratory Protection Program Manual* [3]
- NSW Health Policy Directive *Cleaning of the Healthcare Environment* (PD2023_018) [4].

1.1. The Risk of Healthcare Associated Infection

Healthcare associated infections (HAIs) are one of the most common adverse events in care delivery impacting morbidity, mortality, quality of life and incurring increased burden for patients, families, and carers.[5] Patients with an HAI are more likely to have a longer hospital stay, require second-line or broader-spectrum, more expensive antimicrobials, and place greater demands on the health system.[6]

Preventing harm to patients, visitors, volunteers, carers, and health workers due to infection in healthcare facilities is fundamental to achieve quality care, patient safety and health security. This will also reduce HAIs and help mitigate antimicrobial resistance. Similarly, preventing and reducing the transmission of high consequence infectious diseases, such as pandemic influenza, Ebola virus disease and other viral haemorrhagic fevers, or emerging novel communicable disease of significance is paramount.[7]

The application of appropriate infection prevention and control strategies by the health worker will reduce the risk of HAIs, as most HAIs are preventable through effective infection prevention and control measures. [5,8] The effectiveness of an infection prevention and control program is dependent on a robust implementation strategy and a well-defined clinical governance structure or system for the adaptation and integration of these measures into the facility.[5]

1.2. About this document

This Policy Directive outlines the mandatory infection prevention and control requirements for NSW Health Organisations (including inpatient, outpatient, outreach).

The scope of this Policy Directive includes:

- Requirements for the infection prevention and control program.
- Direction on governance.

- Infection prevention and control incidents and risk.
- Quality monitoring (surveillance).
- Standard and transmission-based precautions.
- Strategies for the prevention and management of HAIs including those caused by multidrug-resistant organisms (MROs) and communicable diseases.
- Outbreaks of transmissible infections and communicable diseases.
- Reprocessing of reusable medical devices.
- Handling of animals within healthcare settings.
- Environmental sustainability.

The handling and management of body substances and cytotoxic waste (such as body substances and any discarded materials containing unmetabolised or residual cytotoxic and hazardous medication), is outside the scope of this Policy Directive. Guidance on this is provided in NSW Health Policy Directives *Clinical and Related Waste Management for Health Services* (PD2020_049) and *High-Risk Medicines Management* (PD2020_045).

1.3. Key definitions

Aerosol Generating Behaviour	Behaviours that are likely to generate higher volumes of respiratory secretions and thus increase the risk of transmission via aerosols.
Aerosol Generating Procedure	Medical procedures which lead to the generation of respiratory aerosols of sufficient size to enable microorganism transmission.
Aerosols	Aerosols form part of a continuum of particle sizes generated through a range of respiratory activities in humans, which can carry infective material and facilitate respiratory disease transmission.
Affiliated Health Organisations	Not-for-profit religious, charitable, or other non-government organisations which provide health services and are recognised as part of the public health system under the *Health Services Act 1997* (NSW).
Airborne precautions	A type of transmission-based precautions, used to interrupt airborne transmission from patients known or suspected to be infected with agents transmitted person-to-person by the airborne route.[1]
Alcohol based hand rub (ABHR)	An alcohol-containing preparation (such as gel, foam, or liquid) designed for reducing the number of viable microorganisms on dry, unsoiled hands.

Alert/ De-Alert	Enabling of an electronic communication warning 'flag' in a patient's clinical records that indicates a patient's infectious status, for example: multidrug-resistant organism (MRO) colonisation or infection. De-Alert is the inactivation of the electronic infection control alert (flag).
Antimicrobial	A chemical substance, usually a medicine, that inhibits or destroys bacteria, viruses, fungi, or protozoa.[1]
Antimicrobial stewardship	An ongoing program within a health organisation for judicious antimicrobial use in order to improve patient outcomes, ensure cost-effective therapy and reduce adverse sequelae of antimicrobial use, including antimicrobial resistance.[9]
Aseptic technique	Aseptic technique consists of a set of specific practices and procedures performed under carefully controlled conditions. Aseptic technique protects patients during clinical procedures by utilising infection prevention measures that minimise the presence of microorganisms. While the principles of aseptic technique remain constant for all procedures, the level of practice will change depending upon a standard risk assessment.[9]
Body substance	Any substance produced by, or otherwise expelled, excreted, or extracted from the body. Body substance is used rather than body fluid to emphasise the need for precautions to prevent contact with solid tissue and faeces as well as blood (including dried blood) and body fluids. This does not include intact skin, hair and sweat.
Cleaning	The removal of visible soil (such as inorganic and organic material) from objects and surfaces and is normally accomplished manually or mechanically using water with detergents or enzymatic products.[10]
Clinical governance	A clearly defined framework of accountability at all levels in an organisation for continuously improving the quality of their service and safeguarding high standards of patient care.[11]

Cluster	A disease cluster is an unusually high incidence of a particular microorganism occurring in close proximity in terms of both time and geography. A closely grouped series of events or cases of diseases that fulfils the definition of a case – for example, two or more surgical site infections from the same surveillance period or theatre session of the same type of surgery.
Colonisation	Detection of an organism from a site (usually skin, throat, nose, or perineum, and/ or chronic ulcers) without signs of invasive infection.
Contact	The state or fact of touching or being in immediate proximity or association. An individual who may have been exposed to an infected person.
Contact precautions	A type of transmission-based precautions used to interrupt the transmission of infectious agents that are spread by direct or indirect contact with the patient or the patient's environment.
COVID-19	Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus (a member of a large family of viruses called coronaviruses). 'CO' stands for corona, 'VI' for virus, and 'D' for disease.
Critical items	A medical device that comes into contact with blood or normally sterile tissue and that must be sterile at the time of use. Note: A critical medical device confers a high risk of infection if it is contaminated with microorganisms.[12]
Decolonisation	Decolonisation is an evidence-based intervention that can be used to reduce or eliminate colonised microorganisms to prevent healthcare associated infections.
Disinfection	A process that eliminates many or all pathogenic microorganisms, except bacterial spores, on inanimate objects.
Droplet precautions	A transmission-based precautions used to interrupt droplet transmission occurring from patients known or suspected to be infected with agents transmitted person-to-person by respiratory droplets.[9]
Fit check	A manual procedure that is used each time a tight-fitting respirator (particulate filter mask or P2/ N95) is used to ensure a seal is achieved.

Fit test	A procedure to evaluate the fit of a tight-fitting respirator (particulate filter mask or P2/ N95) either qualitatively or quantitatively.
Functional area	A functional area refers to any area in a healthcare facility that requires cleaning. The functional areas have been grouped under four risk categories: extreme, high, medium, and low. These risk categories reflect the frequency and intensity of cleaning required to meet minimum cleaning standards.
Hand hygiene	A general term referring to action of hand cleansing. Includes washing hands with the use of water, soap, or a soap solution, either non-antimicrobial or antimicrobial, or applying a waterless alcohol-based hand rub (ABHR) to the surface of the hands. When performed correctly, hand hygiene results in a reduction of microorganisms on hands.
Health Worker (HW)	Refers to all staff delivering or supporting healthcare services in a public health organisation. Any person employed or contracted by a NSW Health Organisation either on a permanent, temporary, casual, volunteer or agency basis.
Healthcare associated infection (HAI)	Refers to infections acquired in healthcare facilities and infections that occur as a direct or indirect result of healthcare interventions and which may manifest after people leave the healthcare facility.[13]
High Consequence Infectious Disease (HCID)	Also known as Infectious Disease of High Consequence (IDHC). An emerging novel communicable disease of global significance or a high consequence infectious disease (HCID) is defined as a disease that has potential to cause a high mortality among otherwise healthy people, no routine vaccine exists, risk of airborne spread or unknown mode of transmission, some types of clinical specimens pose generalised risks to laboratory personnel.[14]
Key part	Key parts are the sterile components of equipment used during an aseptic procedure, such as bungs, needle hubs, syringe tips, dressing packs.[9]
Key site	Key sites include any non-intact skin and insertion or access sites for medical devices connected to the patient, such as insertion/ access sites of intravenous devices, urinary devices, open wounds using aseptic technique.[9]

Monitor	To check, supervise, observe critically, or record the progress of an activity, action, or system on a regular basis in order to identify change.
Multidrug-resistant organism (MRO)	MROs are defined as microorganisms, predominantly bacteria, that are resistant to one or more classes of antimicrobial agents.
Negative pressure room (Class N)	A Class N isolation room is a negatively pressured single room, with or without an anteroom, with an ensuite that is not shared. It is used for patients who require isolation to reduce airborne transmission of disease (such as varicella, measles, pulmonary or laryngeal tuberculosis).
NSW Health Organisation	This term refers to local health districts, statutory health corporations, affiliated health organisations and administrative units within the Health Administration Corporation, such as the NSW Ambulance Service, HealthShare NSW and the Ministry of Health, as defined in the *Health Services Act 1997* (NSW).[15]
Outbreak	Outbreak is the occurrence of disease exceeding the expected level for a given population within a specific timeframe. This includes single cases of some diseases not previously seen or those that have previously been eliminated. Typically, in healthcare this has been defined as two or more cases, which should trigger an outbreak management process. [2, 16]
Outreach program	Programs provide an extension of healthcare provision aimed to increase access to health services for hard to reach and marginalised population such as rural communities and Aboriginal people.
Personal protective equipment (PPE)	Refers to a variety of protective barriers used alone, or in combination, to protect mucous membranes, skin, and clothing from contact with recognised and unrecognised sources of infectious agents in healthcare settings.
Point of care	The time and location where an interaction between a patient and clinician occurs for the purpose of delivering care.[6]
Respiratory protective devices (RPDs)	RPDs (respirator) worn on the face are designed to reduce the wearers risk of inhaling hazardous airborne particles (including dust, infectious agents, aerosols, gases, or vapours).[3]

Reprocessing	All the activities required to ensure that a reusable medical device is safe for its intended purpose. This is a multi-step process that includes cleaning, inspection and assembly, functional testing (if applicable), disinfection (if applicable), packaging and labelling, and sterilisation (if applicable).[17]
Satellite reprocessing unit	A satellite reprocessing site is a small unit/ department/ clinic that reprocesses (sterilises or high level disinfection) a single specific type of reusable medical device, such as transvaginal transducer, nasendoscope, flexible cystoscope, Trans-oesophageal echocardiogram transducer.[18]
Semi-critical items	Equipment or devices that come into contact with mucosal membranes or non-intact skin. Such items include but are not limited to respiratory therapy and anaesthesia equipment, gastrointestinal endoscopes, bronchoscopes, laryngoscopes, oesophageal manometry probes, anorectal manometry catheters, endocavitary probes, prostate biopsy probes, infrared coagulation devices, transvaginal probes and diaphragm fitting rings, dental dam, removable dental appliance, dental x-ray holder.[12]
Sharp(s)	Any object capable of inflicting a penetrating injury, which may or may not be contaminated with blood and/ or body substances. This includes needles and any other sharp objects or instruments designed to perform penetrating procedures.[19]
Standard precautions	Standard precautions represent the minimum infection prevention measures that apply to all patient care, regardless of suspected or confirmed infection status of the patient, in any setting where healthcare is delivered. These evidence-based practices are designed to both protect and prevent spread of infection among patients and health workers.[20]
Transmission based precautions	Additional work practices in situations where standard precautions alone may be insufficient to prevent transmission of infection [21], such as contact, droplet and airborne precautions or a combination of these precautions.
Volunteer	A person who works in an unpaid role for an NSW Health Organisation.
Zoning	Zoning, cohorting or ring fencing refers to the grouping of patients with the same condition or same risk in the same area.

