

HLTINFO06

Apply basic principles and
practices of infection
prevention and control



**LEARNER
GUIDE**

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This Learner Guide

HLTINF006 - Apply basic principles and practices of infection prevention and control (Release 1)

This unit describes the performance outcomes, skills and knowledge required to apply basic infection prevention and control principles in a workplace, including implementing standard and transmission-based precautions and responding to risks.

This unit applies to individuals working in a range of industry and work setting contexts.

The skills in this unit must be applied in accordance with Commonwealth and State or Territory legislation, Australian standards and industry codes of practice.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

A complete copy of the above unit of competency can be downloaded from the TGA website:

<https://training.gov.au/Training/Details/HLTINF006>

About This Unit of Competency Introduction

As a worker, a trainee, or a future worker, you want to enjoy your work and become known as a valuable team member. This unit of competency will help you acquire the knowledge and skills to work effectively as an individual and in groups. It will give you the basis to contribute to the goals of the organisation which employs you.

It is essential that you begin your training by becoming familiar with the industry standards to which organisations must conform.

This Learner Guide Covers

Apply basic principles and practices of infection prevention and control

- I. Identify the role of infection prevention and control in the work setting
- II. Follow standard and transmission-based precautions for infection prevention and control in the work setting
- III. Respond to potential and actual exposure to infection risks within scope of own role

Learning Program

As you progress through this unit of study, you will develop skills in locating and understanding an organisation's policies and procedures. You will build up a sound knowledge of the industry standards within which organisations must operate. You will become more aware of the effect that your own skills in dealing with people have on your success or otherwise in the workplace. Knowledge of your skills and capabilities will help you make informed choices about your further study and career options.

Additional Learning Support

To obtain additional support you may:

- Search for other resources. You may find books, journals, videos and other materials which provide additional information about topics in this unit.
- Search for other resources in your local library. Most libraries keep information about government departments and other organisations, services and programs. The librarian should be able to help you locate such resources.
- Contact information services such as Infolink, Equal Opportunity Commission, Commissioner of Workplace Agreements, Union organisations, and public relations and information services provided by various government departments. Many of these services are listed in the telephone directory.
- Contact your facilitator.

Facilitation

Your training organisation will provide you with a facilitator. Your facilitator will play an active role in supporting your learning. Your facilitator will help you at any time during working hours to assist with:

- How and when to make contact
- What you need to do to complete this unit of study
- What support will be provided.

Here are some of the things your facilitator may do to make your study easier:

- Give you a clear visual timetable of events for the semester or term in which you are enrolled, including any deadlines for assessments
- Provide you with online webinar times and availability
- Use ‘action sheets’ to remind you about tasks you need to complete, and updates on websites
- Make themselves available by telephone for support discussion and provide you with industry updates by email where applicable
- Keep in touch with you during your studies

Flexible Learning

Studying to become a competent worker is an interesting and exciting thing to do. You will learn about current issues in this area. You will establish relationships with other students, fellow workers, and clients. You will learn about your own ideas, attitudes, and values. You will also have fun. (Most of the time!)

At other times, studying can seem overwhelming and impossibly demanding, particularly when you have an assignment to do and you aren't sure how to tackle it, your family and friends want you to spend time with them, or a movie you want to see is on television.

Sometimes being a student can be hard.

Here are some ideas to help you through the hard times. To study effectively, you need space, resources, and time.

Space

Try to set up a place at home or at work where you can:

- Keep your study materials
- Be reasonably quiet and free from interruptions
- Be reasonably comfortable, with good lighting, seating, and a flat surface for writing.

If it is impossible for you to set up a study space, perhaps you could use your local library. You will not be able to store your study materials there, but you will have a quiet place, a desk and chair, and easy access to the other facilities.

Study Resources

The most basic resources you will need are:

- A chair
- A desk or table
- A computer with Internet access
- A reading lamp or good light
- A folder or file to keep your notes and study materials together
- Materials to record information (pen and paper or notebooks, or a computer and printer)
- Reference materials, including a dictionary

Do not forget that other people can be valuable study resources. Your fellow workers, work supervisor, other students, your facilitator, your local librarian, and workers in this area can also help you.

Time

It is important to plan your study time. Work out a time that suits you and plan around it. Most people find that studying, in short, concentrated blocks of time (an hour or two) at regular intervals (daily, every second day, once a week) is more effective than trying to cram a lot of learning into a whole day. You need time to ‘digest’ the information in one section before you move on to the next, and everyone needs regular breaks from study to avoid overload. Be realistic in allocating time for study. Look at what is required for the unit and look at your other commitments.

Make up a study timetable and stick to it. Build in ‘deadlines’ and set yourself goals for completing study tasks. Allow time for reading and completing activities. Remember that it is the quality of the time you spend studying rather than the quantity that is important.

Study Strategies

Different people have different learning ‘styles’. Some people learn best by listening or repeating things out loud. Some learn best by ‘doing’, some by reading and making notes. Assess your own learning style and try to identify any barriers to learning which might affect you. Are you easily distracted? Are you afraid you will fail? Are you taking study too seriously? Not seriously enough? Do you have supportive friends and family? Here are some ideas for effective study strategies:

1. **Make notes.** This often helps you to remember new or unfamiliar information. Do not worry about spelling or neatness, as long as you can read your own notes. Keep your notes with the rest of your study materials and add to them as you go. Use pictures and diagrams if this helps.
2. **Underline keywords** when you are reading the materials in this Learner Guide. (Do not underline things in other people’s books.) This also helps you to remember important points.
3. **Talk to other people** (fellow workers, fellow students, friends, family, or your facilitator) about what you are learning. As well as help you to clarify and understand new ideas, talking also gives you a chance to find out extra information and to get fresh ideas and different points of view.



Using This Learner Guide

A Learner Guide is just that, a guide to help you learn. A Learner Guide is not a textbook. Your Learner Guide will:

1. Describe the skills you need to demonstrate to achieve competency for this unit.
2. Provide information and knowledge to help you develop your skills.
3. Provide you with structured learning activities to help you absorb knowledge and information and practice your skills.
4. Direct you to other sources of additional knowledge and information about topics for this unit.

How to Get the Most Out of Your Learner Guide

Some sections are quite long and cover complex ideas and information. If you come across anything you do not understand:

1. Talk to your facilitator.
2. Research the area using the books and materials listed under Resources.
3. Discuss the issue with other people (your workplace supervisor, fellow workers, fellow students).
4. Try to relate the information presented in this Learner Guide to your own experience and to what you already know.
5. Ask yourself questions as you go. For example, 'Have I seen this happening anywhere?' 'Could this apply to me?' 'What if...' This will help you to 'make sense' of new material, and to build on your existing knowledge.
6. Talk to people about your study. Talking is a great way to reinforce what you are learning.
7. Make notes.
8. Work through the activities. Even if you are tempted to skip some activities, do them anyway. They are there for a reason, and even if you already have the knowledge or skills relating to a particular activity, doing them will help to reinforce what you already know. If you do not understand an activity, think carefully about the way the questions or instructions are phrased. Read the section again to see if you can make sense of it. If you are still confused, contact your facilitator or discuss the activity with other students, fellow workers or with your workplace supervisor.

Additional Research, Reading, and Note-Taking

If you are using the additional references and resources suggested in the Learner Guide to take your knowledge a step further, there are a few simple things to keep in mind to make this kind of research easier.

Always make a note of the author's name, the title of the book or article, the edition, when it was published, where it was published, and the name of the publisher. This includes online articles. If you are taking notes about specific ideas or information, you will need to put the page number as well. This is called the reference information. You will need this for some assessment tasks, and it will help you to find the book again if you need to.

Keep your notes short and to the point. Relate your notes to the material in your Learner Guide. Put things into your own words. This will give you a better understanding of the material.

Start off with a question you want answered when you are exploring additional resource materials. This will structure your reading and save you time.

Introduction

In the closing days of 2019, the Coronavirus disease (COVID-19) began its outbreak. In the following days, months and years, many have felt its effects in almost all aspects of life. The world stood still as it tried to figure out how to deal with the new conditions it faced. This was when people realised what we all should have known from the beginning—everyone plays a part in maintaining public health.



Infections affect everyone. All people can carry pathogens and get infected by them.

Pathogens are microorganisms like viruses, bacteria or fungi. Microorganisms have to lead to ill effects on a person's health to become a pathogen.

Infection happens when pathogens get into a person's body and multiply. This process is what causes damage to the body. Once the damage becomes significant, it finally becomes a disease.

Because people cannot detect pathogens with the naked eye, they usually cannot tell they are carrying them. This is important because you will interact with people in most work roles or settings. In that interaction, more than information may transfer among individuals. However, we are not helpless against infection and disease.

Infection prevention and control (IPC) is the process that allows people to keep infections from happening. This is especially true for avoidable infections. Small things such as proper hygiene and hand washing can make a big difference here.

This learner guide will discuss applying infection prevention and control to your context. Infection prevention and control in your work ensures that disease does not stop you from achieving work and life goals.

In this learner guide, you will learn how to:

- Identify the role of infection prevention and control in the work setting
- Follow standard and transmission-based precautions
- Respond to potential and actual exposure to infection risks within scope of own role

I. Identify the Role of Infection Prevention and Control in the Work Setting

The goal of infection prevention and control (IPC) generally stays the same for any situation. This process aims to protect everyone from infection's harm and negative effects. The focus is always to keep you healthy and in good condition.

However, it may take different forms depending on what kind of work you do. For example, in a field with a high risk of infection, such as healthcare, measures to prevent and control infection may be more complex. This contrasts with environments that may be lower risk, such as remote office work. For example, the amount of personal protective equipment used would likely be higher in a high-risk infection area.



As you read further, you will explore what 'infection prevention and control' means for your work setting. Learning this helps you fulfil your responsibility and duty to ensure everyone in your workplace stays healthy and safe.

In this chapter, you will learn how to:

- Identify relevant standards and guidelines
- Identify infection risks and hazards
- Identify roles and responsibilities in relation to infection prevention and control
- Identify control measures to minimise risk
- Communicate information relevant to risk management
- Document risks and risk management strategies

1.1 Identify Relevant Standards and Guidelines



Standards and guidelines are documents prepared by industries to ensure that:

- Services, products and processes are at the minimum expected quality.
- The outcomes of your work reach the quality set by industry experts.

There may be variations in standards and guidelines depending on your work role and setting. For example, say you are a health worker dealing with infectious diseases. You will likely follow stricter guidelines than those in different roles and settings.

Examples of standards and guidelines include:

- Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019)
- Preventing and Controlling Infections Standard of the National Safety and Quality Health Service (NSQHS) Standards

The standards and guidelines above will be discussed in detail in this section.

Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019)

In 2019, the National Health and Medical Research Council (NHMRC), in partnership with the Australian Commission on Safety and Quality in Health Care (ACSQHC), created national guidelines for IPC. Staff and workers across various healthcare industries follow these guidelines to ensure the safety of their workplace.

According to the NHMRC, there are over 165,000 healthcare-associated infections (HAIs) in Australian healthcare facilities annually. This makes HAIs the most common complication affecting patients in the hospital. As such, national guidelines are released to recommend effective practices that can reduce the number of these incidents. These are aligned with infection control and prevention. The guidelines assist healthcare workers in improving the quality of care they deliver. This aims to create safe healthcare environments by implementing evidence-based practices that minimise the risk of transmission of infectious agents.

These guidelines have also been adapted to various healthcare settings. This includes clinics, health centres and community health facilities. The core principles, as well as the respective sections from the guidelines that address them, are provided below:

- **An understanding of the modes of transmission of infectious agents of risk management**

Section 2 of the guidelines contains basic information that all healthcare workers must learn. This covers the important details of infection prevention and control, including the following:

- Main modes of transmission of infectious agents
- Application of risk-management principles



- **Effective work practices minimise the risk of transmission of infectious agents**

Section 3 of the guidelines refers to recommended work practices that healthcare workers and staff must conduct. This ensures that the risk of transmitting infectious agents in the workplace will be minimised.

Section 3 contains the following aims:

- To reduce the risk to patients, consumers and members of the workforce of acquiring preventable infections
- To effectively manage infections if they occur
- To prevent and contain antimicrobial resistance
- To promote appropriate prescribing and use of antimicrobials as part of antimicrobial stewardship
- To promote appropriate and sustainable use of infection prevention and control resources

- **Governance structures that support the implementation, monitoring and reporting of infection prevention and control work practices**

Section 4 of the guidelines contains the roles and responsibilities of the management and staff of healthcare facilities. It also includes the duties of governance structures in ensuring the effectiveness of IPC work practices.

Section 4 outlines the organisational support expected on the following:

Management and clinical governance

Staff health and safety

Education and training

Healthcare-associated infection surveillance

Antimicrobial stewardship

Influence of facility design on HAIs

- **Compliance with legislation, regulations and standards relevant to infection control**

Appendices 1 to 3 of the guidelines discuss how to conduct work practices per infection control legislation, regulations and standards. These work practices refer to the following:

- Risk management in the workplace for various HAI cases
- The standard precautions, policies and procedures and resources relevant to infection prevention and control
- The reporting process for addressing risks

Based on material provided by the National Health and Medical Research Council. Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019), used under CC BY 4.0.

Your organisations must follow these infection prevention and control practices according to your specific setting and circumstances.

Preventing and Controlling Infections Standard of the National Safety and Quality Health Service (NSQHS) Standards

Aside from the previously mentioned guidelines, the ACSQHC also developed the NSQHS standards to outline the requirements for a quality health service provision. Organisations must meet these standards to manage infections in the workplace effectively.

Eight NSQHS standards uphold safety and quality of service towards healthcare clients. These standards are consistent across states and territories in Australia.

The eight NSQHS standards are as follows

Clinical governance standard	Partnering with consumers standard
Preventing and controlling infections standard	Medication safety standard
Comprehensive care standard	Communicating for safety standard
Blood management standard	Recognising and responding to acute deterioration standard

This discussion will focus on important information to prevent and control infections. This information covers the following:

- **The description of the standard**

The preventing and controlling infections standard provides the requirements to ensure the safety of people against HAIs in the workplace.

- **The intention of the standard**

A standard is made to address the following objectives:

- To reduce the risk to patients, consumers and members of the workforce of acquiring preventable infections
- To effectively manage infections, if they occur
- To prevent and contain antimicrobial resistance
- To promote appropriate prescription and use of antimicrobials as part of antimicrobial stewardship
- To promote appropriate and sustainable use of infection prevention and control resources

- **The criteria of the standard**

A standard contains four criteria. Recommended actions are provided under each criterion to help in its implementation in the workplace.

The four criteria are as follows:

- **Clinical governance and quality improvement systems**

This refers to the establishment of management systems in the workplace. Health service organisations must have safe and quality systems to reduce the risk of infection. They must also work with their clients when designing and implementing their systems.

Systems are in place to:

Support and promote the prevention and control of infections

Improve antimicrobial stewardship

Support appropriate, safe and sustainable use of IPC resources

- **IPC systems**

Evidence-based systems are used to mitigate the risk of infection. These systems account for the following:

- The individual risk factors for infection
- The risks associated with the clinical intervention and the clinical setting in which care is provided

A precautionary approach is warranted when evidence is emerging or rapidly evolving. IPC systems must follow the standard procedures for identifying potential and confirmed infection cases.

- **Reprocessing of reusable equipment and devices**

Reprocessing of reusable equipment and devices meets current best practices and is consistent with recurrent national standards.

- **Antimicrobial stewardship**

The health service organisation implements systems for the safe and appropriate prescribing and use of antimicrobials as part of an antimicrobial stewardship program.

This is important to minimise the negative impacts of antimicrobial use, like antimicrobial resistance.

Further Reading



You can read the complete national guidelines and standards for infection prevention and control on the links below:

[Australian Guidelines for the Prevention and Control of Infection in Healthcare](#)

[The NSQHS Standards](#)

[Preventing and Controlling Infections Standard](#)

Similar to the Australian guidelines, your organisation must follow the requirements for IPC standards based on your specific needs. Your organisation must also enact the recommended actions that suit your workplace conditions.

Identifying standards and guidelines relevant to your role and work setting means looking for IPC standards and guidelines that suit your context. This ensures that the IPC measures you take fit your situation.

To identify the IPC standards and guidelines that fit your situation, check the following:

Intended audience

Content

- **Intended audience**

IPC standards and guidelines documents usually have some hints about the intended audience. You can check the title and introduction of the document to find this information. For example, the title *Australian Guidelines for Prevention and Control of Infection in Healthcare* hints that these guidelines were written with healthcare-related contexts in mind.

- **Content**

You can also find hints in the contents. Check if the recommendations discuss unfamiliar work processes, jargon, or concepts. They might be intended for a different work role or context.

Note, however, that specialised documents of IPC may still have useful information for you. For example, the sample guidelines document given is written for healthcare workers. Despite this, you can still find universally useful sections. This is especially true for recommendations about hand and personal hygiene. These two measures usually apply to most work roles and settings.

At this point, you can now decide how you can use an IPC standards and guidelines document according to your situation. Usually, your workplace's policies and procedures regarding IPC should already be tailored to your context. However, discuss the matter with a supervisor if you cannot find one specific to your work. This way, they can direct you to where to find one or initiate the process of creating or adapting one.



Lotus Compassionate Care

Lotus Compassionate Care is the simulated organisation that provides services in disability support, home and community support, and residential care referenced in our learning resources.