1.4. Legal and legislative framework

This Policy Directive must be read and interpreted alongside the following legislation:

- *Health Practitioner Regulation National Law Act 2009* (NSW)
- *Public Health Act 2010* (NSW)
- *Food Act 2003* (NSW)
- *Privacy Act 1988* (Commonwealth)
- *Health Records and Information Privacy Act 2002* (NSW)
- *Therapeutic Goods Act 1989* (Commonwealth)
- *Public Health Regulation 2022* (NSW)
- *Work Health and Safety Act 2011* (NSW)
- *Protection of the Environment Operations Act 1997* (NSW)

The *Health Practitioner Regulation (New South Wales) Regulation 2016* (NSW) provides infection prevention and control standards for a broad range of health practitioners including medical practitioners, nurses, midwives, pharmacists, physiotherapists, and podiatrists.

The Dental Board of Australia expects dental practitioners to practise in a way that maintains and enhances public health and safety by ensuring that the risk of the spread of infection is prevented or minimised and aligned as per the Australian Health Practitioner Regulation Agency (Ahpra) *Shared Code of Conduct*. NSW Health Organisations and health workers are obliged to comply with relevant Australian Standards with which this Policy Directive is consistent.

2. CLINICAL GOVERNANCE REQUIREMENTS

Each NSW Health Organisation must ensure they have an executive sponsor, responsible for their infection prevention and control program. The progress and outcomes of the program must be reported to the highest management level of the organisation aligned with the NSW Health Policy Directive *Incident Management* (PD2020_047).

Supported by executive engagement, strategic and operational planning under the direction of infection prevention and control program, the clinical leaders and senior managers are responsible for implementing and evaluating systems to prevent and manage healthcare associated infections (HAIs). Additional advice and expertise must be sought from individuals skilled in this area and/ or an infection prevention and control committee where required.

NSW Health Organisations are to have a dedicated Infection Prevention and Control Program with suitably qualified infection prevention and control professional(s) and a current operational/ risk plan that is in keeping with this Policy Directive. The program must specify the necessary steps to address improvements, education, and training of health workers and measurement tools for HAI prevention and risk management in alignment with NSW Health Organisation's strategic priorities and directions.

Patients and visitors are to be provided the necessary information and education to enable partnership between them and NSW Health Organisation for infection prevention strategies.

2.1. National accreditation standards

The National Safety and Quality Health Service (NSQHS) Standards [6], provide a quality assurance mechanism that tests whether relevant systems are in place to ensure that expected standards of safety and quality are met. The Preventing and Controlling Infections Standard along with Australian Commission on Safety and Quality in Health Care Advisories and Clinical Care Standards provide an additional layer of requirements for compliance with infection prevention and control and this Policy Directive.

Each NSW Health Organisation must plan for and implement appropriate clinical governance systems and infection prevention and control strategies to prevent and manage HAIs.

2.2. Infection prevention and control committees

Each NSW Health Organisation must have a committee that is responsible for the delivery and evaluation of infection prevention and control programs and strategies.

The committee structure is required to connect local and local health district (district)/ specialty health network (network) functions to disseminate and communicate reports across the organisation. This committee must have executive membership and must report to the highest management level within the organisation. Structures are to be in place for the provision, oversight and as a point of escalation to ensure appropriate district/ network governance.

2.3. Multimodal improvement strategies

Every NSW Health Organisation is to have an infection prevention and control program in place. Multimodal strategies are a core component of effective infection prevention and control at state and facility level.

NSW Health Organisations are to implement at least five multimodal strategies such as system change, training, and education, monitoring and feedback, reminders and communication and a culture of safety as per the World Health Organisation (WHO) Multimodal Hand Hygiene Improvement Strategy [22]. The success and effectiveness of such a program requires the development and involvement of suitably qualified personnel or the development of adequate systems to link in (link program or similar) with such expertise.

NSW Health Organisations must have clinical governance and quality improvement systems to prevent and control infections, support antimicrobial stewardship and sustainable use of infection prevention and control resources as per the National Safety and Quality Health Service, Standard 3 - Preventing and Controlling Infections Standard.

2.4. Respiratory Protection Program

Each NSW Health Organisation must have a process in place to comply with the recommendations and requirements for implementation of the Respiratory Protection Program (RPP) [3] that is compliant with work health and safety standards ensuring that there is clear governance and capacity.

2.5. Infection prevention and control

Each NSW Health Organisation is to have a process in place to implement the infection prevention and control practices set out in the *Infection Prevention and Control Practice Handbook* [1] and the resources developed for the management of communicable diseases.[2]

Each NSW Health Organisation is to have a process in place to ensure the guidance provided under the Clinical Excellence Commission (CEC) infection prevention and control program is accessible and adhered to by health workers and healthcare consumers.

2.6. Reprocessing of reusable medical devices

Each NSW Health Organisation is to comply with the standards set out in the Australia/ New Zealand Standards *Reprocessing of reusable medical devices in health service organisations* [17] and should refer to current standard version.

2.7. Surveillance and response to healthcare associated infections

Each NSW Health Organisation must have a process in place to undertake surveillance, manage and mitigate transmission risk in ensuring there is an effective and timely response and escalation of outbreaks or clusters of HAIs, communicable diseases, multidrug-resistant organisms (MROs) and/ or non-MROs. [23,24]

3. RISK MANAGEMENT

NSW Health Organisations must use a risk management framework when considering the implementation of infection prevention and control initiatives. This framework must be used to determine individual and collective risk(s) in specific situations, procedures or programs and inform management options and priorities to reduce the risk of healthcare associated infections (HAIs).

The aim of determining a patient's specific risk(s) is to ensure that appropriate controls are implemented to protect all patients, visitors, carers and health workers without compromising clinical care and psychological support. Guidance is provided in the NSW Health Policy Directive *Enterprise-Wide Risk Management* (PD2022_023).[25]

An operational/ risk plan that includes infection risk must be reviewed and endorsed by the NSW Health Organisations infection prevention and control committee and incorporated into the organisation's plan(s).

3.1. Incident management

To determine whether an infection prevention and control risk or breach constitutes a reportable incident, NSW Health Organisations are to refer to NSW Health Policy Directive *Incident Management* (PD2020_047) which describes a state-wide system for managing clinical and corporate incidents.

One example, it is recommended that Healthcare-associated Staphylococcus aureus bloodstream infections be investigated and managed as a minimum Harm Score 2 incident.

3.2. Provision of education

NSW Health Organisations must ensure that all health workers are provided with education and training during induction and on an ongoing basis on preventing and controlling the risk of transmitting microorganisms in line with their duties.

Online mandatory training is described in the NSW Health Education and Training Institute (HETI) Mandatory Training Matrix and is underpinned by the NSW Health Policy Directive *Mandatory Training - Criteria for Approval as a NSW Health Requirement* (PD2016_048) for all health workers. Completion of this training is required to meet patient safety programs and National Safety and Quality Health Service (NSQHS) Standard 3.

The NSW Health Organisation is responsible for ensuring health workers complete this training. In addition, health workers are to undergo onsite practical training and competency assessments where relevant on the following: hand hygiene, aseptic technique, sharps use and disposal, waste management, donning, and doffing of personal protective equipment (PPE) including respiratory protective devices, cleaning of shared patient equipment and cleaning of healthcare environment.

NSW Health Organisations must educate, promote, and facilitate the participation of patients, visitors and carers in infection prevention and control measures. At a minimum patients, visitors and carers must be educated on appropriate hand hygiene and respiratory etiquette, and where required, donning, and doffing of PPE.

3.3. Safety and well-being of health workers and patients

Patient and health worker safety within healthcare rely on established infection prevention and control processes that enable effective teamwork which depends on multiple factors, such as:

- education for patients, visitors, carers, and health workers
- reasonable workloads
- adequate staffing for all health workers.

Wellbeing, compassion, and kindness are now recognised to be essential for health workers (infection prevention and control professionals, environmental and support services such as administration, engineering, security services, reprocessing, and clinicians, based on bed or chair occupancy and patient risk factors) perspective and resilience.

Infection prevention and control programs are required to be adequately resourced to ensure quality and safe delivery of the program across the system. NSW Health Organisations are to ensure processes are in place for both staff well-being and burn-out to reduce adverse outcomes for patients and health workers.

3.4. Staff health and healthcare associated infection risk

Health workers' non-compliance with infection prevention and control can contribute to the potential transmission of microorganisms within healthcare settings. A health worker diagnosed with an infectious condition is required to practice in such a manner that it does not put patients, visitors, carers, or other health workers at risk of infection.

In some circumstances exclusion from the workplace may be required during the communicability period. Processes must be developed to manage exclusion periods in consultation with infection prevention and control, staff health and infectious diseases teams.

In the event of a health worker acquiring an infectious condition from the workplace, they are required to report the incident as per NSW Health Policy Directive *Incident Management* (PD2020_047).

3.5. Occupational assessment, screening, and vaccination

NSW Health Organisations must implement and monitor a risk-based workforce vaccination program for health workers, other clinical personnel and healthcare students in accordance with the NSW Health Policy Directive *Occupational Assessment, Screening and Vaccination Against Specified Infectious Diseases* (PD2023_022) and Australian Immunisation Guidelines.[26, 27]

NSW Health Organisations must maintain a central register as evidence of health workers vaccination status, including medical contraindications to vaccination, vaccination refusals and an appropriate risk management strategy to address vaccination refusals and exemptions. Compliance with the program must be reported on and a process for managing non-compliance must be in place.