Their policies and procedures are published on their site. You can access them through the link below:

[Policies & Procedures](#)

(username: newusername password: new password)



Checkpoint! Let's Review

1. Standards and guidelines are documents prepared by industries to ensure the following:
 - The services, products, and processes are at the minimum expected quality
 - The outcomes of your work reach a quality set by industry experts
2. Identifying standards and guidelines relevant to your role and work setting means looking for IPC standards and guidelines that suit your context.
3. Check its intended audience and content to identify the IPC standards and guidelines that fit your situation.

1.2 Identify Infection Risks and Hazards



Infection can harm individuals in a range of ways. The diseases that come with infection range from something simple like colds to those that become global pandemics. In protecting yourself from these, you must understand the risks and hazards in your work role and setting.

A *hazard* is anything that can cause harm to you, your environment or even your property. An infection hazard, then, could potentially lead to infection of people. This can refer to equipment, a work area and even your colleagues. An example of an infection hazard is a contaminated room. This is because contaminated rooms carry pathogens. A sick colleague coming to work is also considered a hazard.

Risk is the likelihood and the severity of harm resulting from a hazard. An infection risk refers to the probability of the infection hazard causing harm. This can range from low-risk to high-risk levels. In the previous example, the contaminated room was the hazard. The risk here would be getting in that room without protection. As for the sick colleague, the risk would come from interacting with that person. You are at high risk of infection if you talk to them without wearing protective equipment like face masks.

Infection Hazards in the Workplace

Below are common hazards that can be the cause of infection. Recognise if any of these hazards are present in your workplace:

- **Contaminated food**

Food can be contaminated due to unsafe preparation. They can cause a disease outbreak, like diarrhea and even food poisoning. If your workplace serves food at lunch or break time, there can be a chance that it might be contaminated.

- **Contaminated water**

Like foods, contaminated water can contain bacteria that bring infection to the body. If your workplace has a drinking faucet, there can be a chance that the water may be contaminated.

Dirty water can also affect your skin. For example, if the water from the sink is dirty, washing your hands with it may irritate your skin.



- **Incidental exposure**

These refer to situations in the workplace where a person comes into contact with blood, body fluids or any possible infectious body substances. Exposure incidents can be caused by the following:

- Cuts or punctures from sharp, possibly contaminated objects (i.e. needles)
- Direct contact of a mucous membrane with the infectious body substance
- Contacts of infectious body substances with non-intact skin, like wounds and lesions

- **Poor ventilation**

Poor ventilation in the workplace can lead to poor indoor air quality. Areas often lacking ventilation, like basements, bathrooms and kitchens, have high moisture content. This, in turn, can promote the development of moulds and fungi. These microorganisms have spores that mix with the air. When inhaled, a person might get a cough, throat irritation or headache.

- **Workplace vector**

Vectors are animals that carry infectious agents. Examples include mosquitoes and ticks. Their presence in the workplace is considered an infection hazard as they can directly transmit the disease when they bite a person. This is the case for mosquitoes that can cause dengue or malaria.

- **Dirty work area**

A place not routinely cleaned can be a breeding ground for microorganisms since accumulated dirt and dust can be mixed with pathogens. Also, areas frequented by people but not regularly cleaned enable microorganisms to multiply and spread.

- **Ill colleague**

A coughing or sneezing person can disperse infectious agents in the air. When another person in the same area inhales it, they can get infected as well. As such, workers who are sick are not encouraged to report to work. For example, a person exhibiting symptoms of COVID-19 is automatically mandated to stay at home. This is due to the highly infectious nature of the virus. In addition, people in close contact with a sick person are also considered hazards. They are monitored for several days to confirm whether they contracted the same disease.



Infectious Risks in the Workplace

These are risks related to infection that you can find in the work environment. These risks come from hazards such as people, surfaces, and even the air inside the workplace.

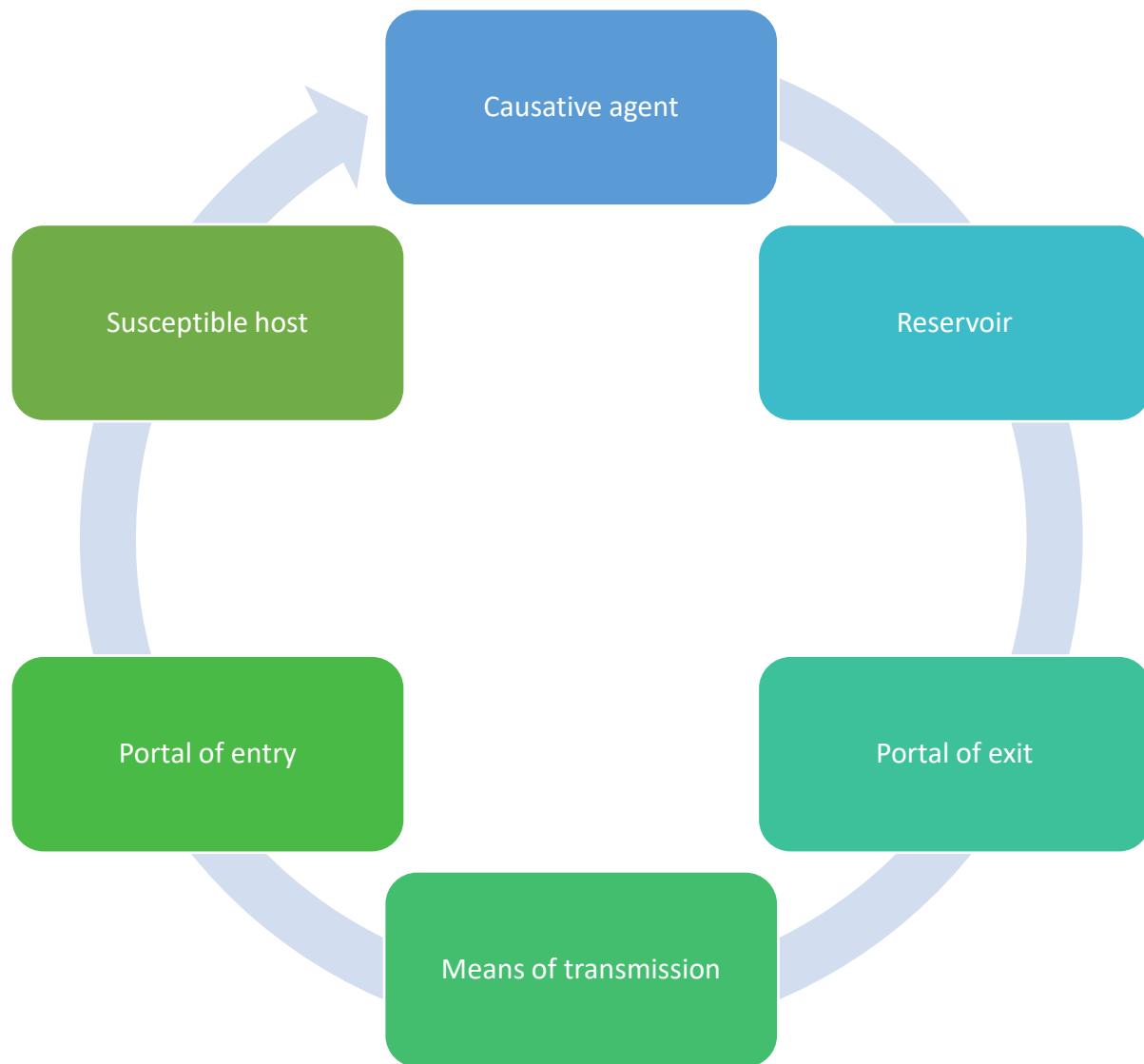
How you interact with these hazards varies depending on your work role and setting. One type of infection risk comes from direct contact with a pathogen carrier. This risk increases for work roles involving plenty of human contacts. This is because direct contact is a means of transmission for pathogens. The more people you interact with, the more chances you will have of meeting someone carrying infectious agents like viruses. Some ways to manage this would be good hygiene, hand washing, and using personal protective equipment like face masks.

However, there are other ways to transmit pathogens. Sometimes you can get them from touching surfaces. This is an example of infection risk from indirect contact with the pathogen carrier. This means work settings with plenty of high-contact surfaces may have a higher risk of infection. In such cases, disinfecting through cleaning becomes an important risk management solution.

Another type of infection risk comes from a person breathing in aerosols. Aerosols are droplets that stay suspended in the air. These droplets carry pathogens and are not visible. Because of this, the likelihood of infection is high if one is not prepared. Personal protective equipment (PPE) is one of the best ways to manage infection via airborne transmission.

The variety of tasks you perform or how infection happens makes identifying infection risks difficult. To help with making the process manageable, you need to learn how infection occurs.

To identify infection risks and hazards associated with your role, you need to understand the *chain of infection*:



The *chain of infection* is a diagram illustrating how the infection is transmitted from the source to the host. The succeeding sections will discuss the elements of the chain of infection in detail.

1.2.1 Causative Agent

Harmless microorganisms are different from pathogenic microorganisms:

- **Non-pathogenic microorganisms**

These microorganisms are considered harmless since they do not cause harm, disease or death to their host. They can even be beneficial to the body. For example, the bacteria *Lactobacillus acidophilus* helps in protecting the intestines from disease-causing bacteria like E. coli.

- **Pathogenic microorganisms or pathogens**

These are microorganisms that can cause harm or disease in their host. If left untreated, infections caused by pathogens can even lead to death. For example, the human immunodeficiency virus (HIV) is a pathogen in the blood that weakens the body's immune system. This virus is controlled with the help of antiretroviral medications. If HIV is not treated, it can lead to acquired immunodeficiency syndrome or AIDS.

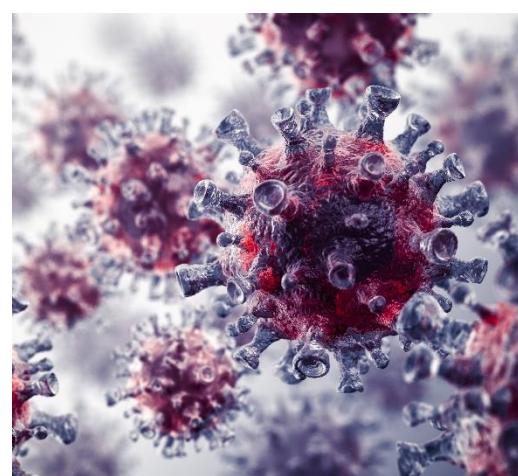
Pathogens are the cause of infection. Hence, they are called causative agents. The common types of pathogens include the following:



- **Virus**

Viruses are the smallest agents of infection. They infect cells to reproduce and grow. Viruses cause various illnesses, including the common cold, flu and measles.

Viruses cannot survive without a host. Once they enter a host's cell, they will release their genetic material to reproduce inside the body. They also come in various shapes and sizes. The coronavirus, for example, is spherical with spikes.



Transmission of viruses can happen in various ways, including the following:

- Infection via direct contact with someone who has the virus (e.g. touch)
- Infection via respiratory droplets
- Infection via bodily fluids
- Infection via contaminated water or food
- Infection via insects
- Infection via childbirth

■ **Bacteria**

Bacteria are microorganisms that are present everywhere- both inside and outside of the body. Unlike viruses, bacteria do not need a living host to grow or reproduce. They can also either be beneficial or harmful to the body. Probiotics or good bacteria help maintain healthy microorganisms in the body and fight against pathogens. On the other hand, pathogens or bad bacteria can harm the body and cause many diseases.

When bacteria are faced with harsh conditions, bacterial spores are formed as a form of survival mechanism. They are durable and can withstand even extreme temperatures.

The methods of transmitting bacteria are similar to the transmission of viruses. People with bacterial infections are prescribed to intake antibiotic medications. Antibiotics either kill the bacteria in the body or delay their reproduction.



Below is a table that presents the differences between bacteria and viruses based on various criteria:

Criteria	Viruses	Bacteria
Type of Infection It Causes	Viral infection	Bacterial infection
How Do They Cause Infection?	They invade living, normal cells and use those cells to multiply and produce other viruses like themselves.	<ul style="list-style-type: none"> ▪ When a host is exposed to harmful bacteria through transmission ▪ When it enters the host's body and proliferates inside
Examples of Illnesses It May Cause	<ul style="list-style-type: none"> ▪ Chickenpox ▪ Common cold ▪ Flu ▪ Others 	<ul style="list-style-type: none"> ▪ Strep throat ▪ Pneumonia ▪ Urinary tract infection ▪ Others
Can it Be Treated with Antibiotics?	No	Yes

- **Fungi**

Fungi are single-celled microorganisms that can grow anywhere in the environment, including on surfaces and human skin. Fungi can grow as yeasts or as moulds. They reproduce by spreading microscopic spores that blend with the air or soil. They can cause infection when tiny fungal spores in the air are inhaled or when they land on the body or skin. This infection can affect human lungs, skin, nails and mucous membranes.

Fungal infections are contagious. This means that people with this condition have a high chance of passing it on to others.

- **Parasites**

These are microorganisms that live on or in a host species. They depend on their host for survival. Over time, parasites grow, reproduce and might even damage the body's organs if left untreated. They can cause infection by entering the body through the mouth or by contamination and invading body organs. Healthcare workers exposed to human waste have a high risk of getting parasitic infections.

Parasitic diseases are transmitted through the following means:

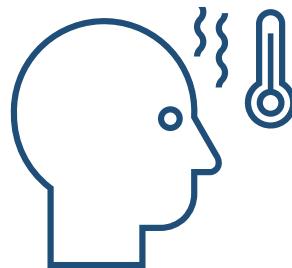
- Insects
- Blood transfusion
- Food or water contamination
- Direct contact

Examples of parasites that can bring diseases are protozoa and helminths. Protozoa are single-celled organisms that can infect humans and transmit diseases. They can cause infection when they enter the body through sexual contact, insect bite, or by ingestion of contaminated food or faecal matter from an infected person or animal.

On the other hand, helminths are parasitic worms that depend on their host for survival. They reside in the digestive tract or invade other organs. Helminths can cause infection when they enter the body through insect bites, skin penetration, or ingesting contaminated food or faecal matter from an infected person or animal.

Degree of Pathogen Exposure

Regarding healthcare settings, infections brought by various microorganisms are caused mainly by humans. This involves the transmission of pathogens among healthcare workers, patients and visitors. The possibility of an infection or disease manifestation depends on the extent to which a person is in contact with a pathogen.



Depending on different factors, pathogens can lead to one of the following:

- **Exposure**

This occurs when the individual comes in contact with the infectious agent. This includes contact through skin, bodily fluids, infected surfaces, etc.

Your distance to the reservoir or carrier of the causative agent may affect the degree of pathogen exposure. The time you spend around the carrier will also affect the degree of exposure. Higher degrees of exposure mean a stronger possibility of getting infected.

- **Colonisation**

This occurs when infectious agents establish themselves in a host without causing harm. From the term itself, pathogens reproduce and form colonies inside a human's body without leading to an infection or disease.

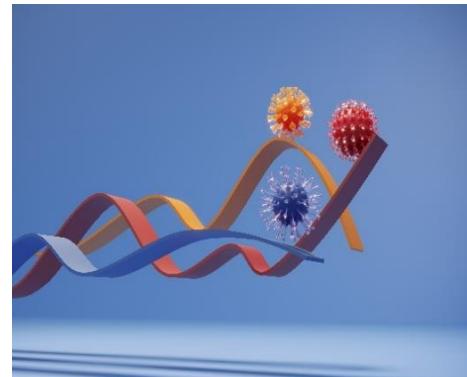
People who are colonised by pathogens will not show any symptoms of infection. For example, a person who tested positive for Covid-19 but has no symptoms like cough or cold appears to be colonised by the virus.

However, you must remember that just because a pathogen colonises a person does not guarantee they are safe. Even though they are asymptomatic, they are still pathogen carriers. Hence, they can still transmit these pathogens to other people.

As such, it is best to assume that everyone can be a pathogen carrier when it comes to infection control. This helps ensure that everyone involved in IPC will always comply with the standard procedures.

■ Infection

This occurs when an infectious agent enters a host and multiplies inside them to cause harm. Infection may or may not develop into a disease. Unlike in colonisation, a person with an infection displays symptoms. For example, if infected with the COVID-19 virus, they would experience coughs, colds or headaches. If a person has a weak immune system or is not immune to the virus, they will most likely get infected.



Infections get spread easily. IPC plays a vital role in ensuring that the number of infected people will not increase. It is also responsible for identifying risks in the workplace that can make people more prone to infection.

■ Disease

This occurs when the infection causes damage to the cells of the body part that has been infected. It happens when the infection is prolonged, or no medical intervention is done.

The progression of the disease varies based on the condition of a person's immune system and the severity of the damage caused by pathogens. For example, bacteria can kill cells and damage tissues. Viruses, on the other hand, can multiply so fast and invade multiple organs in a short period.

There are standard precautions in IPC relevant to interacting with people with diseases. These measures protect the health care worker and others interacting with the sick person. They also ensure that the condition of the sick person will not worsen by maintaining cleanliness and safety of the environment.

Based on material provided by the National Health and Medical Research Council. Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019), used under CC BY 4.0.

The likelihood of a person getting an infection if they are exposed to an infectious agent increases due to the factors below:

The infective dose of the pathogen

The availability of the infectious agent to infect the person

In general, a pathogen with a small infective dose has greater virulence, which means that a smaller number of pathogens is needed to cause an infection in a susceptible host. A pathogen with a high infective dose would have lesser virulence.

There are practices you can do in the workplace that can help reduce the likelihood of exposure to pathogens or infectious agents. This includes the following:

- Wearing personal protective equipment (PPE)
- Cleaning and disinfecting high-touch areas and items regularly
- Getting immunisation against infectious diseases

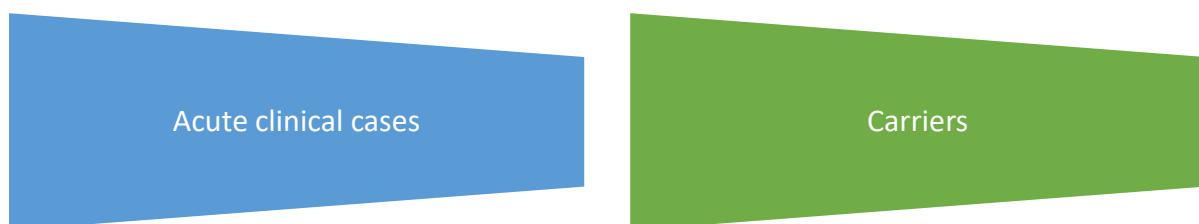
1.2.2 Reservoir

The reservoir of infection is the habitat in which an infectious agent typically lives, grows and multiplies. A reservoir, also known as the source of the causative agent, refers to organisms, the environment or a combination of these where pathogens can live, grow and reproduce. Examples of reservoirs include the following:

Reservoir	Infectious Agents Commonly Found in the Identified Reservoir	How the Infectious Agent Is Transmitted to a Susceptible Host
People	Variola/smallpox virus	Through direct contact with droplets and fluids from the scabs
Animals	<i>Escherichia coli</i>	By ingesting contaminated foods like raw or undercooked ground meat products, raw milk and contaminated raw vegetables
Birds	Influenza A virus	Through direct contact with infected live or dead poultry

Reservoir	Infectious Agents Commonly Found in the Identified Reservoir	How the Infectious Agent Is Transmitted to a Susceptible Host
Blood	Human immunodeficiency virus (HIV)	Through direct sexual contact with the infected individual
Bodily fluids	Herpes simplex virus-1 (HSV)	Through direct oral contact with the infected person
Food	Salmonella	By ingesting contaminated foods like raw or undercooked eggs, raw milk and dairy products and other contaminated raw fruits and vegetables
Water	<i>Legionella pneumophila</i>	By breathing in small droplets of water in the air that contains the bacteria
Soil	<i>Clostridium tetani</i>	Through direct contact with breaks in the skin
Wastes	<i>Cryptosporidium parvum</i>	Through ingestion of food and water contaminated with the protozoan

Human reservoirs generally fall under two categories:



- **Acute clinical cases**

Acute clinical cases are also called acutely ill cases. These are cases that refer to individuals who show signs or symptoms of an infection. They would usually be those who cough, sneeze or contract a fever.

- **Carriers**

They are individuals who do not show any signs or symptoms of infection. But as the name suggests, they carry pathogens without visible symptoms.

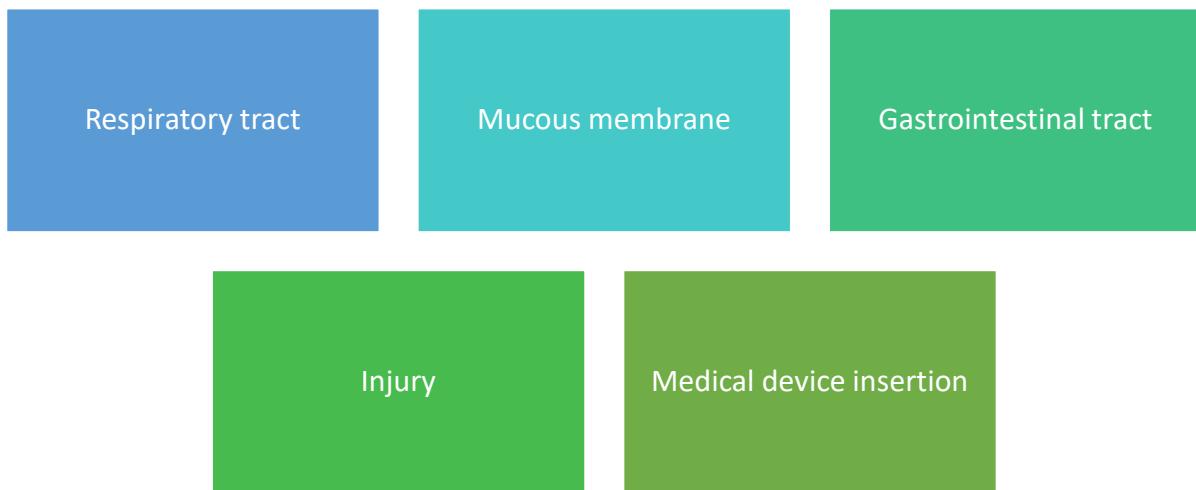
1.2.3 Portal of Entry or Exit

A *portal of entry or exit* refers to the site where pathogens leave or enter a host. These are usually openings found in the body. They can be natural openings like the nose, mouth or other mucous membranes. They also include unnatural ones like cuts and abrasions.

Portals of Entry

The portal of entry is the route or mechanism through which an infectious agent enters a susceptible host. After passing through this portal, they will start multiplying and invading other body parts.

Pathogens can enter the body via the following portals of entry:



- **Respiratory tract**

Pathogens like viruses and fungal spores enter the body through inhalation. They will enter the nose or mouth and travel through the respiratory tract. Inhaled pathogens often stay in and damage the lungs.

- **Mucous membrane**

Pathogens like viruses and bacteria enter the body through absorption. This is done when they contact mucous membranes, like the mouth, eyes, ears and genital tract. Absorbed pathogens can damage the cells of mucous membranes. This can lead to swelling, irritation and mucus discharge.

- **Gastrointestinal tract**

Pathogens can also enter the body by ingesting contaminated food or water. They pass through the gastrointestinal tract, including the mouth, throat, stomach and intestine.

- **Injury**

Wounds, lesions, cuts and abrasions in the skin can be portals of entry for pathogens. Open wounds are susceptible to infections since pathogens can enter through direct contact. For example, the tetanus-causing bacteria *Clostridium tetani* gets transmitted through wounds from contaminated materials.

In addition, pathogens can enter when the skin is cut open from medical procedures. Infection can occur if cleaning and disinfection protocols are not followed.

- **Medical device insertion**

Medical devices and implants like catheters, intravenous tubes and pacemakers can be contaminated if not properly cleaned. They can be sources of infection when they are inserted into the body. Pathogens like bacteria and fungi can easily latch onto medical devices.

Portals of Exit

The portal of exit is the path by which an infectious agent leaves its host, typically the site where the infectious agent gets out. When it comes to humans, the portals of exit can be the same as the portals of entry. For example, an airborne virus can enter the nose as the person inhales. They can also exit the body when the person sneezes. Another instance would be skin injuries. Suppose bacteria enter the body through an open wound. When the tissues of the wound get infected, bacteria-containing pus may ooze out of it.

There is also a faecal-oral route where pathogens' portal of entry is the mouth, while their portal of exit is the rectal area. In this case, the pathogens are in the faeces. When faecal matter contaminates food or water, it can transmit pathogens to another host.

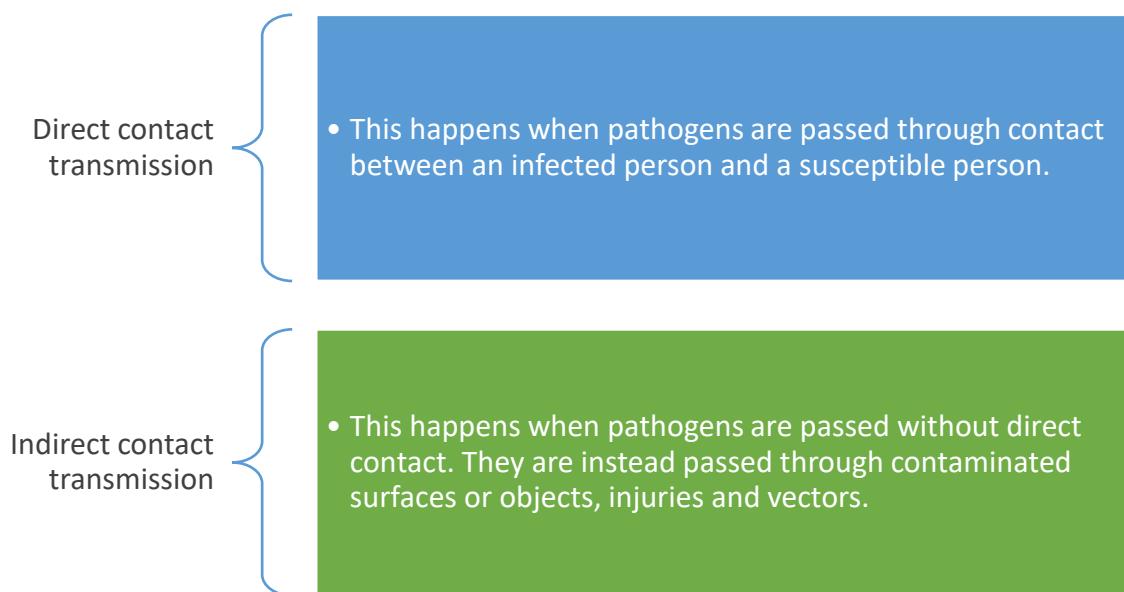
The table below shows the portals of entry and exit of sample infectious agents in the body:

Infectious Agent	Portal of Entry	Portal of Exit
Varicella zoster virus	Upper respiratory tract or the conjunctiva (mucous membranes)	Fluid-filled blisters
<i>Sarcoptes scabiei</i> (itch mite)	Skin	Scab lesions on skin
<i>Entamoeba histolytica</i>	Mouth, ingestion, oral/anal contact (gastrointestinal)	Gastrointestinal tract (anus)

1.2.4 Means of Transmission

Pathogenic viruses, bacteria, fungi and parasites cause infection and disease in their hosts. They can be passed from one host to another through transmission. Transmitting pathogens can occur in various ways. The *means of transmission*, also known as routes, refer to the methods or modes of transmission. These modes can be classified into two categories: direct contact and indirect contact transmission.

The figure below shows a comparison between these two categories:



Direct Contact Transmission

This category can be further classified into three means of transmission. This refers to the following:

- **Contact transmission**

This happens when there is direct physical contact between the infected person and the susceptible person.

Examples include the following:

- A person touches someone who is infected
- A person comes in contact with the infected person's blood or other bodily fluids
- A person comes in contact with the infected person's body lesions (e.g. wound)

- **Droplet transmission**

This happens when the respiratory droplets that exit the infected person's body enter the mucosal surfaces of another person.

Examples include the following:

- An infected person coughs or sneezes without observing proper etiquette and respiratory hygiene
- An infected person talks without wearing a facemask

- **Airborne transmission**

This happens when pathogens in small particles called aerosols disperse in the air. Aerosols are created through the evaporation of large droplets produced during breathing, talking, coughing and sneezing. This evaporation is possible when the environment has low humidity. Pathogens in aerosols remain infectious and can enter a susceptible person through inhalation.

Examples include the following:

- Aerosols containing pathogens are dispersed from the ventilation system
- Dust particles with pathogens are dispersed when a worker shakes linens

Indirect Contact Transmission

This category can also be further classified into three types, as seen below:

- **Surface or object contamination**

This happens when a susceptible person touches a surface or object where pathogens have latched on. Contamination through contact with surfaces or objects increases if disinfection is not regularly performed.

Examples of how infection can happen through surface contamination include the following:

- A person with unclean hands touches a surface, like tables, doors, etc.
- A person touched a contaminated surface, like tables, doors, etc.



On the other hand, examples of how infection can happen through object contamination include the following:

- An infected person touches a piece of equipment, like a telephone, keyboard, etc.
- A person touched infected objects, like a telephone, keyboard, etc.

- **Penetrating injuries**

Penetrating injuries can make infection happen when contaminated sharps like needles pierce the skin and enter body tissues. This can transmit pathogens, like blood-borne viruses, such as HIV.

- **Vectors**

This happens when other pathogen-carrying organisms like mosquitoes, ticks and fleas bite a person. These vectors transmit the infectious pathogen through various methods and cause diseases in the affected person.

You can refer to the table on the next page to see examples of vectors along with the following details:

- Infectious pathogens they transmit
- Disease they cause
- Method of their transmission of the infection



Category	Vector	Infectious Pathogen Transmitted by the Identified Vector	Disease Caused by the Identified Pathogen	How the Vector Transmits the Identified Infection
Animal	Dog	Rabies virus	Rabies	An infected dog bites a person and transfers rabies.
	Snail	<i>Schistosoma</i>	Schistosomiasis	The larvae are deposited in freshwater by the snails and penetrate the skin of the person who comes in contact with the infested waters.
Insect	Mosquito	West Nile virus	West Nile fever	A disease-carrying mosquito bites a person.
	Triatomine bug or kissing bug	<i>Trypanosoma cruzi</i>	Chagas disease	When an infected bug takes a blood meal, it releases trypomastigotes in its faeces near the wound site. The trypomastigotes enter the wounds or other mucosal membranes (e.g. eyes).
Parasite	Blackflies	<i>Onchocerca volvulus</i>	Onchocerciasis or river blindness	An infected blackfly penetrates the skin and introduces larvae into the bite wound.
	Flea	<i>Yersinia pestis</i>	Plague	The disease is transmitted when an infected flea bites the person or when the person handles an animal infected by the plague.

You are vulnerable to infection transmission in your everyday tasks as a healthcare worker. As such, you must be familiar with the workplace hazards that can lead to infection cases. Recognising these hazards is the first step in implementing IPC measures to ensure the safety of everyone.

Refer to the table below to know the samples of infection hazards that come with various means of infection transmission:

Means of Transmission	Examples of Infection Hazards
Direct contact transmission	<ul style="list-style-type: none"> ▪ Blood or other body fluid splatters/splashes enter through your unprotected non-intact skin. ▪ PPE is not appropriate for the task.
Indirect contact transmission	<ul style="list-style-type: none"> ▪ A medical device has not been appropriately reprocessed. ▪ Sharps are not handled and disposed of properly. ▪ HCWs do not perform hand hygiene before tending to another patient.
Droplet transmission	An infected person coughs or sneezes without observing proper etiquette and respiratory hygiene.
Airborne transmission	<ul style="list-style-type: none"> ▪ The ventilation system disperses aerosols containing pathogens. ▪ Particles with pathogens are dispersed when you shake linens.

1.2.5 Susceptible Host

A *susceptible host* is a person who is at risk of developing an infection from an infectious agent. Several factors increase the susceptibility of a host, including the following:

Wounds	Immune status	Devices
Medications (e.g. immunosuppressive drugs)	Comorbidities	Age

Wounds

Individuals who have wounds, including incisions (surgical cuts), burns and skin ulcers, are more susceptible to infection as their skin is not intact. When the skin is not intact, it is easier for infecting microorganisms to enter the body tissues and get into the bloodstream.



Immune Status

The immune system protects the body from infection; if someone is immunocompromised, such as those with HIV or hepatitis, their body finds it harder to fight disease-causing microorganisms.

Individuals with a weakened immune system are more susceptible to harm. These include the following:

- Those with genetic immune deficiencies
- Those with HIV/AIDS
- Those undergoing chemotherapy and other cancer treatments
- Those who have undergone solid organ or bone marrow transplant

Devices

Individuals who have undergone procedures where medical equipment such as urinary catheters, respiratory equipment and drain tube enters the body are susceptible to infection. These devices often remain in the same location for prolonged periods, from weeks to months, and can result in device-related infections.

Medications

Those who are taking medications, such as immunosuppressive drugs (e.g., for cancer and transplant), are more susceptible to infection as these drugs suppress their immune system. If the immune system is suppressed, the body finds it harder to fight disease-causing microorganisms.

Comorbidities

Comorbidity is the existence of two or more diseases or conditions in a person. Individuals with comorbidities have a higher risk of getting more severe infections. Those who have lung disease, including asthma, pulmonary fibrosis and cystic fibrosis and cardiac conditions like coronary artery disease, heart failure and hypertension are also more susceptible to infections as these conditions are often associated with weakened organs and, at times, weakened immune systems. With weakened organs and an immune system, the body finds it harder to fight disease-causing microorganisms.

Age

Older people, premature babies and younger children face a higher risk of severe consequences from infection because they have a weaker immune system than the average adult. With weakened organs and an immune system, the body finds it harder to fight disease-causing microorganisms.

Various ways can help reduce the transmission of infectious diseases to a susceptible individual. This can include the following:

- The susceptible individual's exposure to infectious agents is reduced.
- The susceptible individual's immunity can be increased or improved.



1.2.6 Identifying Infection Risks and Hazards



Now that you know how the chain of infection works, here are some tips for identifying infection risks and hazards in your work role and setting:

- Identify susceptible hosts since they are at the most risk of getting infected.
- Locate high-contact surfaces in the work environment. These are spots that different people touch and come into contact with, such as elevator buttons or tables.
- Monitor how spilled liquids are disposed of in the workplace.
- Look into how food and water are stored in the workplace.
- Check if your work role requires using sharps (devices like syringes and needles).
- Check how the workplace deals with material and biological wastes.