Managers, staff health services or occupational vaccination/ screening services also have a responsibility to minimise the risk of infection to health workers.

3.6. Management of health workers with symptomatic illness

Health workers who have a symptomatic illness (such as boils, acute respiratory illness, or gastroenteritis) or conditions that promote the shedding and transmission of microorganisms, such as herpes simplex, exfoliative skin conditions or skin lesions, may increase the risk of the spread of infection to vulnerable patients.

The NSW Health Organisation must have systems to ensure compliance with the policy directives that protect health workers. Therefore, NSW Health Organisations must develop a procedure that outlines how they will address:

- Health worker communication, escalation, reporting and disclosure of their suspected or known communicable pathogen or disease.
- The mitigation of transmission risks of communicable pathogens or diseases.
- Human resource issues such as redeployment, sick leave and return to work management.
- Health workers non-participation in certain clinical procedures (such as exposure prone procedures) that is mandated by policy or legislation.

3.7. Respiratory Protection Program

Respiratory protection is required for those organisms that are usually transmitted via respiratory particles (airborne, aerosols). A respiratory protection program must be implemented for health workers that require the use of a respirator when providing care to patients under airborne precautions.

NSW Health Organisations are required to follow the CEC *Respiratory Protection Program Manual* for further guidance on program implementation.[3]

4. RISK IDENTIFICATION REQUIREMENTS

4.1. Risk assessment of the patient

Assessing a patient's individual infection risk rating is to determine whether the patient is a potential source of infection to other patients, visitors, carers, and health workers and/ or whether the patient is more susceptible to infection. The higher the risk rating, the greater the priority for infection prevention and control interventions and precautions.

4.2. Risk rating of the clinical area (functional area)

All patients, visitors, carers or health workers in a NSW Health organisation are susceptible to acquiring an infection, and/ or transmission of a microorganism or communicable disease. However, there are certain functional areas, such as intensive care units, neonatal units, transplant units, burns units, dialysis, haematology units, and interventional suites/ radiology where patients are at a greater risk of acquiring an infection (for more details on functional areas in each risk category refer to NSW Health Policy Directive *Cleaning of the Healthcare Environment* (PD2023_018).

Patients in these areas are often immunosuppressed, are acutely unwell or have undergone major surgery. These patients have an increased propensity to infection due to:

- the nature of their condition
- frequent contact with health workers
- number and types of indwelling devices
- the duration of hospitalisation.

Each NSW Health Organisation must assign a risk rating to each functional area followed by regular review of risk rating and reassess the risk if the purpose or patient risk category within the functional area changes.

The functional areas must be risk rated as one of the following:

- Extreme risk
- High risk
- Medium risk
- Low risk.

In the event of an outbreak, the NSW Health Organisation may adjust the risk rating of a functional area if there is an increased transmission risk of infection to patients, visitors, carers and/ or the health worker and reassess the functional risk rating when the outbreak is over.

5. COMMUNICATION REQUIREMENTS

5.1. Clinical documentation and communication

A patient's communicable disease, transmissible infection, or multidrug-resistant organism (MRO) status must be always treated as confidential information.

Communication and clinical handover of a patient's communicable disease, transmissible infection or MRO status is required as part of medical treatment, patient placement and decisions on transmission-based precautions.

Health workers are to ensure the required additional precautions are communicated during patient handover and transfer of care.

Appropriate signage must be placed at the entrance to the patient room or zone to communicate the type of transmission-based precautions required. Each NSW Health organisation (must have a process to:

- Assign responsibility for adding infection prevention and control alerts, such as MRO carriage detail (colonisation or infection), site and screening date.
- Enable an electronic communication warning 'Alert' to indicate MRO or infection status in a patient's clinical records.
- De-alert, removal of the MRO alert and documentation of the reason and required information, such as MRO screening, met MRO clearance criteria, MRO clearance date.

5.2. Communication with patients, family, and carers

Clinicians must provide information to patients, family and carers affected by a communicable disease, transmissible infection or MRO colonisation or infection to establish an understanding of:

- The communicable disease, transmissible infection, or MRO colonisation.
- The transmission-based precautions required to prevent further transmission.
- Their role in preventing transmission, such as hand hygiene, keeping door closed where there is an airborne precaution, when and how to wear a mask, caring of wounds if any.

In the event of a healthcare associated infection NSW Health Organisations are to follow the principles outlined in the NSW Health Policy Directive *Open Disclosure Policy* (PD2014_028).

All patient education and communication must be documented in the patients' healthcare record. A patient's infection prevention and control information must be evaluated to determine if it meets the needs of the target audience.

6. RISK MITIGATION REQUIREMENTS

When implementing infection prevention and control principles in healthcare settings, all levels of controls (administrative controls, environmental and engineering controls, and

personal protection) must be given appropriate attention for the system to work effectively, and for the different levels to support each other.

The adherence to hierarchy of controls including use of personal protective equipment (PPE) is key in supporting the prevention and control of any exposure to communicable diseases and pathogenic organisms. PPE requirements must be based on clinical circumstances and risk assessment.

6.1. Environmental and engineering controls

Environmental and engineering controls are an integral part of infection prevention and control that include standards for adequate ventilation, air exchange and filtration of the air according to specific areas in healthcare facilities, adapted structural design, spatial separation as well as adequate environmental cleaning. The management of airflow and the creation of a turbulence-free environment are essential to the control of the spread of infection. For more information refer NSW Health Guideline *Engineering Services* (GL2023_009).

Specialised areas of a healthcare facility (such as operating rooms, interventional rooms, birthing rooms, negatively or positively pressured isolation rooms, burns unit, intensive care units, emergency departments and special treatment or procedural areas) must always provide high quality air. Return air paths in clinical areas will be provided via dedicated return air ducting. All supply air and return air registers and grills must be removable for regular scheduled cleaning. They must not be installed directly above a patient bed. [25, 28]

An effective ventilation system to optimise indoor air quality is a key strategy for reducing the spread of infectious diseases.[29] Environments adapted to create separation, isolation, or divisions in multibed bays using temporary solutions are not without risks and lack conclusive evidence. Consideration for the addition of such structures requires consultation with infection prevention and control and other key stakeholders. Additional impacts to airflow and environmental cleaning are to be considered. Removal of temporary structures should not be delayed at conclusion of the causing incident.

Healthcare environmental and engineering controls are required to meet rigorous standards as per the Australasian Health Facility Guidelines with preferred approach to centralised and automated systems. The evidence for the routine use of portable air filtration devices in hospital settings is not yet conclusive. The use of these devices is to be limited to situations where the mechanical ventilation system is deficient and not as an adjunct to a well-ventilated environment. Consultation with an environmental engineer, work health and safety and infection prevention and control are recommended before purchasing an air filtration device to ensure all issues and potential safety risks have been considered and a protocol surrounding the safe use, management and storage are to be developed.[30]

6.2. Antimicrobial stewardship

Any facility or organisation within NSW Health is required to have an antimicrobial stewardship (AMS) program. The program should include an AMS policy and an antimicrobial formulary that includes restrictions, rules and approval processes, with appropriate governance to support stewardship activities and a range of quality improvement initiatives to

prevent and control infections and to meet the National Safety and Quality Health Service (NSQHS) Standards Preventing and Controlling Infections Standard.[6]

Where a NSW Health Organisation is responsible for the antimicrobial therapy received by patients in its care, they must ensure that safe and appropriate antimicrobial prescribing is a goal within its clinical governance system and the program is to be overseen by a dedicated specialist of that area.

The use of antimicrobial agents to prevent and treat infections must be considered judiciously, using the six essential strategies for effective antimicrobial stewardship:[31]

- Providing access to and implementation of clinical guidelines consistent with current evidence and *Therapeutic Guidelines: Antibiotic* that reflect local microbiology and antimicrobial susceptibility patterns.
- Ensure a formal referral service is in place for anti-infective advice when clinically indicated or if required as per NSW State Formulary restrictions.
- Review of antimicrobial prescribing with intervention and direct feedback to the prescriber.
- Implementation of point-of-care interventions to target inappropriate or no longer appropriate antimicrobial use (for example, intravenous to oral switch, and dose optimisation)
- Monitor performance of antimicrobial prescribing by collecting and reporting unit or ward-specific data, auditing antimicrobial use, and using quality use of medicines indicators.
- Ensure the clinical microbiology laboratory uses selective reporting of susceptibility testing results that is consistent with current endorsed therapeutic guidelines on antibiotic usage and provides Infectious Diseases and Infection Prevention and Control Practitioners with access to susceptibility and resistance testing results

6.3. Patient placement

To ensure the safe and timely placement of a patient with a known or suspected transmissible infection (including multidrug-resistant organism (MRO) infection), patient placement decisions must be made in conjunction with the patient flow team and local infection prevention and control service wherever possible.[1] After hours management of patients are to be determined by local procedures. The decision to place a patient in isolation are to be determined by the following principles:

- Route(s) of transmission of the known or suspected microorganism and risk assessed as requiring a higher level of precautions above standard precautions.
- Risk factors for transmission in the patient with an infection.
- Risk factors for adverse outcomes resulting from a health care associated infection (HAI) in other patients.
- Risk factors for adverse outcomes if the patient is accommodated in a single room.
- Availability of single rooms.

Zoning (cohorting, ring fencing) refers to the grouping of patients with the same condition or same infectious agent in the same area. The aim of zoning or cohorting patients (and the health workers that attend to them) is to minimise interaction between infectious and non-infectious patients as much as possible. The following factors are to be taken into consideration when considering zoning, in particular for situations such as outbreaks:

- Physical building space including air conditioning and ventilation, egress paths.
- Availability of single or shared rooms in a specific area to enable zone establishment.
- Patient ability and acuity, patient safety considerations.
- Staffing capacity (including cleaning) and access to dedicated shared equipment.
- Number of suspected or confirmed cases.
- Number of contacts.
- Access to bathrooms or risk mitigated local plan to support patient hygiene requirements or needs.

6.3.1. Bed management and patient flow

Placement of a patient(s) must be based on a risk assessment that considers the risk ratings of all patients involved, functional area and room availability to meet the patient's isolation requirements.

When considering patient movement or transfer, the receiving department, transport service, or NSW Health Organisation must be notified of a patient's infection or colonisation status before transfer. The admission and/ or transfer of a patient (including from/ to residential or aged care facilities) must not be delayed or compromised by a patient's suspected or known infection or colonisation status. Also consider other risk factors such as MRO status, mobility, falls risks or behavioural concerns when patient placement or transfer decision has been made and document the outcome in patient medical record.

Patient placement decisions must be made in conjunction with the local patient flow team and infection prevention and control and infectious diseases teams where appropriate to ensure timely patient transfers and admissions.[1] Patients and their nominated next of kin (NOK) are to be engaged as partners in care and as part of shared decision making, and this discussion must be documented.

7. STANDARD PRECAUTIONS

Standard precautions are the minimum infection prevention measures that apply to all patient care settings, regardless of suspected or confirmed infection status of the patient.[21]

Standard precautions must always be applied when caring for all patients and when handling all body substances, secretions, and excretions (excluding hair and sweat), non-intact skin, and mucosal membranes, including eyes.

Standard precautions involve adherence to all the following work practices:

- Performing hand hygiene.

- Appropriate and correct use of personal protective equipment (PPE).
- Respiratory hygiene and cough etiquette.
- Use of aseptic technique.
- Safe use and disposal of sharps.
- Performing routine environmental cleaning.
- Cleaning and disinfection of shared patient equipment.
- Reprocessing of reusable medical devices.
- Safe handling and disposal of waste used linen and laboratory specimens.

The use of standard precautions must be monitored for compliance and practice improvement within each area within the NSW Health organisation.

7.1. Hand Hygiene

NSW Health Organisations must ensure an ongoing hand hygiene awareness program is established for all health workers that is consistent with the National Hand Hygiene Initiative [32], CEC Hand Hygiene and Patient Safety Programs.

For most hand hygiene activities, alcohol-based hand rub (ABHR) is to be used whereas visibly soiled hands must be washed with liquid soap and running water.[32] NSW Health Organisations must ensure that ABHR dispensers are as close as possible to the point of care. Placement and design of ABHR dispensers and hand basins must be consistent with the Australasian Health Facility Guidelines (AusHFG) Part D.[28]

The ability to perform effective hand hygiene for clinical care must not be impeded by the wearing of long-sleeved garments or forearm jewellery (for example religious bangles, medical bracelets, or bandages) or long fingernails. NSW Health Organisations must perform a case-by-case risk assessment in consideration to the risk to patients versus the health worker where bare below the elbow cannot be maintained during clinical care (with the exception of applied risk assessed PPE).

Hand hygiene compliance auditing is conducted to assess the effectiveness of hand hygiene programs. NSW Health Organisations are required to collect hand hygiene compliance data for national hand hygiene audits unless exempted from this process.[32]

The outcome of the hand hygiene compliance audits will be provided to the appropriate committee and evaluated locally to identify opportunities for improvement.

Ongoing non-compliance with hand hygiene by a health worker is to be managed within local performance management policies and the frameworks within the following NSW Health policies:

- NSW Health Policy Directive *Managing Complaints or Concerns about Clinicians* (PD2018_032)
- NSW Health Policy Directive *NSW Health Code of Conduct* (PD2015_049)
- NSW Health Policy Directive *Managing Misconduct* (PD2018_031)
- NSW Health Policy Directive *Managing for Performance* (PD2016_040).

7.2. Patient, visitor, and carer hand hygiene

Hand hygiene is to be performed by everyone. Health workers must encourage patients to perform hand hygiene and provide education on the correct hand hygiene technique. Patients must be provided with the means to perform hand hygiene before eating, and after going to the toilet or using a bedpan or urinal, after sneezing, blowing their nose or coughing into hands, and after touching/ handling animals.

Visitors, carers, contractors, and volunteers must be provided with the means to perform hand hygiene and be encouraged to perform hand hygiene before and after contact with patients and their surroundings.

7.3. Personal protective equipment

Selection of personal protective equipment (PPE) must be based on an assessment of the risk of transmission of infectious agents to the patient, visitor or carer and the risk of contamination of clothing, skin, or mucus membrane of health workers by a patients' body substances.[21]

The *Infection Prevention and Control Practice Handbook* [1] provides advice on choosing the correct PPE and the sequencing of putting on and removing PPE including the provision of appropriate PPE.

Implementation of PPE must consider environmental impact and sustainability in addition to safety requirements.

Clinicians are not to bring any PPE (reusable or disposable) into a health facility unless it has been approved for use by the local facility, local health district/ specialty health network, HealthShare NSW and/ or NSW Health.

7.3.1. Gloves

Gloves must be used in situations where the health worker is potentially exposed to body substances. When gloves are determined to be necessary, they must be worn on both hands.

Gloves must be used for procedures that involve direct or perceived contact with non-intact skin, mucous membranes, and body substances.

Sterile gloves must be worn when it is necessary or unavoidable to touch key sites and key parts directly. The wearing of sterile gloves for any specific aseptic technique procedure may be at the discretion or mandate of the NSW Health Organisation.

Gloves must be changed and discarded, and hand hygiene performed:[33]

- as soon as they are torn or punctured or when the integrity has been altered
- immediately after contact with a patient is complete and before care is provided to another patient
- when performing separate procedures on the same patient
- after handling blood and body substances
- before handling or opening sterile consumables and devices

- before writing in the healthcare record, answering telephones, pagers, mobile phones, using computers and other social environmental actions.

Disposable gloves must not be cleaned or reused. Disposable gloves must not be disinfected using ABHR.

Double gloving is only permitted in specific settings such as an operating theatre worn by the operating team.

No part of the glove is to be tampered with at any time before during or after use, such as fingertip cut off to feel a vein when undertaking cannulation or venepuncture.

Hand hygiene must always be immediately performed before and after use of gloves.

7.3.2. Respiratory and facial protection

A Respiratory Protective Device (RPD) is worn on the face, covers the nose and mouth, and is used to reduce the wearer's risk of inhaling hazardous particles (including dust particles and infectious agents – noting this Policy Directive and Respiratory Protection Program applies to infectious agents). There is a range of RPDs available that provide facial and respiratory protection, and this includes either a surgical mask or a respirator, with or without eye protection.

Facial protection is used to protect the mucous membranes of the face (eyes, nose, and mouth) from exposure to body substance splash or spray. The level of protection required are to be determined by the volume and distribution of body substance likely to be encountered during patient care.

Respiratory and facial protection is required for those microorganisms that are usually transmitted via the droplet or airborne route and for those procedures with potential for body substance exposure to mucus membranes.

7.3.3. Surgical masks

Surgical face masks provide a barrier to splashes and droplets impacting on the wearer's nose, mouth, and respiratory tract.

Based on risk assessment a single use mask is to be worn while performing any procedure where there is a likelihood of splashing or spraying of body substances or mucous membrane exposure to microbial droplets.

Choosing a fluid-resistant single use mask, with the level of barrier protection required must be based on the risk of exposure at the time the procedure is performed or the likelihood of mucous membrane exposure to respiratory or oral droplets.[34] Surgical masks are for use in clinical care, dental settings, and surgery as per Standard and Droplet Precautions. Surgical masks must be worn for the duration of the relevant exposure, task, or procedure.

Single-use face masks are categorised to provide varying levels of fluid penetration resistance and protection against body substances. The manufacturer's instructions for use provide the detail on the barrier level and their applications for use.

All patients with an acute respiratory infection (ARI) are to be asked to wear a mask on presentation to a health facility and transit if able; and visitors asked to wear a mask during increased respiratory communicable disease transmission risk levels.

A single use mask must:

- be worn and applied in accordance with the manufacturer's instructions
- cover both the mouth and nose while worn
- be discarded once it has been worn, or becomes visibly soiled or moist, and must not be used again
- be removed/ doffed by touching the strings/ ties or loops only.

7.3.4. Respirators

A respirator is used by an individual to provide respiratory protection. Respiratory protection is one aspect of both infection prevention and control as well as work health and safety strategies for ensuring health worker safety at work. In the healthcare setting, an air-purifying respirator (or particulate filtering respirator) most commonly relates to the disposable filtering half face respirator also known as a P2 or N95 respirator [3].

A P2/ N95 respirator is applied based on the risk assessment and is to be worn when providing care to patients in airborne precautions. Procedures that increase the release of particles into the air (such as aerosol generating procedures [AGP] or behaviours) potentially carry a greater risk. When performing these procedures or activities on patients with a respiratory communicable disease use of an RPD is required by health workers. Health worker must perform a fit check every time they put on a respirator. NSW Health Organisations must ensure health workers are informed on how to perform a fit check.

Fit testing is performed to determine whether a specific type, model and size of respirator is a suitable fit for the wearer and that it is worn correctly to achieve a facial seal and comfort. Health workers who are required to wear a respirator must be trained and assessed for competency in the use of all PPE as part of an ongoing training program. This includes student health workers on placement.

Advancement from fit checking to a fit testing program are to be based on the health workers' level of exposure to known airborne hazards or identification of a new and/ or emerging risk. Implementation of fit testing requires a comprehensive respiratory protection program as outlined in the Clinical Excellence Commission *Respiratory Protection Program Manual*.[3]

A P2/ N95 respirator is not recommended to be worn by a patient. A fluid resistant surgical mask is to be worn by a patient who has a respiratory infection or has an airborne transmissible disease while they are outside their isolation or cohort room or in public areas of the NSW Health Organisation.

7.3.5. Eye protection

Eye protection must be worn when there is risk of body substances splashing or spraying into the conjunctiva and/ or while providing care to patients under droplet or airborne precautions. Personal eyeglasses, prescription glasses and contact lenses are not considered adequate eye protection and are not a substitute for eye protection unless they are specified as safety glasses.

Eye protection must meet Australian standards [35] and be worn and fitted in accordance with the manufacturer's instructions for use.

Goggles with a manufacturer's anti-fog coating provide reliable, practical eye protection from splashes, sprays, and respiratory droplets from multiple angles.

Prescription specific eye protection is considered to provide appropriate eye protection for blood or body fluid splash or droplet exposure if the eyewear:

- is close fitting, particularly at the corners of the eye and across the brow
- includes side protection that is indirectly vented
- can be cleaned and disinfected between use.

Visors are transparent personal protective devices intended to shield the face and eyes of a health worker and are suitable for use with prescription glasses and masks. A mask with visor or a face shield is to be used if there is exposure to an excessive amount of splash or spray.

Reusable eye protection and face visors/ shields must be cleaned in accordance with the manufacturer's instructions after use and stored clean and dry. Eye protection labelled single use must not be shared between health workers or reused.