The table on the next page also details the common sources of infectious risks in the workplace and their description. Suggested ways to prevent and reduce the harm they bring are also provided.

Source of Infectious Risk	Example of Infectious Risk	Harm the Infectious Risk May Cause	How to Prevent Harm	How to Reduce Harm
Human blood	Human immunodeficiency virus (HIV)	When left untreated, HIV can progress to AIDS and damage the immune system.	Using engineering controls, like retractable needles	Wearing personal protective equipment like gloves, gowns, masks, etc.
Animals	Q fever	Q fever can result in severe flu-like illness, which can also cause patients to develop hepatitis or pneumonia.	Getting the Q fever vaccine	Avoiding contact with animals, especially when they are giving birth
Human waste products (e.g. faeces, urine, etc.)	Hepatitis A	Hepatitis A causes liver inflammation and may affect the liver's ability to function.	Getting the Hepatitis A vaccine	<ul style="list-style-type: none"> ▪ Practising hand hygiene regularly ▪ Cleaning and disinfecting toilets regularly
Respiratory discharge (e.g. cough droplets)	Tuberculosis	<ul style="list-style-type: none"> ▪ Tuberculosis affects the lungs, causing chest pain, severe coughing, breathlessness, etc. ▪ Tuberculosis may also attack other body parts, like lymph nodes, bones, kidneys, brain, and spine. ▪ Tuberculosis may cause possible death if not treated. 	Getting vaccinated against tuberculosis	Practising proper respiratory and cough etiquette

Checkpoint! Let's Review



1. A hazard is anything that can cause harm to you, your environment, or even your property.
2. Risk is the likelihood and the severity of harm resulting from a hazard.
3. The chain of infection is a cycle involving the following:
 - The causative agents of infection are pathogens.
 - A reservoir is where pathogens can live, grow and reproduce.
 - A portal of entry or exit refers to the site where pathogens leave or enter a host.
 - The means of transmission are also known as the routes, methods or modes of transmission.
 - A susceptible host is someone who is at risk of infection.



1.3 Identify Roles and Responsibilities in Relation to Infection Prevention and Control

Chapter 1 discussed that maintaining public health is everyone's responsibility. One form of this responsibility is related to infection prevention and control. Prevention and control are always used together since one cannot be done without the other when fighting infections in the workplace. However, there is still a significant difference between the two.

Infection prevention focuses on strategies that will help minimise the risk of infections in the workplace. These strategies refer to standard precautions that all healthcare workers must follow and apply at all times, including the following:

- Proper hand hygiene that is consistent with the five moments for hand hygiene
- Appropriate personal protective equipment
- Safe use and disposal of sharps
- Routine environmental cleaning
- Proper reprocessing of reusable medical equipment and instruments
- Respiratory hygiene and cough etiquette
- Proper aseptic technique
- Proper waste management
- Appropriate handling of linen

Standard precautions are observed regardless of suspected or identified cases of infection. On the other hand, infection control covers the strategies that must be done to reduce the risk of transmitting infections in the workplace. These strategies are known as transmission-based precautions. They aim to guide healthcare workers in the presence of suspected or known pathogens that can increase the risk of infection transmission.

Transmission-based precautions include the following:

Application of transmission-based precautions

Contact precautions

Droplet precautions

Airborne precautions

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IPC standards and transmission-based precautions will be discussed further in the next chapters of this Learning Guide.

The success of IPC depends on the commitment of all people in the workplace to follow their designated duties. In this subchapter, the roles and responsibilities of people towards IPC will be explored in the context of their work roles and settings.

Most industries need to account for work health and safety legislation. Different industries have different hazards and risks, so different control measures are implemented. However, what is common among all industries is that everyone is responsible regarding work, health and safety.

This sentiment is expressed in how different acts and codes of practice refer to the duty of care. Roles and responsibilities are usually assigned to persons conducting business or undertakings (PCBU), workers, and others at the workplace.

No matter the industry, the roles and responsibilities of people in the workplace usually follow this pattern:

People	Roles and Responsibilities
The person conducting business or undertaking	They are usually those who manage and oversee how work is run. The responsibilities of PCBUs usually include planning and implementing risk management strategies. PCBUs need to ensure those measures are done according to set procedures. They are responsible for the health and safety of the entire workplace.
Worker	These are the individuals who perform the work in a workplace. They are responsible for both their and others' health. They must also comply with workplace health and safety policies and procedures. Sometimes, they will be asked to cooperate and collaborate in creating policies and procedures.
Other persons at the workplace	These are usually the people who either visit or come from outside the organisation. At the minimum, they must comply with the workplace's policies and procedures relating to health and safety. This includes but is not limited to wearing PPE or avoiding restricted areas.



To identify your role and responsibilities relating to IPC, ask yourself the following questions:

- **What tasks do you do at work?**

PCBU-type roles mean you have more power to implement policies. On the other hand, worker-type roles require you to comply with policies and procedures. Refer to the table above to give a rough idea.

- **Have you checked for applicable documents that discuss your roles and responsibilities?**

These documents could be work health and safety (WHS) documents. Organisation policies and procedures also help define your roles and responsibilities regarding infection prevention and control.

- **How closely do you work around critical points in the chain of infection?**

The closer you are to critical points in the chain of infection, the more responsibility you have. These critical points include susceptible hosts, interaction with pathogen reservoirs and being in the way of infection means of transmission. You can slow and even stop infection spread in these critical areas. For example, say you work in an area with high-contact surfaces. You will likely be responsible for overseeing or even doing the disinfection of the area yourself.



Further Reading

The link below leads to the Safe work Australia website. You will find different codes of practice for different industries on the page. These define roles and responsibilities for PCBUs and workers.

[Industry and business](#)

One of your most important responsibilities concerning infection prevention and control is keeping yourself healthy. Doing your best to minimise your susceptibility to infection through immunisations and healthy living is a big help. Remember that most people can be reservoirs for pathogens. If people can prevent this, they are already slowing infection transmission.



Multimedia



The video is a scenario created by the University of Rochester Medical Centre. It shows how each person has some form of responsibility in preventing infection.

[Infection Prevention is Everyone's Business](#)



Checkpoint! Let's Review

1. Different industries have different hazards and risks, so different control measures are implemented.
2. Roles and responsibilities are usually assigned to persons conducting business or undertakings (PCBU), workers, and others at the workplace.
3. The closer you are to critical points in the chain of infection, the more responsibility you have.
4. One of your most important responsibilities concerning infection prevention and control is keeping yourself healthy.

1.4 Identify Control Measures to Minimise Risk

Subchapter 1.2 discussed identifying infection risks and hazards associated with your work role and setting. This subchapter will teach you how to manage identified risks and hazards. This is usually in the form of control measures.

Control measures are the strategies you implement to minimise risks.

To identify which control measures to implement, you must first know how likely harm will occur or how severe its consequences are.

Recall that risk is made up of two elements:

- Likelihood of occurrence
- Severity of consequence

1.4.1 Likelihood of Occurrence

Likelihood refers to the probability that something might occur. It is usually measured according to the needs of each organisation. The following questions are used to determine the likelihood of occurrence:

- How frequently do you perform the task?
- Does performing the task more often increase the chances of harm?
- Has it happened before in similar or related situations?

You can develop measures appropriate to your workplace by answering these questions.

An example of a measure of the likelihood of occurrence can be seen in the table below:

Likelihood	
A (Almost certain)	This is expected to occur in most circumstances.
B (Likely)	This will probably occur in most circumstances.
C (Possible)	This could occur at some time.
D (Unlikely)	This is not likely to occur in normal circumstances.
E (Rare)	This may occur only in exceptional circumstances.

1.4.2 Severity of Consequence



In estimating the severity of a consequence, consider the following questions:

- What type of harm could occur (e.g. injury from sharps, cross-contamination due to improper cleaning methods)?
- What is the extent of the effect of the hazard (e.g. death, serious injuries, illness, or only minor injuries)?
- What factors could influence the severity of the harm that may occur?

The measures of the severity of consequences differ according to the needs and nature of the organisation. Here is an example of classifications of severity are:

Consequence	
1 (Insignificant)	Minor injuries, external reputation not affected, no environmental damage and the threat of litigation
2 (Minor)	Minor casualties that require medical attention off-site, no long-term effects, external reputation minimally affected, minor environmental damage, and single minor litigation
3 (Moderate)	Several casualties that require hospitalisation with no long-term effects, some environmental damage, and single moderate litigation
4 (Major)	Serious casualties, an external reputation severely damaged, would cause extensive environmental damage, and single major litigation
5 (Severe)	Legal consequences, multiple litigations, termination of the contract, loss of life, permanent disability, external reputation irrevocably damaged, and catastrophic environmental damage

1.4.3 Risk Analysis Matrix

A *risk analysis matrix* is a tool used to illustrate the combination of the likelihood of occurrence and severity of consequence to come up with the risk classification. It lets you decide whether risks need action and what mitigation measures are appropriate for a given situation.

The figure below is an example of a risk analysis matrix:

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
	1	2	3	4	5
A (Almost certain)	Moderate	High	High	Very high	Very high
B (Likely)	Moderate	Moderate	High	High	Very high
C (Possible)	Low	Moderate	Moderate	High	High
D (Unlikely)	Low	Low	Moderate	Moderate	High
E (Rare)	Low	Low	Low	Moderate	Moderate

Different risk classifications require different responses:

Situations classified as *low risks* are managed by routine procedures.

Situations classified as *moderate risks* are managed by specific monitoring or audit procedures.

Situations classified as *high risks* are serious and must be addressed immediately.

Situations classified as *very high risks* call for a specific response according to the context and effectiveness of your healthcare facility's existing strategies and controls.

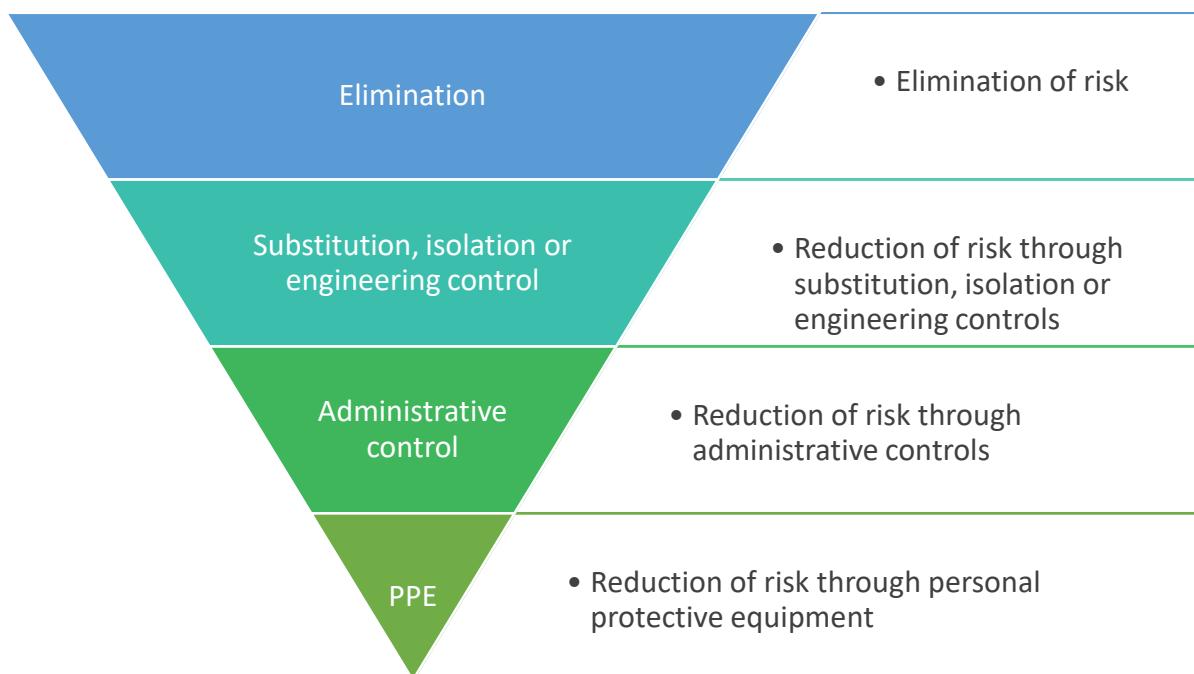
1.4.4 Identifying Control Measures

Once you know how likely harm is to occur and how severe its consequences are, you can then come up with or choose control measures.

Hierarchy of Control

The hierarchy of controls ranks different risk control measures. The rankings are categorised into four levels. The most effective control measures sit atop the ranking. The measures will be less effective as you go down the inverted pyramid. The idea in choosing a control measure is to pick which one is most reasonably practicable. For example, you can eliminate any risk of infection by not coming to work. However, that option means you will not earn income. So you either come up with a different elimination control measure or move down the hierarchy of control.

The hierarchy of control consists of the following:



Based on [Managing the risk in the workplace](#), used under CC BY 4.0.

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Eliminating the risk by removing the hazard is the best choice. When this option is not reasonable or practical, you can choose other controls in the hierarchy. Remember that as you go lower in the hierarchy, the level of protection and reliability of the approach also decreases.

The hierarchy of control involves the following:

- **Elimination of risk**

Controls that fall under this remove hazards completely. If reasonably practicable, this is the most effective control measure.

An example would be eliminating the homes of vectors like mosquitoes and flies. This can be done by cleaning and ensuring no uncovered stagnant water is around the workplace.

- **Reduction of risk through substitution, isolation or engineering controls**

Risk control strategies at this level aim to reduce risks in the workplace through the following strategies:

- **Substitution**

This reduces risk by picking safer alternatives to how you do things or the tools and materials used. Make sure that the alternatives still get the job done.

- **Isolation**

This risk control separates the people from the hazard. An example of this would be putting infected people in a quarantine area.

- **Engineering controls**

Engineering controls are measures that use mechanical devices or processes to minimise risk. One example of engineering controls is installing filter systems that remove airborne contaminants in a room.



- **Reduction of risk through administrative controls**

Administrative controls are policies and procedures set by management. This is meant to change how a person performs the work to minimise the risk.

An example of administrative control is scheduling work time that limits each worker's exposure to sources of infection.

- **Reduction of risk through personal protective equipment**

PPE-related control measures are measures taken when exposure to hazards is unavoidable. PPE helps limit direct exposure to hazards, but the hazard is still there. This means that you need to select and use them properly.

Subchapter 2.3 will discuss how to select and use PPE to minimise risks.

National Standards and Guidelines

National standards and guidelines are documents created by Australian industries and experts to ensure processes and products are of good quality. Relevant standards and guidelines in infection control could vary, especially for certain industries, states, and territories. However, here are some that most workers can refer to:

- **Work Health and Safety Legislation**

The model work health and safety (WHS) legislation includes the following:

- Model WHS act
- Model WHS regulations
- Model codes of practice

Australia's eight states and territories adopt the model work health and safety act to create legislation. They are the ones responsible for regulating and enforcing the laws.

Here are some examples of work health and safety legislation in the different territories:

Territories	WHS Legislations
Australian Capital Territory	Work Health and Safety Act 2011
New South Wales	Work Health and Safety Regulation 2017
Northern Territory	Work Health and Safety (National Uniform Legislation) Act 2011
Queensland	Work health and safety laws
South Australia	Work Health and Safety Act 2012
Tasmania	Work Health and Safety Act 2012
Victoria	Occupational Health and Safety Act and Regulations
Western Australia	Work Health and Safety Act 2020

- **Australian Guidelines for the Prevention and Control of Infection in Healthcare**

As discussed in Subchapter 1.1, the Australian Guidelines for the Prevention and Control of Infection in Healthcare and its companion documents provide recommendations backed by evidence and research. This helps you know what professionals suggest regarding infection prevention and control. While these guidelines are specialised for healthcare-related work roles, information about basic infection prevention and control can still be useful for non-healthcare jobs.

Identifying Control Measures

Identifying control measures means determining which control measure to apply to a hazard.

To identify the control measures for a hazard, follow these steps:



1. Review the task, work site, people, and associated hazards.

Look at possible sources of hazards in your workplace. Usually, the actual work task, environment, or even people can be hazards. Make sure to take note of them.

Review your job role and the tasks you do. Reflect on those tasks and think about how they factor into the chain of infection. For example, your tasks may require you to interact with many people. This increases the chance you come in close contact with susceptible hosts.

Check your work environment and identify areas that correspond to points in the chain of infection. For example, are there spots in the workplace where direct contact transmission is possible? These would be areas where bodily fluids may spill. They can also be high-contact surfaces.

Account for yourself and other people in the workplace. Take note of people who might be playing a role in the chain of infection. This may come from those not following health and safety procedures in the workplace.

2. Come up with measures that correspond to the hierarchy of control.

Once you have taken note of possible hazards from the task, work environment, and people, review existing documents (e.g. policies and procedures, hazard registers) to look for control measures. You can also come up with ideas. This is especially encouraged if you have evidence or experience to support the idea.

Choose control measures that fit the hierarchy of control:

Elimination

Substitution, isolation or engineering control

Administrative control

PPE

List options for control measures and categorise them according to where they would rank in the hierarchy of control. This will help you in the next step when you pick a preferred control option.