7.3.6. Gowns and aprons

A fluid-resistant gown or apron, made of impervious material must be worn:

- during any procedure or task where there is a likelihood of splashes or contamination with body substances
- when providing care to patients under transmission-based precautions if contact with the patient or the patient's environment is likely, and removed before or immediately on exiting the room
- as a protective layer under a sterile gown that is not made of impervious material.

Reusable gowns are not recommended for the management of infectious diseases including reprocessing of reusable gowns.[21] Washable fabric gowns that are laundered provide no protection from body substances and are not recommended for protection against infectious diseases, nor considered part of PPE for infection prevention and control.

The need for, and type of gown or apron selected, is based on the nature of the patient interaction, including the anticipated degree of contact with infectious material and potential for blood and body substance penetration of the barrier. Gowns or aprons must be discarded after each use, on exiting the patient room or zone or on completion of a non-clinical task that required a gown to be worn to prevent exposure to contaminants, such as for cleaning. A gown provides increased coverage compared with an apron.[1]

Extended use of PPE is not routinely recommended outside of a pandemic and is confined to a specific infection or communicable disease.

7.4. Aseptic technique

Aseptic technique is a set of practices to minimise contamination and is used to protect the patient from the risk of acquiring an infection during clinical procedures. NSW Health Organisations are to base their practice on the five principles of aseptic technique as outlined in the *Infection Prevention and Control Practice Handbook*.

Each NSW Health Organisation is to undertake a local risk assessment to identify medium and high-risk procedures that require the use of aseptic technique according to the Australian Commission on Safety and Quality in Healthcare (ACSQHC) *Aseptic Technique Risk Matrix*.[36]

Each NSW Health Organisation is to provide its clinical workforce with, or access to, aseptic technique education and maintain records of education, training, and competency assessment. Each NSW Health Organisation is to monitor compliance and report on the results to the appropriate committee.

7.5. Safe handling of waste and used linen

NSW Health is committed to the delivery of an environmentally sustainable footprint, including transitioning to a low-waste system. Consideration should be given to alternate waste streams, in addition to general waste stream disposal for non-clinical waste. This may include recycling waste streams where appropriate.

There is a potential risk of microorganism transmission via exposure to waste or contaminated linen.

Health workers are to handle waste as follows:

- Clinical waste must be disposed of in clinical waste streams and sharps must be discarded into a sharps bin.
- All non-clinical waste must be disposed of into general waste stream or into a specific recycling bin if a recycling program is in place. PPE is considered general waste unless contaminated with bulk blood and or body substances.

Refer to the NSW Health Policy Directive *Clinical and Related Waste Management for Health Services* (PD2020_049) for further information.

Health workers are to handle, dispose and process used linen, or linen soiled with body substances in a manner that prevents exposure to skin and mucous membranes, contamination of clothing and transfer of microorganisms to other persons and the environment. [37, 38]

7.6. Respiratory hygiene and cough etiquette

To minimise the risk of transmission of infection to others, everyone entering, visiting, or working within a NSW Health Organisation presenting with the signs and symptoms of an acute respiratory infection are to have access to hand hygiene products and single use masks to enable them to practice respiratory hygiene and cough etiquette.

Health workers must not attend work with symptoms of acute respiratory infection.

Local or state protocols may apply for people presenting with an acute respiratory infection.

7.7. Safe use and disposal of sharps

The potential for exposure to bloodborne viruses is greatest when medical devices such as needles, scalpels, or other sharp instruments are used and contaminated with body

substances. Therefore, the use of sharps must be minimised wherever possible and when used be disposed of immediately into a sharps bin at the point of care.

Each NSW Health Organisation must have procedures in place for the safe handling, transportation, and disposal of sharps including management of occupational exposures. Where available NSW Health Organisations are to use safety engineered devices.

NSW Health Organisations must provide training to health workers on sharps handling and disposal. [37,38]

7.8. Environmental cleaning

Each NSW Health Organisation must have an environmental cleaning program in place that is managed by suitability qualified personnel with an understanding of environmental cleaning and overseen by an appropriate committee or directorate. Environmental cleaning must be performed in accordance with NSW Health Policy Directive *Cleaning of the Healthcare Environment* (PD2023_018).[4] This includes cleaning of patient areas during and after a patient's stay (such as between patients).

A risk assessment must be done for each functional area to determine the level and frequency of cleaning required based on the number of people using each facility or unit. The performance of cleaning in all functional areas must be regularly audited as per the auditing schedule described in NSW Health Policy Directive *Cleaning of the Healthcare Environment* (PD2023_018).[4]

The transport vehicle should be considered as part of the health facility and is to be cleaned and disinfected (as required) after the patient is transported. Follow local cleaning and disinfection procedures.

8. TRANSMISSION BASED PRECAUTIONS

Transmission-based precautions must be used in addition to standard precautions when standard precautions alone are insufficient to interrupt the transmission of a known or suspected pathogen.[21] The three main types of transmission-based precautions are contact, droplet and airborne (these can be combined for specific transmissible infections or communicable diseases). Implementation of transmission-based precautions must include an education program on how to risk assess for type of precautions, patient placement and selection of personal protective equipment (PPE).

Transmission-based precautions consist of:

- Appropriate patient placement (such as use of negative pressure rooms, isolation, cohorting).
- Appropriate PPE selection and use based on risk assessment.
- Gloves as per standard precautions, don immediately before patient contact and change between different tasks on same patient and must be changed between patients.
- Limit transport and movement of patients where possible and practical.

- Where practical use disposable or dedicated patient care equipment, clean and disinfect reusable shared equipment in between use.
- Clean and disinfect the patient environment.

Some microorganisms can be transmitted simultaneously via more than one transmission route. To mitigate the transmission of these microorganisms, more than one type of transmission-based precautions must be employed in addition to standard precautions.

Each NSW Health organisation must develop a procedure that outlines how they will minimise the risk of contact, droplet, or airborne transmission as well as address visitor access and any restrictions based on risk assessment.

To support the requirements of each of the transmission-based precautions, a NSW Health Organisation must provide the required PPE, appropriate patient accommodation and patient care equipment. Patients and their nominated next of kin (NOK) are to be engaged as partners in care, and this discussion must be documented.

9. PRECAUTIONS FOR MULTIDRUG-RESISTANT ORGANISMS

Multidrug-resistant organisms (MRO) are defined as microorganisms, predominantly bacteria, that are resistant to one or more classes of antimicrobial agents. In most instances, MRO infections have clinical manifestations that are similar to infections caused by susceptible pathogens. However, options for treating patients with these infections may be extremely limited, and may be associated with increased lengths of stay, costs, and mortality.[39]

To minimise MRO transmission and infection, various types of infection prevention and control principles and interventions are required. In addition, local risk assessments must be conducted to assess the risk to inform the requirements of specific infection prevention measures [39, 40] for the management of patients who are MRO colonised or infected. This includes:

- Screening for MROs (see Section 9.1).
- Appropriate patient placement.
- Hand hygiene, standard and transmission-based precautions.
- Prompt and effective communication (such as electronic medical record alert to identify patients MRO status).
- Maintaining staffing level appropriate to patient care requirements.
- Infection prevention and control service involvement in analysis, structure, process, and outcomes when designing interventions.
- Compliance monitoring and timely feedback on adherence to recommended precautions and management.
- Antimicrobial stewardship.
- Educational intervention for health workers, patients, family, and carers.
- Environmental cleaning and monitoring.

- Decolonisation program.

9.1. Multidrug-resistant organisms screening

In acute-care settings, NSW Health Organisations must have a targeted MRO screening plan. The decision to screen for specific MROs is to be based on the level of risk and the local epidemiology of the specific MRO.

Organism-specific approach is the use of knowledge of the epidemiology of specific MROs to reduce the risk of transmission and outbreaks. These strategies include targeted screening and identification, management of cases and screening and management of contacts. When implementing an MRO screening program NSW Health Organisations are to consider factors such as:

- Local prevalence of the MRO.
- The reason for admission of the patient.
- The potential risk of transmission to others.
- The functional risk status of the unit to which the patient is admitted.
- The likelihood that the patient is carrying an MRO.
- Admissions from an international facility into Australian facilities.

Screening results, as well as any results obtained through diagnostic testing, are to be used to inform subsequent infection prevention and control actions.

Ongoing MRO screening may be necessary in clinical areas where there may be a high risk of transmission or where the clinical impact of MRO transmission would be severe (such as dialysis units, haematology units, oncology units, neonatal intensive care units, intensive care units).

A major risk factor for acquiring an MRO is overseas travel, especially when medical care or treatment in an overseas healthcare facility is involved. A risk assessment must be conducted at admission to identify people who require screening for specific MROs.

Preoperative screening for *Staphylococcus aureus* including Methicillin resistant *Staphylococcus aureus* (MRSA) and Methicillin sensitive *Staphylococcus aureus* (MSSA) is recommended for elective procedures such as coronary artery bypass graft (CABGs) and joint replacements (total hip replacement and total knee replacements).

A risk assessment must be conducted at admission to identify people who require screening for specific MROs.

9.2. Isolation and placement of patient with multidrug-resistant organisms

A single-patient room is recommended for patients who require transmission-based precautions. Patient placement decisions must be made based on a risk assessment in consultation with local infection prevention and control services and the infectious diseases team. The decision needs to consider the prioritisation of isolation or single rooms or dedicated areas for other important uses beyond the management of infectious diseases,

such as providing end-of-life care, falls risk or ensuring appropriate patient security and safety.

Isolation of a patient must not compromise clinical care. Patients must be provided with information on the isolation requirements, specific information on the organism and infection prevention measures. Extended periods of isolation require regular assessment by teams involved in patient care. The reason for isolation must be documented in the patient's healthcare records and reviewed by the infection prevention and control service. Patients with significant neutropenia and transplant recipients may require protective isolation.

When single rooms with dedicated toilets are not available a dedicated commode must be assigned. Where single rooms are not available in a high-risk clinical area, cohorting patients with the same confirmed infectious agent may need to occur. A decision to cohort patients must be made carefully with consultation between treating clinicians and the infection prevention and control service and/ or an infectious diseases physician. Cleaning and disinfection of patient care items and surfaces is especially important in this situation.

9.3. Contact precautions for multidrug-resistant organisms

Contact precautions in addition to standard precautions, are implemented in the presence of known or suspected infectious agents that are spread by direct or indirect contact with the patient or the patient's environment.

The decision to manage patients **colonised** with an MRO without contact precautions must have the following:

- Solid foundations, implementation, and agreed measured compliance indicators with standard precautions across the NSW Health Organisation.
- Demonstrated hand hygiene compliance which is inclusive for all health worker groups working within the NSW Health Organisation.
- Detailed monitoring with continual review and oversight including ability to identify outbreaks and triggers for escalation of precautions.
- Risk assessment of identified environmental risk area (such as transplant, oncology)
- The ability to escalate precautions where required.

Health workers must practice effective hand hygiene as per the five moments for hand hygiene. When performing multiple tasks which may carry additional risks on the same patient, will require additional hand hygiene and changing gloves if worn between tasks.

The use of gloves for contact precautions must be applied based on risk of exposure to blood or body substances (wet contact) and risk assessed for significant patient or environmental contact.

The use of apron or gown for contact precautions must be applied based on risk of exposure to blood or body substances (wet contact) and risk assessed for significant patient or environmental contact.

Appropriate use of PPE significantly contributes to delivering environmentally sustainable healthcare.

9.4. Cleaning of shared equipment

Single use or patient dedicated equipment is recommended where available and practical. Where common use of equipment for multiple patients is unavoidable, a risk assessment must be performed, and cleaning carried out according to the manufacturer's instructions.

9.5. Cleaning of environment

Where the presence of infectious agents requiring transmission-based precautions is suspected or known, surfaces are to be physically cleaned with a detergent solution followed by disinfection (if required) with disinfectant that is listed on the Australian Register of Therapeutic Goods. Refer to the NSW Health Policy Directive *Cleaning of the Healthcare Environment* (PD2023_018) for further information.

9.6. Transfer of patients

The transfer and transport of patients within and between NSW Health Organisations are to be guided by clinical need and urgency, not by their infection status. Cohorting patients for transport must be assessed with consideration to transmission risks in equally with requirements for timely access to care or preventing delayed discharge.

All agencies involved in patient transfer and transport are to, at the minimum, exercise standard precautions during the transfer and transport of any patient. This includes ensuring that the transport vehicle and equipment is cleaned and disinfected after transport of a patient with an MRO or infectious disease.

It is the responsibility of the transfer or transporting agency to ensure, the receiving organisation is notified of any infection risk prior to the team arriving and that transport staff have undertaken appropriate training and education to enable them to employ the appropriate transmission-based precautions.

When transporting patients with any respiratory communicable diseases, the use of surgical masks should be considered for patients if cohorted during transport.

9.7. Decolonisation

NSW Health Organisations are to consult with infection prevention and control, infectious diseases and treating medical team regarding the appropriate use of decolonisation strategies for suitable patients as part of an intensified MRO control program.

10. SURVEILLANCE REQUIREMENTS

Each NSW Health Organisation must conduct a healthcare associated infection (HAI) surveillance program as directed by the *Healthcare Associated Infection (HAI) Clinical Indicator Manual*.[41] This manual outlines the minimum HAI surveillance activities that NSW Health Organisations must undertake and report on.

All NSW Health Organisations with admitted patients are required to monitor and report on HAIs as per the NSW Health Performance framework - Service performance measure.[42]

All HAI surveillance data are to be reviewed within the NSW Health Organisation and reported to the highest executive level on a regular basis.

Surveillance data must also be reported back to the clinicians of the NSW Health Organisation to enable practice and quality improvement.

A NSW Health Organisation must have in place methods for monitoring, review, and assessment of the effectiveness of infection prevention and control strategies including internal quality and risk management systems.

An effective surveillance plan must include:

- Adherence to relevant national and state requirements, safety standards and guidelines.
- Purpose built surveillance systems.
- Laboratory-based surveillance and clinical ward rounds to identify infections.
- Monitoring of significant organisms such as multidrug-resistant organisms (MROs), high consequence infectious diseases (HCIDs) and any local risks and/ or emerging trends.
- Access to epidemiological support in reviewing data.
- Feedback of surveillance data analysis to relevant teams and executives.
- Process for ensuring communication with patients and partners in care.

11. REPROCESSING OF RE-USABLE MEDICAL DEVICES

Each NSW Health Organisation must ensure that there is a governance structure in place for both central and satellite reprocessing units. Each NSW Health Organisation must maintain a risk management approach to reprocessing.

It is recommended that a central reprocessing unit provides advice and expertise to local satellite units, or a NSW Health Organisation may choose to employ an alternative strategy to ensure that satellite units are adequately supported and compliant with relevant standards. This Policy Directive is to be read in conjunction with developed standard operating procedures and resources developed and endorsed by NSW Health.

Central reprocessing, endoscopy reprocessing, and satellite reprocessing units must be regularly audited against the *Australian New Zealand (AS/NZS) Standard - Reprocessing of reusable medical devices in health service organisations.* A documented, quality improvement plan specifying timeframes, milestones and deliverables must be maintained.[17]

Re-useable medical devices (RMDs) must be reprocessed in accordance with relevant Australian [17,43] and international standards and manufacturer's instructions. For endoscopy units, additional resources are available from the Gastroenterological Nurses College of Australia.[44]

The AS/NZS Standard for reprocessing of RMDs is applicable wherever the reprocessing of RMDs occurs within provision of services from NSW Health Organisations.

12. SINGLE USE AND SINGLE PATIENT USE DEVICES

Where the NSW Health Organisation is responsible for providing 'single use' devices and equipment, they must ensure that the device or equipment is used once. Single use items may be labelled as:

- single use
- disposable
- or with the ② symbol.

The *Therapeutic Goods (Medical Devices) Regulations 2002* (Commonwealth) requires a NSW Health Organisation that reprocesses single use devices to be licensed as a manufacturer under Section 41BG (2) of the *Therapeutic Good Act 1989* (Commonwealth).[45] Where the NSW Health Organisation is considered to be a manufacturer by the Therapeutic Goods Administration (TGA) it is subject to audit conformance.

Where the NSW Health Organisation is responsible for providing 'single patient use' devices and equipment, they must ensure that the device or equipment is used for only one patient. 'Single patient use' devices and equipment can be used multiple times on the same patient following manufacturer's instructions for cleaning and/ or reprocessing between use.

Single patient use devices must be stored in a manner that prevents contamination between uses on that same patient and cleaned before each use.

NSW Health Organisations are required to consider environmental sustainability with a balanced approach to decisions related to the implementation of single use or single patient use items versus reusable items.

Routine replacement of single use items with reusable items can be a complex process which requires rigorous risk assessment to ensure quality and safe provision of care is maintained.

13. SHARED PATIENT CARE EQUIPMENT

Use of shared devices and equipment in patient care has been implicated in the transmission of infection between individuals.[21] Health workers are to pay special attention to the cleaning of shared reusable clinical devices and equipment between patients, their carers, between health workers and between episodes of patient contact. They must be cleaned according to manufacturer's instructions for use and local procedures.

13.1. Information communication technology

Health information communication technology (ICT) hardware (such as workstations on wheels, iPads, laptops, digital pens, wall mounted fixatures that support ICT equipment) in some circumstance can pose patient safety risks due to inability to clean these items effectively and efficiently in between use.

The design, development, trial, purchase, and implementation of any ICT must be in consultation with local infection prevention and control service, work health and safety and local procurement to ensure relevant Australian Standards and processes are considered and followed.

14. PROCUREMENT OF NEW DEVICES OR EQUIPMENT

As part of the process for purchasing new patient care devices, consumables or equipment, the NSW Health organisations, solely or in conjunction with HealthShare NSW, must seek local infection prevention and control advice prior to purchase. Where new devices or equipment will require later reprocessing, the NSW Health Organisation must also consult with management of local reprocessing units prior to trial or purchase to ensure compliance with relevant policies, procedures, and Australian standards.

A NSW Health Organisation's asset management program must include infection prevention and control consultation when undertaking a review of the risks associated with patient and non-patient care equipment, furnishing, fixtures and clinical information technology systems. The local infection prevention and control service must be consulted when the NSW Health Organisation is considering the replacement of old equipment or reviewing the need to adopt newer technologies (as per NSW Health Guideline *New Health Technologies and Specialised Services* (GL2022_012).

15. SAFE INJECTION AND MULTI-DOSE VIALS

Breaches in safe injection, infusion and medication vial handling practices have resulted in transmission of human immunodeficiency virus (HIV) and viral hepatitis and in some cases caused outbreaks of disease.[46] Standard precautions, particularly aseptic technique form the basis of safe injection practices. Flip-top pharmaceutical vials are a dust cover and therefore all vials must be cleaned and disinfected prior to access to maintain aseptic technique.[47]

Use of a multi-dose vial is not recommended. Where multi-dose vial use is unavoidable (such as only manufactured as a multi-dose vial) it must be used for a single patient whenever possible and discarded immediately after use. Health workers are to be provided with appropriate education and training prior to the utilisation of multi-dose vials.

Injectable products packaged in multi-dose vials or ampoules (or other similar containers) must not be used except where the product is intended solely for the exclusive use of a single patient or where there is no alternative available on the Australian pharmaceutical market. Where there is no alternative, precautions must be taken to ensure that the injection of contaminated material or fluid into a multi-dose vial or ampoule (or other similar container) does not happen.

Injectable medication or solution must be withdrawn from a vial or ampoule (or other similar container) using a sterile needle and syringe. Before each entry into a multi-dose vial the top must be cleaned and punctured with a new unused sterile needle and syringe, even if the vial is dedicated to a single patient (refer to NSW Health Policy Directive *Medication Handling* (PD2022_032).[46]

Open multi-dose lotion or cream pots or containers must not be used unless they are for an individual patient. A collapsible squeeze tube or bottle, pump pack or valve are to be used to dispense lotion or cream from a multi-dose container. A collapsible squeeze tube or bottle should be single patient use unless there is a valve. Once the product is empty both the container and pump pack are to be disposed of.

There are some delivery systems within the Australian healthcare market that provide multi-dosing administration where a drug, fluid, radiation treatment or contrast medium is given

from a primary vial to multiple patients. Delivery using such systems (not routinely recommended) must ensure that there is no cross contamination with any device/ consumable/ solution/ medications between patients. These products and devices must be registered with the Therapeutic Goods Administration (TGA), and NSW Health Organisations must identify them and develop clear local protocols for their management.

16. SAFE HANDLING AND TRANSPORT OF PATIENT SPECIMENS

When transporting and handling pathology specimens, health workers must ensure that the specimens are packaged and transported in such a way to ensure the safety of anyone required to handle the package and/ or specimen and that the specimen is maintained under suitable conditions.[48]

In the event of a novel infectious disease, NSW Health Organisations are to refer to specific pathology specimen handling and transporting advice provided by NSW Health or other delegate agencies. Where a NSW Health Organisation is required to transport specimens to a pathology laboratory by road, rail or air transport, triple packaging is to be used. Specimen packaging is to comply with the relevant standards and requirements for the mode of transport being used.