3. Pick a preferred control option.

To pick the control option to implement, consider the one in the hierarchy's highest position. However, that choice must be reasonably practicable.

Reasonably practicable controls are controls that balance safety and work quality.

If there is an existing control measure for a hazard, it should usually be enough. However, suppose you think it may be outdated or not applicable. In that case, you can always inform a supervisor to see what changes can be made.

Checkpoint! Let's Review



- Control measures are the strategies you implement to minimise risks.
- A risk analysis matrix is a tool used to illustrate the combination of the likelihood of occurrence and severity of consequence to come up with the risk classification.
- Identifying control measures means determining which control measure to apply to a hazard.

1.5 Communicate Information Relevant to Risk Management



Communication is the process in which information and facts are sent and received. The information sent and received may differ between work roles and environments. One example of information that must be communicated relates to the management of risks.

This subchapter focuses on the methods that can help you communicate with others effectively about risk management. Risks are already covered in Subchapter 1.2. To recall, they refer to the possibility of colonisation or infection by pathogens in the workplace. *Risk management* is your organisation's approach to addressing these risks. This is the basis for preventing and minimising the harm caused by infections.

Risk management must be observed at all levels in the organisation. This encompasses the whole management - from the departments down to the individuals. Different types and levels of risk exist per level. As such, workers must communicate effectively to act on the risks they encounter. Remember that risk management will only be successful if full support and cooperation from the management and staff exist.

There are no concrete risk management guidelines that every organisation can follow since risks vary depending on workplace conditions and settings.

However, the Australian/New Zealand Standard on Risk Management AS/NZS ISO 31000:2009 provides a suggested step-by-step approach to risk management. This refers to the following:

Establish the context

- Identifying the basic parameters in which risk must be managed

Avoid risks

- Determining whether there is a risk and whether a potential risk can be avoided

Identify risks

- Establishing a systematic and comprehensive process that ensures all potential risks are further analysed and treated

Analyse risks

- Considering the causes of risk, their likelihood of occurrence and severity of consequence

Evaluate risks

- Comparing the risk level after analysis with the previously established risk criteria, and assessing risks in terms of priority for further action

Based on material provided by the National Health and Medical Research Council. Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019), used under CC BY 4.0.

The steps above can be executed properly with the help of effective communication. Everyone in the workplace will develop an increased awareness of IPC through an interactive exchange of information. In your case, you must not hesitate to bring up to your supervisor the potential risks of infection you have spotted. Remember that information sharing is vital in ensuring the safety of everyone.

Types of Information to Communicate



Whatever work role or context you may have, you must communicate IPC-related information. Recall that almost everyone is involved in the chain of infection. This means everyone contributes to ensuring people stay healthy, safe and free from infection.

Some types of information you may need to communicate include the following:

Type of Information	Description
Reports	<p>Work health and safety legislation requires individuals to report work health and safety incidents. This is required so workplaces can respond to incidents. Part of reporting is also documenting. This is the process of recording the incident and the actions taken to deal with it.</p> <p>These documents can become the basis for improving work processes and infection prevention and control procedures. It may also assist in investigating and getting to the bottom of health-related workplace incidents.</p>
Instructions	<p>Instructions are information that tells you how to perform a certain task. In emergencies or unusual circumstances, you have to be able to receive and send instructions. This ensures that the workplace maintains order even in emergencies.</p> <p>They are another means to implement infection prevention and control-related policies in the workplace.</p>

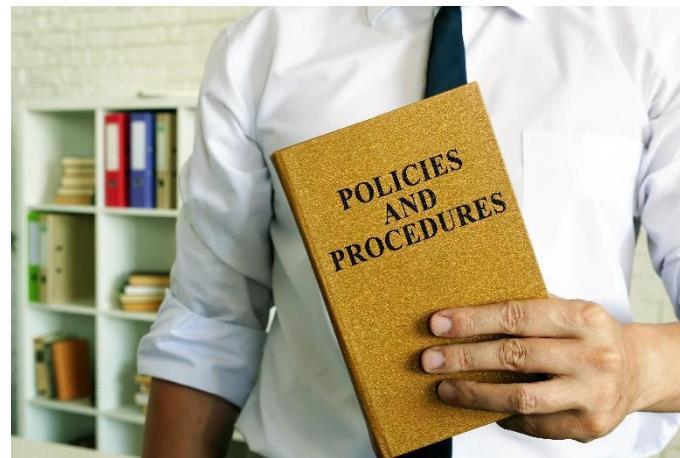
In your workplace, you may communicate with different people. Examples of people you will communicate with include:

People	Description
Supervisor	These are co-workers who have a position of authority in the workplace. Communication with supervisors about infection risks and incidents usually involves giving reports and receiving instructions.
General practitioner	They are doctors. Communication with general practitioners involves reporting health-related information. This can include your health or an incident involving others.
Health care professional	Health care professionals refer to nurses, receptionists, pharmacists, or other job roles related to health care. Your interactions with them will be similar to those with general practitioners.
Carer	Carers refer to individuals tasked with overseeing the well-being of other individuals. Communication with carers involves similar reports to general practitioners and health care professionals.
Responsible person	Responsible persons are those with duties and responsibilities related to health and safety in the workplace. Workers and colleagues in the same role usually fall under this. Communication with responsible persons can include sending and receiving reports and instructions about infection risks and incidents.
Responsible authority	Responsible authority refers to those with duties and responsibilities related to overseeing health and safety in the workplace. They may include PCBUs and health officers. Communication with responsible authorities usually involves reporting infection risks and incidents and receiving instructions.

You will also communicate with colleagues and, occasionally, people not part of the organisation. Section 3.5.2 will further discuss how to report to these people.

Policies and Procedures

Communicating with others for risk management includes reporting risks you have detected in the workplace. Below are the policies and procedures relevant to hazard reporting from Lotus Compassionate Care Services that can serve as your reference when you communicate with other personnel:

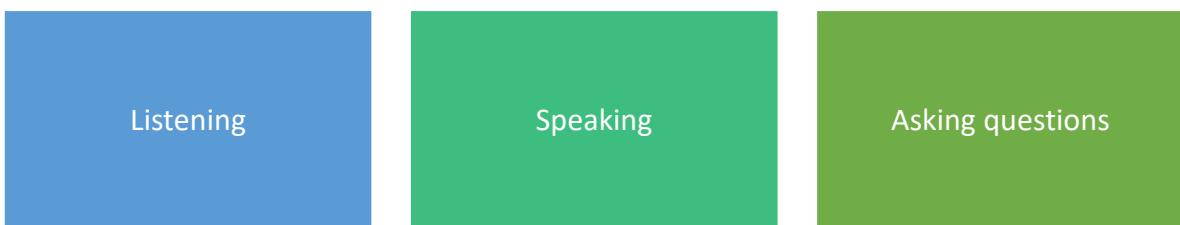


- You should take immediate action to remove or minimise the risk associated with any hazards. In some circumstances, minimising this may involve removing equipment from service and applying 'out of service' tags or isolating an area where a spill may have occurred.
- You must notify your supervisor immediately if you cannot control the hazard.
- You must document all hazards identified or reported by clients, visitors and/or family members which they cannot eliminate immediately.
- You must document all hazards must on the Hazard Report Form.
- You must complete the Hazard Report Form and forward it to the supervisor within the prescribed timeframe.

The Hazard Report Form will be discussed in detail in the next subchapter.

Communicating With Others

The process of communication is improved by focusing on three elements of communication:



These three are important because they allow you to receive, relay and confirm information. For example, misinterpreting instructions about where to bring a sick person could be dangerous. Taking them to the wrong place and moving them around again increases the places with contamination. It also causes unnecessary discomfort due to constant movement for the sick person.

To communicate effectively with others regarding infection risk management, here are some tips:

- **Listen attentively.**

To listen attentively, you need to make sure you focus your attention on the speaker. This could be a co-worker or supervisor sharing instructions or other information. You can usually show you are paying attention by providing relevant responses to the speaker. This does not have to be grand gestures. A simple nod or a short acknowledgment lets the speaker know you are still with them.

Do your best not to interrupt the person speaking. This ensures you do not miss anything they say. It also prevents situations when the speaker has to repeat what they say because their words clash. Time is of the essence, especially in managing infection cases. The longer nothing is done, the higher the degree of exposure of other people to the pathogen.



If you have concerns or issues you want to raise, wait for the appropriate time to raise them. Writing down your ideas and concerns first helps you keep track of them. Jotting down information also engages more of your senses than standing and passively listening.

- **Speak clearly.**

To speak clearly, you need to make an effort to use professional and appropriate language. Professional language is usually neutral and work-focused. This minimises the chances of evoking negative feelings, which may get in the way of sending your message. The goal when you speak is to make sure people understand what you say.

In line with that goal, use jargon only in situations that call for it. This is most useful when talking to colleagues and peers. Adjust your word choice when talking to people outside of the organisation.

The last point to think about is to focus on the relevant information. Do your best to speak clearly and concisely.

- **Ask effective questions.**

Asking questions allows the speaker and the listener to confirm that they received or sent information correctly. Do not be afraid to clarify something you do not understand. Misunderstanding is the last thing you want to experience when dealing with the chain of infection in any workplace. It is advisable to ask confirmation questions. This ensures that your understanding aligns with the workplace's understanding.



To ask effective questions, make sure that you focus on the detail you want to know. This is best done by thinking about what you are not sure of. Giving short context around the question can also improve how the person answering can respond to you better. Context can be related to why you are asking in the first place. For example, say you misheard something because of background noise. You can then say, 'I'm sorry, the noise made me miss your point about where to take the sick person. Can you repeat the location?'.



Checkpoint! Let's Review

1. Communication is the process in which information and facts are sent and received.
2. Some forms of information you will communicate are reports and instructions.
3. The process of communication is improved by focusing on three elements of communication:
 - Listening
 - Speaking
 - Asking questions

1.6 Document Risks and Risk Management Strategies



Section 1.2.6 discussed ways to identify your job's infection risks and hazards. Subchapter 1.4 then discussed how to devise control measures to deal with them.

This subchapter will discuss the importance of recording and managing those risks. Hazards and risks are sometimes unavoidable for certain jobs. For example, working with infectious diseases raises the risks of getting infected. This means that the job will have reoccurring hazards and risks. By recording hazards and risks, other workers in that same role can better prepare for them. This, in turn, helps ensure that the job is done more safely.

What you need to record and where you need to record may differ depending on your work role and workplace. Specific templates and forms exist to make the process of recording. Industries usually create these templates, so there is some difference. What is similar is what needs to be done: to create an accessible record of risks so other workers can prepare for them.

Recording Identified Infection Risks

Recording identified infection risks means documenting and accounting for known risks in your job. This allows other colleagues to have access to information about the risks already identified related to the job.

To record identified infection risks, here are some suggestions:

Check if existing documents have taken note of the infection risk before.

Use the appropriate form when updating or starting a record of identified risks.

Make sure that all information recorded is accurate and complete.

- **Check if existing documents have taken note of the infection risk before.**

You may want to check previous records first to check if the risk has been determined before. If it is already identified, you must confirm if the information on the record applies to your current work conditions. Update the information recorded about the risk, if necessary.

- **Use the appropriate form when updating or starting a record of identified risks.**

Use the appropriate forms to update or start a new record for an identified risk. This refers to the hazard and risk identification forms prescribed by your organisation. You must record information per your organisation's policies and procedures in these forms.

- **Make sure that all information recorded is accurate and complete.**

As sources of information, records need to have accurate and complete information.

The use of appropriate forms helps in ensuring you record relevant information. Guide questions and headers in the document can help you supply the needed information.

You must also be familiar with your organisation's policies and procedures relevant to recording risks. Below are the common details that are considered for this:

- The appropriate department in your organisation that you must notify about the risks
- The timeframe by which the report must be submitted
- The appropriate hazard and risk identification report form that you must fill out
- The information that must be included in your report
- The appropriate person to whom you must submit the report to

Remember to cross-check the details above with the policies and procedures of your organisation. If you are unsure what to do, reach out to your supervisor so they can guide you during the process.

Hazard and Risk Identification Forms

Hazard and risk identification helps you determine any situation, object or activity that can cause harm to people in a workplace. Hazard controls can be implemented by carefully identifying each hazard in the facility. These controls allow the reasonably practical mitigation of the risks.

Hazards must be reported according to the facility's policies and procedures. This ensures that everyone is aware that the hazard exists. It also makes thinking of control measures easier.

Do the following when reporting hazards:

- Report the hazard to your direct supervisor.
- Fill out a *Hazard Report* form, *Hazard Identification* form, or hazard register.
- Provide details about the hazard, including the following:
 - The location of the hazard
 - The description of the hazard

Below is an example of a hazard identification form from Lotus Compassionate Care. Take note of some of the details it asks for:

 Hazard Identification Report Form	
Name	
Location	
Date	
Equipment	
Description of hazard <input type="text"/>	
Suggested corrective action <input type="text"/>	
Employee signature <input type="text"/> Supervisor's remarks <input type="text"/>	
Corrective action taken <input type="text"/>	
Supervisor's signature <input type="text"/> Date <input type="text"/>	

End of Hazard Identification Report Form



Lotus Compassionate Care

Access and review Lotus Compassionate Care's hazard identification form through the link below:

Forms and Templates

(username: newusername password: new password)

When you fill in forms like these, the sections help guide the needed information. For example, it has sections to input your name, location, date and equipment. These help you fill in all the required information.

Recording Risk Management Strategies

After identifying the current hazards in your workplace through a risk assessment, you will evaluate their associated risks. The risk will increase as the severity and likelihood of harm brought by a hazard increase.

Control measures will be implemented to address the recorded hazards and risks. They will vary depending on the hierarchy of control measures previously discussed in Section 1.4.4. The most effective control is to eliminate the risk. However, alternative control measures can also be considered depending on your organisation's decision.



Risk management strategies refer to the methods implemented to address the identified risks. They include the following:

- **Strengthening staff education**

The more knowledgeable the staff are about the hazards and risks in the workplace, the more helpful they will be in managing risks.

- **Establishing a reporting system**

There must be a standard procedure for reporting infection hazards and risks for consistency. Authorities must encourage the staff to be more proactive in reporting anything that harms or can harm people.

Your organisation can build an online reporting system where the staff can submit reports. There can also be a hotline number for infection-related incidents that people can call when needed, especially for emergencies.

- **Promoting transparency**

Sharing information about infection-related incidents can reduce the fear of staff. Proceeding with the issuance of warnings or doing control measures might create confusion or panic. Just ensure to uphold privacy and confidentiality laws when you share information.

- **Enhancing communication**

Communication among people involved in the risk management process must be enhanced to effectively exchange information and task delegation. There must be regular meetings to discuss risks and plan of action. Regular updates must be provided, and evaluations must be conducted after the process.

You must record the strategies and details relevant to risk management in a risk register document. This outlines the complete risk management strategy of an organisation. The risk register seeks to answer the following questions:

- **What are the identified infection hazards?**

Enumerate the identified infection hazards in the workplace and describe each.

- **What is the harm that the hazard could cause?**

Determine the risk/s that the infection hazard could bring.

- **What is the likelihood that harm would occur?**

Analyse the probability of the occurrence of the infection risk. Evaluate as well how severe the consequence of the risk might be.

- **How effective are the current control measures?**

Identify the current control measures of your organisation in addressing the risks. Check and confirm if they are still effective or if they need to be improved.

- **What are further control measures required?**

Aside from the current control measures, determine alternatives that can help address the risks.

- **Who is the personnel or staff assigned to control the risk?**

Clarify the people who will be in charge of risk management tasks. They must also be aware of their roles and responsibilities.



- **When should the risk be controlled?**

Plan when the risk will be addressed and how long it will take. High-level risks must be acted upon immediately.

- **What are the reviews about the control measures?**

Once the control measures are implemented, monitor their effects and review their effectiveness.



Lotus Compassionate Care

Access and review Lotus Compassionate Care's WHS Risk Register form through the link below:

[Forms and Templates](#)

(username: newusername password: new password)

Remember to store the risk management process records according to your organisation's policies and procedures. This is necessary not only for compliance but for future reference as well.

Keeping records of the risk management process helps to:

Provide an example of how decision-making relevant to risk control is done

Assist in targeting training at key hazards.

Provide a reference of safe work procedures in the workplace

Ease the reviewing of risks to keep up with changes in relevant laws

Provide evidence to other stakeholders that WHS risks are being managed in the workplace



Checkpoint! Let's Review



1. Hazards must be reported and recorded according to the organisation's policies and procedures.
2. Under the Work Health and Safety (WHS) Laws, you must report serious safety incidents and work-related injuries and illnesses.
3. Recording identified infection risks means documenting and accounting for known risks in your work role and environment.



Learning Activity for Chapter 1

Well done completing this chapter. You may now proceed to your **Learning Activity Booklet** (provided along with this Learner Guide) and complete the learning activities associated with this chapter.

Please coordinate with your trainer/training organisation for additional instructions and guidance in completing these practical activities.

II. Follow Standard and Transmission-Based Precautions for Infection Prevention and Control in the Work Setting



The previous chapter discussed infection prevention and control. It can have different implementations depending on your work role and workplace. However, infection prevention and control have the same goal—to ensure everyone in the workplace is healthy and safe from infection.

This chapter will explore two types of precautions for infection prevention and control. These terms usually apply in a healthcare setting, but their ideas can still be contextualised in your workplace. Implementing them is another way of minimising the risk of infection.