17. DEVICE RELATED INFECTIONS

Indwelling medical devices such as urinary catheters, vascular access devices, endotracheal tubes, tracheostomy tubes, enteral feeding tubes and wound drains are common in healthcare but may also be left in place temporarily or permanently after discharge from hospital. There can be a risk of introduction of microorganisms with the device either at the time of insertion or while the device is in situ. NSW Health Organisations that use these devices must have local guidelines or procedures in place to support the technical and procedural aspects for using and managing these devices. [49, 50]

At a minimum NSW Health Organisations must:

- Weigh risks and benefits to ensure the device is best for the patient. When not in an emergency, consider and plan the timeframe the device will be required as part of appropriate device selection before insertion.
- Insertion must only be undertaken by health workers trained and competent in the technique.
- Use aseptic technique when inserting.
- Perform hand hygiene and wear appropriate personal protective equipment (PPE) when accessing or manipulating these devices.
- Monitor patients and the devices regularly for any signs and symptoms of infection and document condition each shift.
- Provide suitable and culturally appropriate patient and/ or caregiver education on the infection risks associated with the devices and importance of proper maintenance and

advise on how to escalate any concerns around the device that can meet their needs. [51]

- Remove the device as soon as it is no longer needed.
- Document in the patient's records, monitoring, and documentation of the device and all procedures involving the device.
- Have a process to identify and manage device related complication such as infection. Report all patient related device complications such as infection into relevant reporting system.

17.1. Medical devices used for diagnostic or treatment purposes

Medical devices (such as dialysis machines, syringe pumps, ventilators) must be cleaned, managed, and maintained to reduce the risk of contamination and microorganism transmission. NSW Health Organisations are to follow local processes and manufacturer's instructions for use as specified.

18. CONSTRUCTION, RENOVATION AND REFURBISHMENT

NSW Health Organisations are to ensure that all construction, renovation, installation, and maintenance activities on their sites are undertaken in a safe and appropriate manner to reduce the risk of infection to patients, visitors, carers, volunteers, and health workers.[28]

Factors that contribute to healthcare associated invasive infections such as aspergillosis, and other environmental pathogens for at-risk patient groups must be risk assessed prior to any construction, renovation, installation, and maintenance activities. Infection prevention and control units must be key project members from planning to completion to ensure that infection prevention and control needs have been anticipated, planned for and met.

Environmental controls such as effective ventilation, dust suppression and adequate cleaning is required to minimise any impact on air quality within the construction zones to reduce the risk of potential adverse health effects.[28]

The design, installation, and commissioning of ventilation systems for new builds, or upgrades to current infrastructure, requires technical expertise from qualified biomechanical or ventilation engineers who are also responsible for the operation, maintenance and monitoring of these systems.[29] NSW Health Organisations are to ensure the infection prevention and control team is aware and included in any stage of construction, renovation and refurbishment works including oversight on the requirements for air quality testing where applicable.

19. ANIMALS

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

Potentially, animals can serve as a vector for infections and, in particular multi-drug resistant organisms.[8]

To minimise the risk to patients, visitors, carers and health workers of acquiring an infection from an animal, a NSW Health Organisation must ensure that infection prevention and control requirements described in this Policy Directive are applied when handling and treating animals within the NSW Health Organisation (refer to the *Infection Prevention and Control Practice Handbook* for more information).

All NSW Health Organisations that utilise animal cadavers for clinical training or research purposes are to have a process in place for undertaking this within their facilities. This process must include risk mitigation strategies to prevent any cross contamination between animals and humans.

19.1. Animal assisted therapy and personal pet visitation

All types of animal visitation programs are to be conducted in accordance with relevant NSW Health policies and legislation relating to best practice in healthcare, infection prevention and control, patients' rights, and animal welfare. Some high-risk settings may be unsuitable for animal visit due to patients' clinical health and safety risks.

NSW Health Organisations with animal assisted therapy programs and animal assisted activities are to develop a procedure in consultation with infection prevention and control which in addition to compliance with state and local council legislation, must include types of animals allowed for these activities, certification of animals and their trainers/ handlers, education of staff, and education of animal trainers/ handlers regarding organisational policies and procedures, animal hygiene, patient hygiene, and animal access.

20. OUTBREAK MANAGEMENT REQUIREMENTS

Each NSW Health Organisation must have written procedures that address the outbreak management requirements for communicable diseases and multidrug-resistant organisms (MROs) and identify delegations of responsibility during the outbreak. It must also include notifiable diseases listed in Schedule 2 *Public Health Act 2010* (NSW) to the local Public Health Unit.

In the event of an outbreak NSW Health Organisations are to follow the outbreak management strategies outlined in the *Infection Prevention and Control Practice Handbook* and timely escalation of information on outbreaks or clusters as outlined in the NSW Health Guideline *Triggers for Escalation Following Detection of Infection Outbreaks or Clusters* (GL2019_013).[1, 24]

21. HIGH CONSEQUENCE INFECTIOUS DISEASE MANAGEMENT

An emerging novel communicable disease of global significance or a high consequence infectious disease (HCID) is defined as a disease that:

- There is a potential for human to human, animal to human or human to animal spread.
- The disease is not established in the NSW population.

- The disease has a significant health impact on the individual or at a population level should more widespread transmission occur or significant animal health implications.

Several HCIDs are transmissible from person to person and therefore infection prevention and control precautions must be implemented to prevent transmission in healthcare facilities. The key objectives of the response are to:

- Minimise transmission, morbidity, and mortality in the population.
- Inform, engage, and empower the public and health professionals to assist in the response.
- Minimise the burden on the health system, health support services and partner agencies.
- Ensure that all health sectors work in partnership to provide a coordinated and timely response.
- Maintain effective functioning across health services to manage other health issues.

The NSW Health Organisation must have documented communication and preparedness plans to respond effectively to outbreaks, including single case occurrences of a high consequence infectious disease. Plans must incorporate relevant links to Public Health Units.

The preparedness must include (in consultation with infection prevention and control/ infectious diseases):

- planning, identification, and prioritisation of risks
- training and simulation exercises
- after action reviews
- evaluation of lessons learned
- implementation of the organisational change identified.

For more information refer to NSW Health Policy Directive *Early Response to High Consequence Infectious Diseases* (PD2023_008) and the *Infection Prevention and Control Practice Handbook*.[1]

22. LOOKBACK

NSW Health Organisation are to initiate a lookback process when a clinical incident or concern (including healthcare associated infections, infection prevention and control breaches or exposure to communicable diseases or blood borne viruses) has affected or may affect a group of patients. Refer to NSW Policy Directive *Lookback* (PD2023_003) for more information.

23. ENVIRONMENTAL SUSTAINABILITY

When implementing infection prevention and control strategies, NSW Health Organisations are to enhance environmental sustainability efforts by reducing waste incineration, recycling

nonhazardous waste, reducing water usage, managing resources efficiently and reducing the use of single use or disposable items where practical and appropriate.

Environmental sustainability can also be achieved by adapting a model of care that focuses on fundamental processes and activities with technological innovations such as live data sharing and teleconferencing. The following areas for improvement are to be considered when focusing efforts on reducing the healthcare environmental footprint considerate of ensuring compliance with infection prevention and control:

- Transition to renewable energy sources.
- Purchase environmentally preferred and sustainable products.
- Reduce chemical use where feasible and practical.
- Include green building in infrastructure and planning.
- Reduce consumption of energy, water, and raw materials.
- Minimising waste.
- Introduce recycling programs.
- Eliminate incineration where possible and practical.

Where sustainable options are being considered compliance with infection prevention and control is required ensuring all standards are met and categorisation of procedure or equipment remains consistent and does not introduce other unintended risks or consequences.

Sustainable projects being implemented must include consultation with infection prevention and control in addition to other key stakeholders.[52]

24. RELEVANT NSW HEALTH POLICIES, GUIDELINES AND MANUALS

Number	Document
GL2012_007	*Animal Visits and Interventions in Public and Private Health Services in NSW*
Guideline	*Australasian Health Facility Guidelines Part D Infection Control*
PD2023_018	*Cleaning of the Healthcare Environment*
PD2020_049	*Clinical and Related Waste Management for Health Services*
PD2019_020	*Clinical Handover*
PD2015_049	*Code of Conduct*
GL2017_023	*Community Sharps Management*
PD2023_008	*Early Response to High Consequence Infectious Diseases*
PD2018_032	*Managing Complaints and Concerns about Clinicians*
GL2023_009	*Engineering Services*
PD2022_023	*Enterprise-wide Risk Management*
PD2012_069	*Health Care Records - Documentation and Management*
Manual	*Healthcare Associated Infection (HAI) Clinical Indicator Manual*
PD2020_045	*High-Risk Medicine Management*
PD2017_010	*HIV, Hepatitis B or Hepatitis C – Management of Health Care Workers Potentially Exposed*
PD2020_047	*Incident Management Policy*
QIDS and QARS	*Infection Control Quality Monitoring Program*
Manual	*Infection Prevention and Control Practice Handbook*
GL2021_015	*Insertion and Management of Urethral Catheters for Adult Patients*
PD2019_040	*Intravascular Access Devices (IVAD) - Infection Prevention & Control*
PD2016_016	*NSW Health Influenza Pandemic Plan*
PD2023_003	*Lookback*
PD2018_031	*Managing Misconduct*
PD2016_040	*Managing for Performance*
PD2016_048	*Mandatory Training – Criteria for Approval as a NSW Health Requirement*
GL2023_021	*Breastmilk: Safe Management*
PD2022_32	*Medication Handling*
PD2014_028	*Open Disclosure Policy*
PD2013_024	*Oral Health: Cleaning, Disinfecting and Sterilizing*
IB2023_012	*Privacy Management Plan*
Manual	*Privacy Manual for Health information*

Number	Document
GL2019_012	*Surveillance & Response for Carbapenemase-Producing Enterobacterales (CPE) in NSW Health Facilities*
GL2019_013	*Triggers for Escalation Following Detection of Infection Outbreaks or Clusters*