Standard-based precautions are precautions applied to all patient care regardless of infection status.

Transmission-based precautions are precautions taken in addition to standard-based precautions. This happens when there is a need to control the means of transmission. This is done to prevent the spread of infection during a suspected or confirmed outbreak.

In this chapter, you will learn how to:

- Implement personal hygiene practices
- Practice proper hand hygiene
- Use the correct personal protection equipment (PPE)
- Follow procedures for environmental cleaning and management of waste
- Respond using transmission-based precautions or enhanced cleaning



2.1 Implement Personal Hygiene Practices

Personal hygiene is all about keeping your body clean and healthy every day. This must be maintained as it is your first line of defence against infectious agents. Good personal hygiene protects you, especially when interacting with others and the environment.

The various ways to observe good personal hygiene are called personal hygiene practices. These practices must be done both at home and at work. Recall that anyone can become a reservoir for infectious agents. Anyone can also become a susceptible host. As you perform your daily tasks at work, you will interact with other people and the immediate environment. Since microorganisms are everywhere, they will likely stick to you. Washing your body parts helps remove germs and infectious agents.



Implementing personal hygiene practices is an example of a standards-based precaution. This precaution is best practised by everyone regardless of infection status.

Here are examples of personal hygiene practices and how you can implement them:

- **Observing personal care and cleanliness**

You take care of personal care and cleanliness before, during and after work hours. The core of this practice is ensuring that your entire body is clean.

You do this through:

- **Trimming nails regularly to keep them short and clean**

Dirt can get stuck in the nails when you handle various objects. The longer the nails are, the more dirt can get stuck in them. As such, you must trim your nails regularly to lessen this occurrence.

- **Washing hands when handling food**

Your hands touch surfaces and objects that can have infectious agents. It is important to wash your hands properly before handling food to prevent cross-contamination.

- **Washing hands when eating**

Similar to the practice above, it is essential to perform hand washing before eating. This greatly reduces the possibility of transferring infectious agents to the food you ingest.

- **Washing hands after handling garbage**

When you collect, transfer, or dispose of garbage, you must wash your hands thoroughly afterwards. Garbage is a source of infectious agents, so washing your hands assures you these microorganisms will be killed.

- **Taking a bath every day**

When bathing, you want to make sure you have soap and water. Make sure you clean body parts like the armpits, genitals and anus. Infectious agents can build up on your body over time if you do not regularly wash them.

- **Brushing teeth at least twice a day**

Brushing removes the build-up of infectious agents in your teeth. This is important to practice at least twice a day since you eat multiple times a day.

In addition to the hygiene practices above, maintaining the cleanliness of the workplace contributes to personal cleanliness. Personal cleanliness involves keeping oneself clean; one must also tidy their surroundings. When a person cleans their surroundings, like their workplace, it means practising personal cleanliness.

You can contribute to your workplace's cleanliness by performing the following actions:

Cleaning up after yourself

Eating only in designated areas and not in your workstation

Throwing your trash in the proper bin

Disinfecting your mouse, keyboard, office chair and other high-touch items in your workstation regularly

Cleaning your workspace regularly

▪ **Using clean clothing or uniform**

Your clothes and uniforms will get exposed to different environments and people as you perform your work roles. This means the surface of clothes or uniforms worn accumulates dirt and microorganisms. If you come to work wearing uncleaned clothes or a uniform, dirt and infectious agents build up. Remember that high exposure to a pathogen increases the chances of getting infected.

This is easily avoided by ensuring that your clothes and uniforms are clean.

▪ **Laundering and management of work clothing**

Management of work clothing means organising work clothing. This includes taking inventory of what clothes you use for work. Taking inventory gives you an idea of how many work clothes you can use. This helps in scheduling when you need to do laundry. For example, if you only have enough work clothes for five days, you may need to wash clothes every five days.

Laundering work clothing means washing work clothes. Most of the time, you can access these clothes at home. This means you have control over when and how to wash them. However, some articles of clothing may need to stay in the office. An example of this may be hats or visors. If that is the case, the workplace must ensure that these articles of clothing are regularly cleaned.



The four general laundry management practices for contaminated work clothes include the following:

- Wear gloves when handling contaminated work clothes.
- Wash contaminated work clothes using chemicals and hot water set to the right temperature, depending on the fabric type.
- Tumble dry or iron clean clothes to eliminate possible pathogens.
- Store work clothes separately from your private clothing.

The risk of contamination or spread of infectious diseases can be minimised when you follow measures when washing clothes. Recommended courses of action are provided below:

- Wash work clothes when you do not have any infectious disease that could be transmitted to your clothes.
- Wash clothes in laundry machines with a temperature between 60 to 90°C.
- Dry the clothes in a washer, dryer or hygienic space. Drying in the toilet, shower or bathroom is not recommended.
- Store clean work clothes must be hygienic so they are not contaminated before they are used at the workplace.

Using clean clothing or a uniform is important in infection control. Wearing them ensures that various contaminants and pathogens found in dirty clothing are not introduced in the workplace. You can keep your work clothes clean by wearing them only at work and washing them according to proper guidelines. You must also change your work clothes on a daily basis.

- **Not attending work when ill**

Feeling ill means you may be showing symptoms of infection. When you are sick, you most likely are carrying infectious agents. In situations like this, it is best to call in sick. Refer to your own organisation's policies and procedures about this. Some organisations require you to fill out forms, while some need a call to a supervisor.

It is important not to attend work when ill to avoid spreading illness in the workplace. It also ensures that you do your part in protecting the people at your workplace. Not being there helps break the chain of infection and lowers the risk that others also get infected.



- **Observing safe respiratory and cough etiquette**

The means of transmission for infectious agents can be airborne or through droplets. These two routes are directly related to coughing. Because of this, safe respiratory and cough etiquette helps limit infection via these routes.

The Australian Guidelines have seven steps in respiratory hygiene and cough etiquette that you can follow:

- Cover the nose/mouth with disposable single-use tissues when coughing, sneezing, wiping and blowing your nose.
- Use tissues to contain respiratory secretions.
- Dispose of tissues in the nearest waste receptacle or bin after use.
- Cough or sneeze into the inner elbow rather than the hand if no tissues are available.
- Practice hand hygiene after contact with respiratory secretions and contaminated objects/materials.
- Keep contaminated hands away from the mouth, eyes and nasal mucous membranes.
- In healthcare facilities, patients with symptoms of respiratory infections should sit as far away from others as possible. Healthcare facilities may place these patients in a separate area while waiting for care.

Covering your mouth and nose when coughing or sneezing prevents infected persons from dispersing respiratory secretions into the air and spreading illnesses. Remember to wash your hands with soap and water for at least 20 seconds after sneezing, coughing, or using tissues. You can also clean your hands with an alcohol-based hand sanitiser that contains at least 60% alcohol.



Checkpoint! Let's Review



1. Personal hygiene refers to the practices you take to keep yourself healthy.
2. Personal hygiene practices include the following:
 - Observing personal care and cleanliness
 - Using clean clothing or uniform
 - Laundering and management of work clothing
 - Not attending work when ill
 - Observing safe respiratory and cough etiquette



2.2 Practice Proper Hand Hygiene



You come into contact with potentially infected people, equipment, surfaces and substances every day. As a result, you get exposed to various pathogens that can cause infections. If you are not careful, you can spread these to other people or surfaces when you:

- Touch your eyes, nose or mouth with unwashed hands
- Cough or sneeze into your hands, then touch other people or surfaces
- Touch surfaces with dirty hands
- Prepare or eat food with unwashed hands

Proper hand hygiene is one of the most effective ways to protect yourself and the people around you from getting sick. *Hand hygiene* refers to a person's methods to clean their hands and significantly reduce pathogens. It is a standard precaution in minimising the risk of pathogen transmission. It must always be observed, especially when you interact with another person.

Further Reading



The Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019) discusses hand hygiene in Section 3.1.1. While these guidelines are directed towards healthcare settings, it is still good information.

[Australian Guidelines for the Prevention and Control of Infection in Healthcare \(2019\)](#)

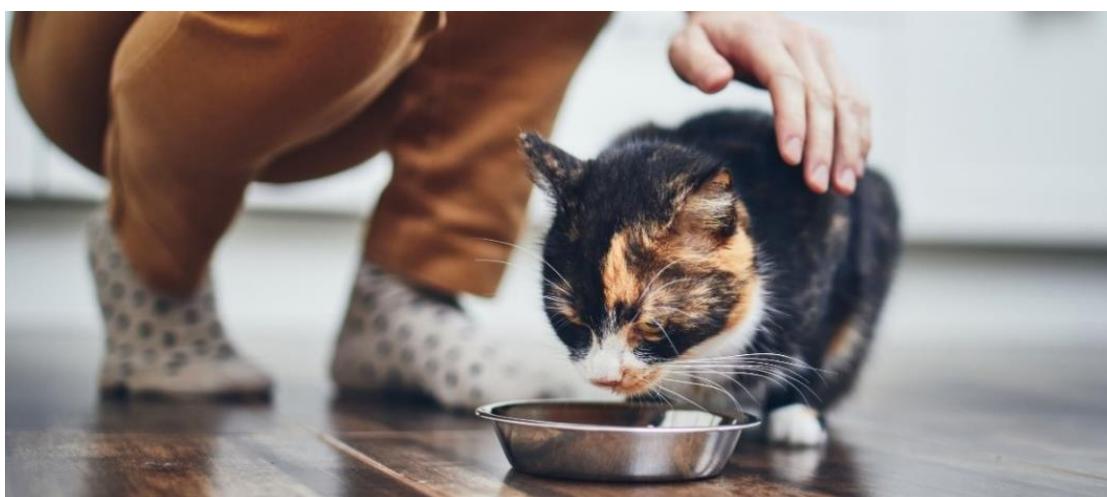
2.2.1 Hand Care

Hand care is part of hand hygiene. It centres on the ways you can ensure that your hands are not only free from dirt but also from injuries. Hand care and hand hygiene are critical to IPC because your hands are usually in contact with many surfaces and other people. You must follow proper hand care, especially when you perform your work tasks.

Below are examples of situations where hand hygiene and hand care are critical:

- Situations that require proper hand hygiene:
 - When preparing food
 - After handling coins and bills
 - After using the toilet
 - After touching pets
 - When coming from outdoors/after taking public transportation

These situations reinforce the idea that hand hygiene procedures are best done before and after contact with the person and the environment.



- Situations that require proper hand care:
 - Handling cleaning agents (when cleaning the bathroom)
 - Using tools such as rakes or gardening tools
 - Being in cold weather (which can dry hands)

Hand care is required in these situations because you risk harming your hands. Cleaning agents may cause abrasions and possible burns to your skin. Tools with sharp edges, on the other hand, can lead to cuts. Dry hands are also more prone to getting cut.

Maintaining Intact Skin



Intact skin is a first-line defence mechanism against infection. If the skin is damaged, it may lead to infection. Damaged skin attracts more microorganisms, increasing the chances of transmitting these to others.

The following are ways that help maintain intact skin:

- Avoid using products that may irritate the skin, e.g. fragrances and preservatives, especially in hand sanitisers or alcohol-based hand rubs.
- Avoid washing hands with soap and water immediately before or after using an alcohol-based hand rub, as this may cause dermatitis.
- Ensure that hands are completely dry and clean before donning gloves.
- Avoid using hot water for handwashing.
- Use moisturisers regularly.

Consider the following when using moisturising lotion and creams:

- Only use lotions and creams provided or recommended by the healthcare facility to ensure compatibility with other hand hygiene products used in the facility.
- Moisturise regularly with creams (preferably water-based hand creams) and lotions to prevent or minimise skin dryness or irritation.

Do the following when choosing appropriate hand hygiene products:

- Avoid or minimise using products with fragrances, colours and preservatives. These can lead to skin irritation.
- Consider any product's tolerance, feel and smell before purchasing and using them.
- Use emollient-containing alcohol-based hand rubs (AHBR). These are known to lead to improvements in irritant contact dermatitis.

The following are the correct handwashing and hand-rubbing practices:

- Do not use an ABHR after washing your hands with soap and water to prevent dermatitis.
- Only wear gloves when the hands are fully dry.
- Do not use hot water for handwashing.
- Consider the quality of the paper towels you will use so you will not experience irritation.



Education is crucial when it comes to hygiene. It would be best to do the following:

- Put up posters and information regarding proper hand care (especially handwashing and hand rubbing) in visible areas.
- Include hand care practices in the education programs for HCWs.

Below are other hand-care guidelines:

- **Wearing jewellery**

Keep jewellery at the absolute minimum (e.g. simple wedding rings). Remove other hand and arm jewellery and watches when performing hand hygiene.

- **Wearing appropriate attire**

Cardigans or jackets must not be worn when conducting patient care. Uniform sleeves and undergarments must not extend below the elbow.

- **Observing proper nail care**

Taking care of your nails is also a part of managing your hands. Keep in mind the following recommendations to take care of your fingernails:

- Remove nail polish that is chipped or older than four days.
- Avoid biting or chewing nails.
- Ensure that the tips of your nails are not more than 0.5 cm long.
- Clean and sterilise all nail grooming tools before clipping nails.
- Do not cut cuticles because they serve as barriers against infection.
- When directly contacting your patients, do not use artificial fingernails or nail polish with raised items such as stones or decals.



Management of Non-Intact Skin

It is important to treat non-intact skin, such as wounds, abrasions and cuts, to avoid infection. The following are things to remember when managing non-intact skin:

- **Management of abrasions**

Skin abrasion means that the top layer of the skin (epidermis) has been broken. Skin in the knees, ankles and elbows is prone to abrasion. Do the following steps to manage skin abrasions:

1. Make sure that the wound is clean. If there is dirt in the wound, use an antiseptic cream. After about five minutes, rinse the wound with sterile water to remove dirt.
2. Use an antiseptic such as Betadine.
3. Use a non-stick sterile dressing to cover the wound.
4. Change the dressing according to the manufacturer's instructions.
5. If you reapplied the antiseptic, wash it off after five minutes and then re-dress the wound.



- **Management of cuts**

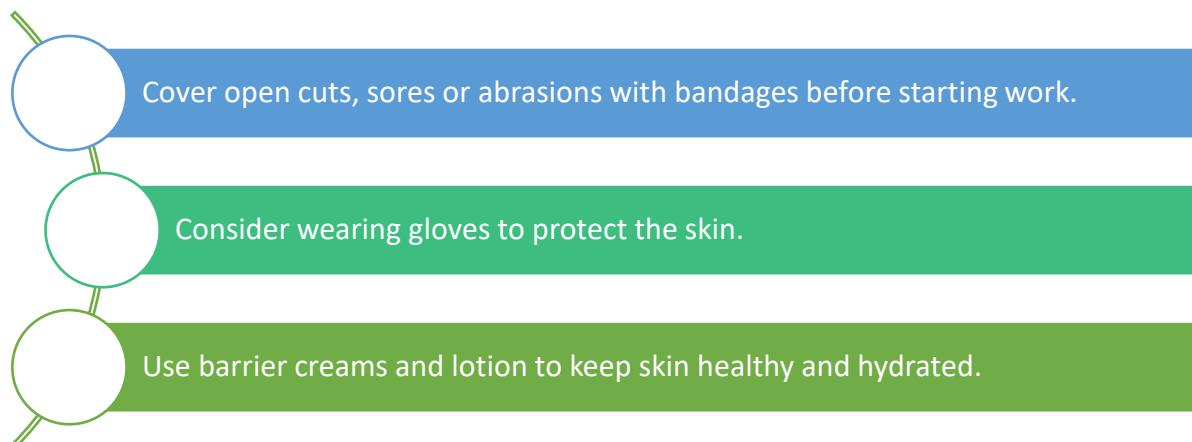
A cut or incised wound is caused when sharp objects like knives or shards of glass slice into the skin. Below are the steps to follow in managing incised wounds or cuts:

1. Control the bleeding using a clean towel to apply light pressure to the wound.
2. Continue applying pressure until the bleeding stops. This may take a few minutes.
3. Rinse the wound with running water.
4. Sanitise your hands before proceeding to clean or dress the wound.
5. Cover the wound with a non-stick sterile dressing.
6. Change the dressing according to the manufacturer's instructions.
7. If you reapplied the antiseptic, wash it off after five minutes and then re-dress the wound.

Below are some other things to consider when treating a wound:

- When removing dirt and debris from the wound, use clean water and soap if available.
- When wiping away blood, dirt, or debris from the wound, wipe from the centre going out of the wound to prevent further foreign material from being introduced.
- Pat dry the wound with fresh, dry gauze. Do not use the same gauze as the dressing for the wound.
- If the wound continues to bleed through the initial dressing, apply a second dressing on top of the first one.

Follow hand hygiene precautions when there are breaks in the skin. Make sure to follow the measures below to reduce the risk of infection:



Similarly, if you have skin conditions like rashes or eczema, you must also observe hand hygiene precautions to avoid irritating them further. This includes the following:

- Wash with soap and water, then moisturize.
- Use an alcohol-based hand gel and then moisturize afterwards. Moisturizing at the same time might compromise the anti-microbial properties of the hand gel.
- Do not over-dry your hands.
- Use hand hygiene product that contains skin emollient to minimise the risk of skin irritation and drying.
- Avoid washing hands with soap and water immediately before or after using an alcohol-based hand rub.
- Wait until your hands are dry before donning gloves.
- Avoid using hot water for handwashing.