25. REFERENCES

1. Clinical Excellence Commission. (2020). *Infection prevention and control practice handbook*. Retrieved from https://www.cec.health.nsw.gov.au/keep-patients-safe/infection-prevention-and-control/resources
2. Clinical Excellence Commission. (2022). *COVID-19 Infection Prevention and Control Manual for acute and non-acute healthcare settings, v3.1*. Retrieved from https://www.cec.health.nsw.gov.au/keep-patients-safe/COVID-19/COVID-19-IPAC-manual
3. Clinical Excellence Commission. (2022). *Respiratory Protection Program Manual, v1.2*. Retrieved from https://www.cec.health.nsw.gov.au/keep-patients-safe/COVID-19/respiratory-protection-program
4. NSW Health Policy Directive *Cleaning of the Healthcare Environment* (PD2023_018).
5. World Health Organization. (2016). *Guidelines on core components of infection prevention and control programs at the national and acute health care facility level*. Retrieved from https://www.who.int/publications/i/item/9789241549929
6. Australian Commission on Safety and Quality in Health Care. (2021). National Safety and Quality Health Service Standards. 2nd ed. Sydney: ACSQHC. Retrieved from https://www.safetyandquality.gov.au/publications-and-resources/resource-library/national-safety-and-quality-health-service-standards-second-edition
7. World Health Organization. (2019). *Core components for infection prevention and control programs*. Retrieved from https://www.who.int/teams/integrated-health-services/infection-prevention-control/core-components
8. Bearman, G., Doll, M., Cooper, K., Stevens, M.P. (2019). Hospital Infection Prevention: How Much Can We Prevent and How Hard Should We Try? *Current Infectious Disease Reports*, 21, 2. Retrieved from https://doi.org/10.1007/s11908-019-0660-2
9. National Health and Medical Research Council. (2019). Australian Guidelines for the Prevention and Control of Infection in Healthcare. Retrieved from https://www.nhmrc.gov.au/about-us/publications/australian-guidelines-prevention-and-control-infection-healthcare-2019#block-views-block-file-attachments-content-block-1
10. Centers for Disease Control and Prevention. (2008). Guideline for disinfection and sterilization in healthcare facilities. Retrieved from https://www.cdc.gov/infectioncontrol/guidelines/disinfection/cleaning.html
11. Australian Commission on Safety and Quality in Health Care. (2017). Safety and Quality Improvement Standard 1: Governance for Safety for Quality in Health Service

Organisation, *National Safety and Quality Health Service Standards*. 2nd ed. Sydney: ACSQHC.

12. Rutala, W.A. and D.J. Weber. (2011). Sterilization, high-level disinfection and environmental cleaning. *Infectious Disease Clinics of North America*, 25(1), 45-76. https://doi.org/10.1016/j.idc.2010.11.009
13. Collins A S. (2008). Chapter 41: Preventing Health Care–Associated Infections. In: Hughes RG, editor. *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Rockville, MD: Agency for Healthcare Research and Quality.
14. Centers for Disease Control and Prevention National Center for Emerging and Zoonotic Infectious Diseases (NCEZID). (2021). Division of High-Consequence Pathogens and Pathology (DHCPP). Retrieved from https://www.cdc.gov/ncezid/dhcpp/index.html
15. NSW Health. (2022, April). *Our Structure*. Retrieved from https://www.health.nsw.gov.au/about/nswhealth/Pages/structure.aspx
16. World Health Organization. (2022). *Disease Outbreak*, Retrieved from https://www.emro.who.int/health-topics/disease-outbreaks/index.html
17. Australian and New Zealand Standards. (2014). Reprocessing of reusable medical devices in health service organizations, Standards Australia (AS/NZS 4187: 2014).
18. Australasian Health Infrastructure Alliance. (2022). *Australasian Health Facility Guidelines (AusHFG) Part B - Health Facility Briefing and Planning 0190 – Sterilizing Services and Endoscope Reprocessing Units*. Retrieved from https://healthfacilityguidelines.com.au/hpu/sterilizing-services-and-endoscope-reprocessing-unit
19. NSW Health Guideline *Work Health and Safety - Blood and Body Substances Occupational Exposure Prevention* (GL2018_013)
20. Centers for Disease Control and Prevention Division of Oral Health, National Center for Chronic Disease Prevention and Health Promotion. (2018). *Standard Precautions*. Retrieved from https://www.cdc.gov/oralhealth/infectioncontrol/summary-infection-prevention-practices/standard-precautions.html
21. National Health and Medical Research Council. (2019). Australian Guidelines for the Prevention and Control of Infection in Healthcare. Retrieved from https://www.nhmrc.gov.au/about-us/publications/australian-guidelines-prevention-and-control-infection-healthcare-2019#block-views-block-file-attachments-content-block-1
22. World Health Organization. (2009). *A guide to the implementation of the WHO multimodal hand hygiene improvement strategy*. Retrieved from https://www.who.int/publications/i/item/a-guide-to-the-implementation-of-the-who-multimodal-hand-hygiene-improvement-strategy
23. NSW Health Guideline *Surveillance & Response for Carbapenemase-Producing Enterobacterales (CPE) in NSW Health Facilities* (GL2019_012)
24. NSW Health Guideline *Triggers for Escalation Following Detection of Infection Outbreaks or Clusters* (GL2019_013)

25. NSW Health Policy Directive *Enterprise-wide Risk Management* (PD2022_023)
26. National Health and Medical Research Council and Australian Technical Advisory Group on Immunisation. (2022). *The Australian Immunisation Handbook*. Retrieved from https://immunisationhandbook.health.gov.au/
27. NSW Health Policy Directive *Occupational Assessment, Screening and Vaccination Against Specified Infectious Diseases* (PD2022_030)
28. Australasian Health Infrastructure Alliance. (2020). *Australasian Health Facility Guidelines (AusHFG) Part D Infection Prevention and Control*. Retrieved from https://healthfacilityguidelines.com.au/aushfg-parts
29. Australian Commission on Safety and Quality in Healthcare. (2022). *Optimising ventilation for infection prevention and control in healthcare settings*. Retrieved from https://www.safetyandquality.gov.au/our-work/infection-prevention-and-control/optimising-ventilation-infection-prevention-and-control-healthcare-settings
30. NSW Health. (2021). *Recirculating air filtration device use in NSW hospitals (SI:009/21)*. Retrieved from https://www.health.nsw.gov.au/sabs/Documents/2021-si-009.pdf
31. Australian Commission on Safety and Quality in Health Care. Antimicrobial Stewardship in Australian Health Care. Sydney: ACSQHC; 2023. Retrieved from https://www.safetyandquality.gov.au/our-work/antimicrobial-stewardship/antimicrobial-stewardship-australian-health-care-ams-book
32. Australian Commission on Safety and Quality in Healthcare. *National Hand Hygiene Initiative (NHHI*). Retrieved from https://www.safetyandquality.gov.au/our-work/infection-prevention-and-control/national-hand-hygiene-initiative
33. Jain, S., Clezy, K., McLaws, M.L. (2017). Glove: Use for safety or overuse? *Am J Infect Control*. 45(12), 1407–1410. Retrieved from https://doi.org/10.1016/j.ajic.2017.08.029
34. Australian Standards. (2015). Single-use face masks for use in health care Standards Australia (AS 4381:2015).
35. Australian and New Zealand Standards. (2010). Personal eye protection, Standards Australia (AS/NZS 1337.1:2010).
36. Australian Commission on Safety and Quality in Health Care. (2018). *Aseptic Technique Risk Matrix*. Retrieved from https://www.safetyandquality.gov.au/sites/default/files/migrated/Aseptic-Technique-Risk-Matrix-Updated-November-2018.pdf
37. NSW Health Policy Directive *Clinical and Related Waste Management for Health Services* (PD2020_049)
38. NSW Health Guideline *Community Sharps Management* (GL2017_023)
39. Jain, S., Clezy, K., McLaws, M.L. (2019). Modified glove use for contact precautions: Health care workers' perceptions and acceptance. *American journal of infection control*, 47(8), 938–944. Retrieved from https://doi.org/10.1016/j.ajic.2019.01.009

40. Jain, S., Clezy, K., & McLaws, M. L. (2018). Safe removal of gloves from contact precautions: The role of hand hygiene. *American journal of infection control*, 46(7), 764–767. Retrieved from https://doi.org/10.1016/j.ajic.2018.01.013
41. Clinical Excellence Commission. (2021). Healthcare Associated Infection (HAI) Clinical Indicator Manual – Version 3.3 – September 2021. Retrieved from https://www.cec.health.nsw.gov.au/keep-patients-safe/infection-prevention-and-control/healthcare-associated-infections/policies,-guidelines-and-handbook
42. NSW Health Performance Framework. Service Performance Measure. https://www.health.nsw.gov.au/Performance/Pages/frameworks.aspx
43. Australasian Society for Ultrasound in Medicine (ASUM), Basseal, JM, Westerway, SC, Juraja, M, van de Mortel, TF, McAuley, TE, Rippey, J, Meyer-Henry, S, Maloney, S, Ayers, A, Jain, S, Mizia, K, Twentyman, D, Guidelines for Reprocessing Ultrasound Transducers. Australasian Journal of Ultrasound in Medicine. 2017; 00: 000– 000. Retrieved from https://doi.org/10.1002/ajum.12042
44. Devereaux, B.M., Jones, D., Wardle, E., on behalf of the Infection Control in Endoscopy Committee. (2021). Infection Prevention and Control in Endoscopy. Retrieved from https://www.genca.org/standards-positions/guidelines/
45. *Therapeutic Goods Act 1989 no. 21* (Cth). Retrieved from https://www.legislation.gov.au/Series/C2004A03952
46. NSW Health Policy Directive *Medication Handling* (PD2022_032)
47. Hilliard, J. G., Cambronne, E. D., Kirsch, J. R., & Aziz, M. F. (2013). Barrier protection capacity of flip-top pharmaceutical vials. *Journal of clinical anesthesia*, 25(3), 177–180. Retrieved from https://doi.org/10.1016/j.jclinane.2012.07.006
48. National Pathology Accreditation Advisory Council. (2013). *Requirements for the packaging and transport of pathology specimens and associated materials, 4th edition*. Retrieved from https://www1.health.gov.au/internet/main/publishing.nsf/Content/health-npaac-docs-PackTransPathSpecimens.htm
49. NSW Health Policy *Directive Intravascular Access Devices (IVAD) - Infection Prevention & Control* (PD2019_040)
50. NSW Health Guideline *Insertion and Management of Urethral Catheters for Adult Patients* (GL2021_015).
51. Clinical Excellence Commission. REACH. Retrieved from https://www.cec.health.nsw.gov.au/keep-patients-safe/reach
52. NSW Health. Net zero clinical programs. Retrieved from https://www.health.nsw.gov.au/netzero/Pages/programs.aspx