2.2.2 Hand Hygiene Procedures

Hand hygiene procedures comprise the materials, techniques and precautions associated with hand washing and rubbing. This refers to the following:



Hand Hygiene Products

Soaps with or without antimicrobial properties are sufficient for hand washing. Hand washing relies more on the proper execution of the process than on the material you will use.

However, when it comes to hand rubbing, you must choose an alcohol-based product that has the following characteristics based on Australian Guidelines:

- It must have excellent antimicrobial efficacy, good user acceptability, and skin tolerability.
- It must be approved by the Therapeutic Goods Administration (TGA) as a hand hygiene product.
- It must meet the requirements of EN1500 testing standards for the bactericidal effect.

The Australian Guidelines also emphasise the following features of commercial alcohol-based products that you must consider:

- The presence of fragrance and colour that might cause allergenic reactions in users
- The emollient agent in the product that can moisturise the skin of the hands
- The risk of skin irritation and dryness brought on by the product

Lastly, your product must have an alcohol concentration of at least 60%. Concentrations higher than 95% tend to be less potent. You can determine the alcohol concentration of a product by looking at its label.

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Avoid using products that do not have the required alcohol concentration. These products may not work well for many types of germs. In addition, these products can only reduce the growth of germs instead of killing them outright.

Soaps and alcohol-based products are both effective for hand hygiene, although they differ slightly in terms of efficiency. Soap and water remove all types of germs, chemicals and visible dirt from hands, while alcohol-based hand rub only kills certain germs on the skin. Hand sanitisers are also less effective at removing certain kinds of germs like norovirus, *Cryptosporidium* and *Clostridioides difficile*.



Examples of instances where soap and water are recommended to be used for hand hygiene include the following:

Before, during and after preparing food

Before eating food

Before and after caring for someone who is sick with vomiting or diarrhea

Before and after treating a cut or wound

After using the toilet

After changing diapers, or cleaning up a child who has used the bathroom

After touching an animal, animal feed or animal waste

After handling pet food or pet treats

After touching garbage

If your hands are visibly dirty or greasy

Sourced from [When and How to Wash Your Hands](#). Source: CDC. Reference to specific commercial products, manufacturers, companies, or trademarks does not constitute its endorsement or recommendation by the U.S. Government, Department of Health and Human Services, or Centers for Disease Control and Prevention

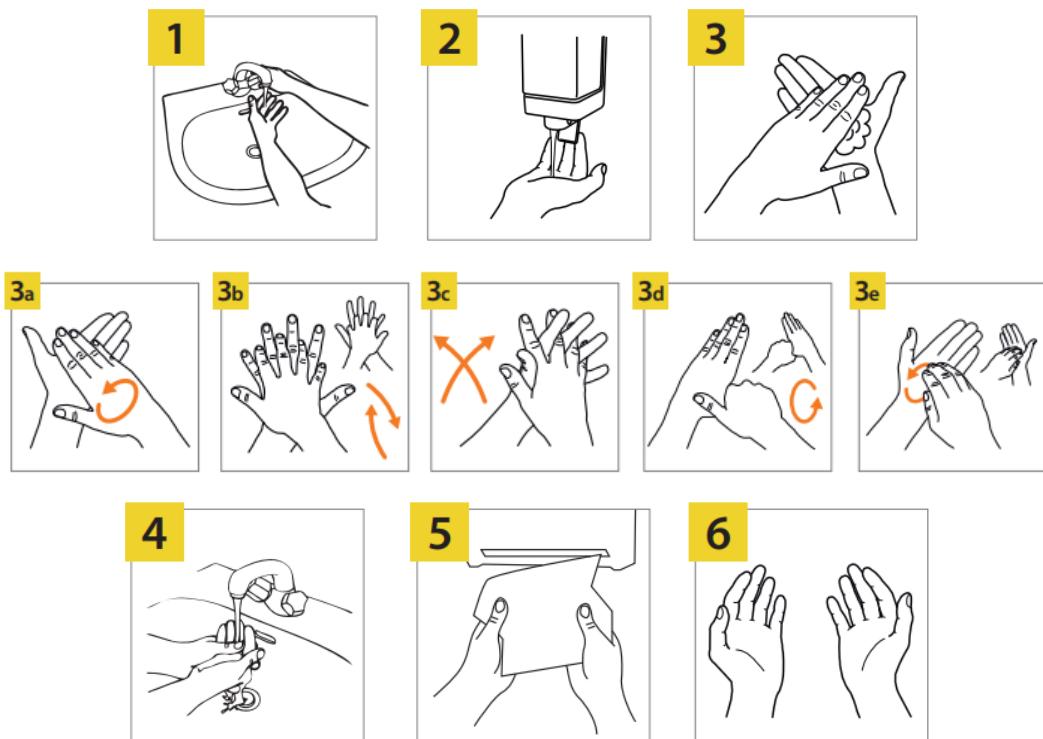
Below are instances where ABHR is recommended for hand hygiene:

- Before and after visiting a friend or loved one in a hospital or nursing home, unless the person is sick with *Clostridioides difficile*
- Instances where soap and water are not readily available
- Regular sanitation of hands after touching something

Hand Hygiene Technique

Handwashing is considered one of the simplest yet most effective measures to prevent infections. It is performed when the hands are dirty or soiled with blood or other body fluids. It involves using water and soap (microbial or antimicrobial) or a soap solution.

The image below illustrates how to perform handwashing:



The steps to handwashing are as follows:

1. Wet your hands with clean, running water (preferably warm).
2. Turn off the tap and apply soap to the hands.
3. Lather your hands by rubbing them together with the soap, including:
 - a. Palm to palm
 - b. Back of hands
 - c. In between fingers and back fingers
 - d. Around thumbs
 - e. Tips of fingers
4. Rinse your hands well under clean, running water.
5. Dry your hands using a clean towel or air dry them.

Based on material provided by the National Health and Medical Research Council. How to wash hands - Poster, used under CC BY 4.0

These are some of the things that you need to remember when washing your hands:

- Perform handwashing in designated handwashing basins. Handwashing basins must not be used for any other purpose.
- Avoid ‘topping up’ containers for liquid soap, cleaners, and disinfectants to avoid contamination.
- Use non-antimicrobial soaps when washing because of social contact and visibly soiled hands. Antimicrobial soaps are used when dealing with skincare issues.
- Use warm or cold water in washing hands. Avoid temperatures that are too high or hot because this can irritate your skin.
- Do not immediately use an alcohol-based hand rub (ABHR) after handwashing. This can lead to skin irritation and dryness.

Multimedia



Johns Hopkins Medicine demonstrates proper handwashing using the World Health Organization (WHO) Technique. Watch the video by clicking the link below:

[Hand-washing Steps Using the WHO Technique](#)

Hand Rubbing Procedures

Hand rubbing involves using alcohol-based hand rubs (ABHRs), hand sanitisers, gels, or liquids. It is performed when:





Before performing hand rubbing, ensure that all hand surfaces are accessible by removing hand and arm jewellery and watches. The entire procedure takes approximately 20 to 30 seconds.

Alcohol-based hand rubbing is composed of the following steps:

Apply a palmful of the product in cupped hand, covering all surfaces.

Rub hands palm to palm.

Right palm over left dorsum with interlaced fingers and vice versa.

Palm to palm with fingers interlaced.

Backs of fingers to opposing palms with fingers interlocked.

Rotational rubbing of left thumb clasped in right palm and vice versa

Rotational rubbing, backwards and forwards with clasped fingers of the right hand in left palm and vice-versa.

Based on material provided by the National Health and Medical Research Council. Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019), used under CC BY 4.0.

Hand rubs should be readily available through dispensers near the points of care or in small bottles for carrying.

Multimedia



The video demonstrates hand rubbing procedures using an alcohol-based hand rub (ABHR). Follow the link below to a video by the World Health Organization:

[WHO: How to hand rub? With alcohol-based formulation](#)

Precautions

Part of hand hygiene is the precautions you must follow when there are breaks in your skin or if you suffer from skin conditions. This ensures that your skin issue will not worsen and be further infected by pathogens.

When you have breaks in the skin like abrasions, open cuts or sores, you must observe the following precautions for your safety:

- Cover breaks in the skin with bandages before starting work.
- Consider wearing gloves to protect against breaks in the skin.
- Use barrier creams and lotions to keep skin healthy and hydrated.



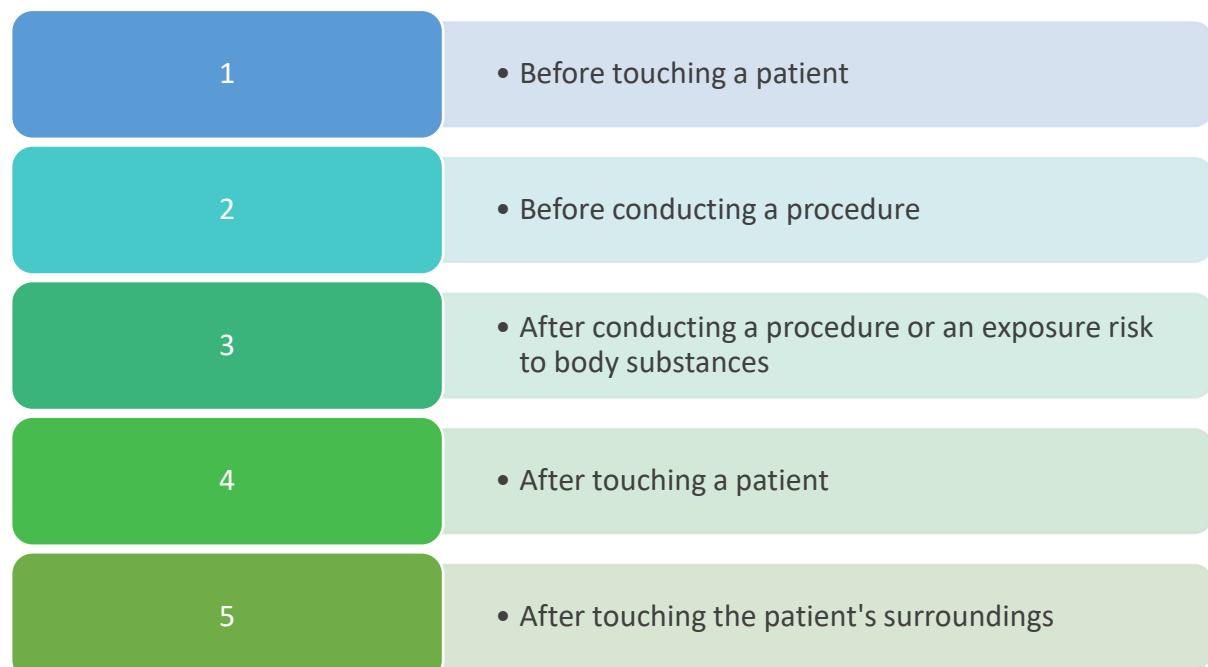
As for skin conditions like rashes and eczema, the precautions must be followed to prevent irritation or complications:

- Use soaps with moisturising factors and water when washing your hands, or use regular soap and water, then moisturise your hands afterwards.
- Use an alcohol-based hand gel and then moisturise after.
- Do not overdry your hands.
- Use hand hygiene products that contain skin emollients.
- Avoid applying alcohol-based products after washing hands with soap and water to prevent skin irritation due to dryness.
- Wait until your hands are dry before putting on gloves
- Avoid using hot water for handwashing.

2.2.3 Five Moments of Hand Hygiene

The World Health Organisation (WHO) developed the five moments of hand hygiene to serve as the guideline for the risk reduction of infection between the healthcare worker, patient and the environment.

The five moments of hand hygiene are designed to lower the transmission of microorganisms in healthcare facilities. This includes the procedures for the following:





Further Reading

Access the complete details of the five moments for hand hygiene from the website of Hand Hygiene Australia:

[5 Moments For Hand Hygiene](#)

The WHO provided the time and purpose for each Moment and specific procedures that healthcare workers must follow when interacting with the patient. The following table summarises 'when' and 'why' a Moment must be followed:

Moment	When	Why
1	Clean your hands before touching a patient when approaching them.	To protect the patient against harmful germs carried on your hands
2	Clean your hands immediately before performing a clean or aseptic procedure.	To protect the patient against harmful germs, including the patient's own, from entering their body
3	Clean your hands immediately after an exposure risk to body fluids.	To protect yourself and the health care environment from harmful patient germs
4	Clean your hands after touching a patient and their immediate surroundings when leaving the patient's side.	To protect yourself and the health care environment from harmful patient germs
5	Clean your hands after touching any object or furniture in the patient's immediate surroundings when leaving, even if the patient has not been touched.	To protect yourself and the health care environment from harmful patient germs

Based on [5 Moments for Hand Hygiene](#), used under CC BY 4.0.

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Checkpoint! Let's Review



1. Proper hand hygiene is one of the most effective ways to protect yourself and the people around you from getting sick.
2. Two common hand hygiene procedures are handwashing and hand rubbing.
3. Hand care is the process of taking care of your hands.
4. Hand care involves the following:
 - Maintaining intact skin
 - Managing non-intact skin



2.3 Use the Correct Personal Protection Equipment (PPE)



Personal protective equipment (PPE) is a piece of wearable equipment that can be used alone or in combination with other PPE. It reduces the risk of infection or transmission of potentially infectious microorganisms by performing the following functions:

- Protecting the person's body parts, membranes (e.g. nose, mouth and eyes), and clothing from excretions and secretions that are likely infectious.
- Preventing contamination of skin and clothing by pathogens in the environment.

When choosing the type of PPE to be used, consider the following factors:

- **Risks to health and safety**

The PPE you will use depends on the likelihood of the risk's occurrence and the threat it might bring. For example, wearing gloves is a must when handling blood or body fluids to prevent the transmission of infection.

- **Task or activity to be performed**

Work tasks will expose you to various levels of risk exposure to infectious agents. You must be familiar with the nature of the task you will perform to understand the risks it brings.

- **Requirements of relevant standards and codes of practice**

PPE is required to ensure work, health and safety in the workplace. You must know the required type and grade of PPE in your job based on WHS laws and relevant codes of practice.

- **Size, fit and comfort for the person wearing the PPE**

Your PPE must not be a hindrance when you perform your work tasks. Choose a PPE that fits your body so you can move easily.

- **Compliance with applicable standards**

Your PPE must not be made of substandard material. It must pass national standards to ensure its quality. Keep in mind that quality must never be compromised for your safety.

These standards include the following:

- NSQHS Standards
- Standards Australia
- Australian Guidelines for the Prevention and Control of Infection in Healthcare



Further Reading

You can read these standards by accessing the links below:

[The NSQHS Standards](#)

[Standards Australia](#)

[Australian Guidelines for the Prevention and Control of Infection in Healthcare](#)

The PPE must only be used when deemed necessary. Overuse of PPE can lead to negative effects such as the following:

- Interference with the quality of care given to patients
- Increased waste and costs
- Shortages of PPE that can result in inappropriate use (e.g. reuse of gloves and gowns)
- Environmental issues relating to disposable PPE, washing agents and chemicals



General PPE Guidelines

PPE should be worn in this sequence:



PPE should be removed in the following sequence:



Based on [Protecting Healthcare Products](#). Source: [CDC](#). Reference to specific commercial products, manufacturers, companies, or trademarks does not constitute its endorsement or recommendation by the U.S. Government, Department of Health and Human Services, or Centers for Disease Control and Prevention

The choice of PPE is based on your work role. The more physical interactions with people, the more likely PPE is needed. The type of PPE needed also depends on the means of transmission.

Further information regarding the use and applicability of the different kinds of PPE is provided in the next section.

2.3.1 Gloves



Gloves are designed to protect people from being exposed to pathogens that can be transmitted via hand contact.

They are worn whenever:

- Anticipating direct contact with blood or body substances, mucous membranes, non-intact skin and other potentially infectious materials
- Handling visibly soiled or potentially contaminated equipment
- Anticipating potential exposure to toxic drugs
- Using chemicals when cleaning

Gloves are not required for routine work activities where contact is limited.

Important Guidelines on Using Gloves Correctly

The guidelines for appropriate glove use include the following:

- Perform hand hygiene before and after using gloves.

IMPORTANT: Gloves should not replace the need for hand hygiene.

- Change gloves between conducting clean and dirty procedures. Dirty procedures are those that require direct contact with pathogen reservoirs. For example, touching or cleaning up bodily fluids are dirty procedures.
- Change gloves after continuous use. After around 4 hours, infectious agents may have already built up on the glove's surface.
- Do not reuse disposable gloves.
- Do not wear gloves when touching the telephone, keyboards, doors, linens or surfaces other people touch to avoid cross-contamination.

Remember to immediately replace torn hand gloves to prevent contamination while wearing them.

Types of Gloves

The table below shows the common types of gloves used as PPE with their corresponding description.

Type of Glove	Description
Patient examination gloves	<ul style="list-style-type: none"> ▪ Disposable gloves to prevent contamination between the patient and the examiner ▪ Common materials include latex, vinyl and polymer
Surgeon's gloves	<ul style="list-style-type: none"> ▪ Used in operating rooms to prevent the contamination of a surgical wound ▪ Common materials include natural and synthetic rubber
Non-medical gloves	Used for non-patient care activities like cleaning contaminated equipment or food service

Based on [Gloves](#), used under CC BY 4.0. © Commonwealth of Australia

Select the type of glove based on the kind of work you do. For example, non-medical gloves should be okay if you do not work in healthcare settings.

Fitting of Gloves

Below are the steps for putting on gloves:

1. Perform hand hygiene
2. Remove gloves one at a time from the box or packaging, holding the top of the cuff.
3. Put your hand through the glove opening and pull it up to the wrist.
4. Repeat the same procedure with the second hand
5. Adjust gloves to cover wrists or gowns as required.

Removing and Disposing of Gloves

Below are the steps when removing and disposing of gloves:

1. Grasp the palm area of the other hand and peel off the first glove using a gloved hand.
2. Hold the removed glove in the gloved hand.
3. Slide the fingers of the ungloved hand under the remaining glove at the wrist and peel off the second glove over the first glove.
4. Discard the gloves in a waste container.
5. Perform hand hygiene.



2.3.2 Masks

The mucous membranes of the nose and mouth serve as entry and exit points for infectious microorganisms. The use of masks reduces the risk of exposure to splashes of blood, body substances, secretions, and excretions. It also prevents you from releasing droplets or fluids into the air when you speak, cough, or sneeze.

Important Guidelines on How to Use Masks Correctly

- Change your mask when it becomes soiled or wet.
- Do not touch your mask while wearing it.
- Never reuse disposable masks. Do not fold it or put it in your pocket for later use.
- Never reapply when it has already been removed.
- Do not let it dangle around your neck.
- Discard your mask in the appropriate waste disposal area.

Ensure not to touch the inside of the mask when putting it on. This helps prevent contamination while applying the mask.

Types of Masks

Two types of masks are commonly used depending on the situation. As with glove use, match the type of mask to your task. Surgical masks usually work well enough for non-healthcare work environments. You will usually select P2 respirators if your work is in a healthcare setting. The table below discusses these two types:

Type of Mask	Description
Particulate filter respirator	<ul style="list-style-type: none"> ▪ It prevents the airborne transmission of microorganisms. ▪ It forms a closed seal around the nose and mouth. ▪ It removes aerosols effectively. ▪ It is not meant for the use of the general public.
Surgical mask	<ul style="list-style-type: none"> ▪ It is loose-fitting and single-use. ▪ It does not form a seal around the nose and mouth. ▪ It helps protect against splashes and large droplets or sprays from reaching the nose or mouth.

Type of Mask	Description
Utility mask	<ul style="list-style-type: none"> ▪ It covers the mouth and nose to create a physical barrier between the wearer and their environment. ▪ It does not provide a close seal to the wearer's face. ▪ It gives a lower level of protection from viruses in droplets and aerosols. ▪ It is for single use.
Cloth mask	<ul style="list-style-type: none"> ▪ It covers the mouth and nose to create a physical barrier between the wearer and their environment. ▪ It gives a lower level of protection from viruses in droplets and aerosols. ▪ It does not provide a close seal to the wearer's face. ▪ It is manufactured or homemade. ▪ It is reusable.

Based on [Comparison of mask types for COVID-19](#), used under CC BY 4.0. © Commonwealth of Australia

Grades of Mask

Among the types of masks used for infection control, only surgical and particulate filter respirator masks are medical grades. This means they comply with the relevant national standards and are appropriate for high-risk work settings like the healthcare industry.



Surgical masks must comply with the Australia Standards (AS:4381:2015) and are regulated by the Therapeutic Goods Administration. These masks have three layers and have three levels or grades based on the level of protection they provide.

Mask Level or Grade	Description
1	It is for general use and not for aerosols, sprays or fluids.
2	It provides moderate protection against aerosols or fluids
3	It provides maximum protection against aerosols or fluids.

On the other hand, particulate filter respirator masks must comply with the Australian/New Zealand Standards (AS/NZS 1716:2012). The Therapeutic Goods Administration also regulates them. Variations of this mask include the following:

P2

N95

KN95

KF94

P2 masks are certified in Australia, while N95 masks comply with the standards of the United States. They are considered equivalent since protective standards for masks in Australia and US are similar. These masks can filter 95% of airborne particles.

Meanwhile, KN95 masks came from China, and KF94 masks are from South Korea. Their level of filtering particles is based on the standards set by each country.

Fitting Surgical Masks

In most workplaces, you would normally use surgical masks. Fitting surgical masks is the process of wearing surgical masks.

To fit surgical masks, follow these three steps:

Position the mask over your mouth and nose.

Fasten the ties or tapes above and below your ears at the back of your head.

Fit flexible band to nose bridge.

Once worn, avoid touching the surface of the mask with your hands. If you accidentally do this, perform proper hand hygiene procedures. Hand washing is the best choice. If hand washing is not an option, hand rubbing helps.

Multimedia



The video below demonstrates the proper way to wear a surgical mask:

[Are you wearing your mask the right way to prevent COVID-19? | ABC News](#)

Fitting P2 Respirators

You normally use P2 Respirators in healthcare settings. This is because P2 respirators have a closer facial fit than surgical masks. Unlike surgical masks, P2 respirators also form a seal around the mouth and nose. Because P2 respirators need to fit snugly, fit testing is required when using P2 respirators.

Fit testing is the process of determining the P2 respirator size and style for the user. You would usually perform this when you first acquire a P2 respirator. Note that this mask is usually used in work settings where you regularly need P2 respirators. Examples would be healthcare facilities, operating rooms or infectious disease wards. If your workplace requires regular P2 respirator use, annual fit testing is suggested by Standard AS/NZS 1715: 2009.

Fit-checking P2 respirators pertain to wearing and adjusting them to ensure they fit properly.

To fit check respirators, follow these steps:



- 1. Position the respirator over the mouth and nose.**
- 2. Place tapes above and below the ears at the back of the head.**
- 3. Adjust fit.** Tighten if:
 - Air escapes when you exhale
 - The respirator does not move closer when you breathe in

Removing and Disposing of Masks

Below are the steps when removing and disposing of masks:

Using clean hands, untie or break the ties at the back of your hand.

Touch only the ties of the masks and discard them in the designated waste disposal.

Perform hand hygiene.

2.3.3 Protective Eyewear and Face Shields

Workers must wear eye protection or face shields during activities that can likely generate splashes or sprays of blood, body fluids, secretions, or excretions.

Protective Eyewear

Protective eyewear ensures the mucous membranes in your eyes are protected from blood and other bodily fluids.

The following are important guidelines on how to use eye protection correctly:

- Dispose of disposable eye protection immediately in the proper disposal area.
- Send reusable eye protection to a central area for reprocessing before it can be used again.
- Choose eye protection that does not interfere with visual acuity.
- Choose a size that securely protects you from splashes from the side.

IMPORTANT: Prescription glasses and contact lenses should not be used as eye protection.

Types of Eye Protection

The types of eye protection and their description are shown in the table below:

Type	Description
Goggles	Considered the most reliable eye protection, but does not protect other parts of the face
Safety glasses	<ul style="list-style-type: none"> ▪ Provides a lower level of protection than goggles ▪ Generally, not recommended for infection control use

Based on [Eye Safety – Eye Protection for Infection Control](#). Source: CDC.

Reference to specific commercial products, manufacturers, companies, or trademarks does not constitute its endorsement or recommendation by the U.S. Government, Department of Health and Human Services, or Centers for Disease Control and Prevention

Fitting of Protective Eyewear

Below are the steps on how to put on protective eyewear:

1. Pick up the eyewear using the temples.
2. Use both hands to open the temples.
3. Place the eyewear over your eyes, ensuring the bridge rests comfortably on your nose and the temple tips are securely hooked over your ears.

Face Shields

Face shields protect your face, mouth, nose and eyes from infectious agents and other bodily fluids. They share similar functions with protective eyewear, but face shields cover the whole face instead of just the eyes. Below are important guidelines on how to use face shields:

- Wear face shields during activities that can likely generate splashes or sprays of blood, body fluids, secretions or excretions.
- You must also wear face shields for any wound irrigation where there is a risk of sprays or splashes
- Never push the face shield up while working. Always keep it down.
- Ensure your face shield's straps are securely tightened so the face shield will not drop.

Keep in mind to hold the face shield on its sides instead of the front when putting it on. This ensures that contamination will be avoided when you use this PPE.

Types of Face Shields

The types of eye protection and their description are shown in the table below:

Type	Description
Disposable	These face shields are made of soft plastic. These are for single use only.
Reusable	These are face shields that are made up of hard, sturdy plastic. Some are even scratch-resistant. They can be reused, provided that they are thoroughly disinfected.

Fitting of Face Shields

The following are the steps for putting on a face shield:

1. Bend forward and hold on to the straps of the face shield with both hands. Do not touch the front of the face shield.
2. Place the elastic behind your head so the foam rests on your forehead.
3. Check the face shield to ensure it covers the face's front and sides, and no areas are left uncovered.



Removal and Disposal of Protective Eyewear and Face Shields

Below are the steps for removing and disposing of used eyewear and face shields:

1. Remove goggles or face shield from the back by lifting the headband and without touching the front of the goggles or face shield.
2. Place reusable items in the designated receptacle for reprocessing. Otherwise, discard it in a waste container.
3. Perform hand hygiene afterwards if hands become contaminated during PPE removal.

Ensure not to touch the front of the eyewear during removal to avoid contaminating yourself when taking it off.

Grades of Protective Eyewear and Face Shields



Protective eyewear and face shields must comply with the AS/NZS 1337.1:2010 standards. This provides the requirements that must be met to protect a person from flying particles and fragments in the workplace.

Protective eyewear and face shields have markings on their frames and arms that symbolise the hazards they can combat.

They are also subjected to impact tests per the AS/NZS standard requirements. They are graded based on how they react to the impact of a specified weight ball. These grades could be any of the following:

- Low impact
- Medium impact
- High impact
- Extra high impact

The greater the impact the material can withstand, the sturdier it is. Face shields can pass extra high impact, while goggles and eye shields can pass medium impact.



Required Reading

Read more about the various grades of protective eyewear and face shields by clicking the link below:

[Australian Standards for Safety Glasses](#)

2.3.4 Protective Clothing

Protective clothing protects the workers' uniforms, clothing and exposed body parts.

Protective clothing must be worn when you are anticipating the following:

- Exposure to blood, body substances, secretions or excretions (excluding sweat)
- Close contact with people, materials or equipment that can contaminate skin, uniforms or other clothing with infectious microorganisms

Below are important guidelines on how to use protective clothing correctly:

- Clinical and laboratory coats or jackets *are not* considered appropriate PPE.
- Aprons and gowns should be removed before leaving a potentially contaminated room to avoid contaminating the environment.



You must not touch the front of the apron at any point to prevent contamination.

Types of Protective Clothing

In the table below, you can see the different types of protective clothing and their respective descriptions.

Type of Protective Clothing	Description
Plastic apron	<ul style="list-style-type: none"> ▪ It is worn for general use. ▪ It is used for low-risk procedures. ▪ It is single-use and disposable.
Gown	<ul style="list-style-type: none"> ▪ Its sleeve length varies depending on the procedure, the volume of body substances to be encountered, and the risk of exposure. ▪ It covers a worker's exposed body area. ▪ It is single-use and disposable.

Type of Protective Clothing	Description
Full body gown	<ul style="list-style-type: none"> ▪ It is worn when contact with non-intact skin is likely. ▪ It is worn when splashing or splattering blood and other body fluids is possible. ▪ It is always worn in combination with other PPE. ▪ It is single-use.
Sterile gown	<ul style="list-style-type: none"> ▪ It is used for procedures performed in an aseptic field.

Source: *National Health and Medical Research Council. Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019)*, used under CC BY 4.0.

Fitting Protective Clothing

The following are the steps for putting on protective clothing:

1. Put on the gown. Fully cover the torso from the neck to the knees and arms to the end of your wrists. Wrap around the back.
2. Fasten the ties at the neck and the back.
3. Tuck your sleeves under the glove cuffs of the gown.

Removing and Disposing of Protective Clothing

Below are the steps for removing and disposing of protective clothing after use:

1. Using clean hands, untie or break your back ties and neckties.
2. Pull from the neck and shoulders, then arms.
3. Turn the gown inside out as you remove it.
4. Roll the gown into a bundle.
5. Discard the gown into the designated waste container.
6. Wash your hands.

Ensure not to touch the gown sleeves during removal to prevent contaminating yourself when you take it off. You can refer to the table on the next page to see the summary of the use and scope or application of the commonly used PPE in the workplace.

PPE	Use	Scope/Application
Masks	To protect the area of the wearer's nose, mouth and respiratory tract against splashes and droplets	Masks must be worn whenever: <ul style="list-style-type: none"> ▪ Anticipating exposure to blood, body substances, secretions, or excretions (excluding sweat) ▪ Anticipating close contact with patients
Gloves	To protect hands from germs and helps reduce the spread of germs	Gloves are worn whenever: <ul style="list-style-type: none"> ▪ Anticipating direct contact with blood or body substances, mucous membranes, non-intact skin, and other potentially infectious materials ▪ Handling soiled or potentially contaminated patient-care equipment ▪ Anticipating potential exposure to toxic drugs during the administration ▪ Exposed to chemicals when cleaning
Protective eyewear	To protect the mucous membranes in your eyes from blood and other bodily fluids	Protective eyewear must be worn during the following: <ul style="list-style-type: none"> ▪ Activities that can likely generate splashes or sprays of blood, body fluids, secretions, or excretions ▪ Any wound irrigation procedure where there is a risk of sprays or splashes
Face shields	To protect your face, mouth, nose, and eyes from infectious agents and other bodily fluids	Face shields must be worn during the following: <ul style="list-style-type: none"> ▪ Activities that can likely generate splashes or sprays of blood, body fluids, secretions, or excretions ▪ Any wound irrigation procedure where there is a risk of sprays or splashes

PPE	Use	Scope/Application
Particulate filter respirators (PFRs)	For providing protection against small airborne particles or aerosols	PFRs must be worn during aerosol-generating procedures on patients confirmed or suspected to be infected with a disease that may be transmitted via the droplet or airborne route
Powered air-purifying respirators (PAPRs)	An alternative to PFRs, PAPRs also provide protection against small airborne particles or aerosols	PFRs must be worn during procedures where there is a risk of the healthcare worker being exposed to aerosolised pathogens that can cause acute respiratory infections
Gowns and aprons	For protecting uniforms and clothing from moisture and/or soiling during direct patient care	<p>Gowns and aprons must be worn when:</p> <ul style="list-style-type: none"> ▪ Anticipating exposure to blood, body substances, secretions, or excretions (excluding sweat) ▪ Anticipating close contact with patients, materials or equipment that can contaminate skin, uniforms, or other clothing with infectious microorganisms



Multimedia



The Australian Department of Health and Aged Care posted the video below. In the video, they demonstrate the proper way to put on different kinds of PPE. While the video comes from a health and aged care context, the process of wearing PPE applies in most workplaces.

[Wearing Personal Protective Equipment in Aged Care](#)



Checkpoint! Let's Review

1. Personal protective equipment (PPE) is a piece of wearable equipment that can be used alone or in combination with other PPE.
2. Two common hand hygiene procedures are handwashing and hand rubbing.
3. Hand care is the process of taking care of your hands.
4. Hand care involves the following:
 - Maintaining intact skin
 - Managing non-intact skin



2.4 Follow Procedures for Environmental Cleaning and Management of Waste



In Section 1.2.2, you learned that people and the environment could become reservoirs for infectious agents. This means infection agents are not carried only by living organisms. Sometimes surfaces of objects and environments can be contaminated. Following procedures for environmental cleaning and waste management help minimise the risk of infection from these surfaces.

Environmental cleaning is part of the standard precautions for infection control and prevention. It involves reducing the number of pathogens on surfaces to minimise the risk of infection.

Waste management is the process of storing and disposing of discarded substances. This happens when the substance is no longer usable or considered valuable. In the context of this learner guide, waste refers to contaminated waste materials.

Different cleaning procedures are meant to be followed when cleaning the environment or managing waste. They exist so that potentially spreading infection through mishandling is minimised. For example, you cannot simply mix waste exposed to the body fluids of infected individuals. This puts the person handling the bins or waste storage at risk of exposing themselves to the infected waste.

The next part will discuss the different procedures for cleaning the environment and managing waste.

2.4.1 Environmental Cleaning



Environmental cleaning is a routine process that focuses on cleaning and disinfecting surfaces and materials as part of the procedures of IPC. Remember that cleanliness is the best way to combat the spread of pathogens. Hence, you must ensure that your environment is cleaned thoroughly and regularly. Having regular cleaning schedules helps in maintaining cleanliness in the workplace.

Some of the activities performed when cleaning include the following:

Removing waste

Damp dusting

Mopping

Washing

Drying

- **Removing waste**

Waste removal begins when waste gets collected from bins. Ideally, waste would have been segregated at this point. Biological waste is usually separated from non-biological waste.

A good practice before this is to separate known infectious waste from non-infectious waste. Infectious waste is waste that has been in contact with pathogens. These might come from disposable PPEs or items used to clean bodily fluids.

Once separated, non-infectious waste can get treated as regular biological and non-biological waste. Measures can then be taken to dispose of or store infectious waste properly.



- **Damp dusting**

Damp dusting is using a damp cloth or sponges to clean surfaces. The idea is to remove dirt and microorganisms from the surface by sticking them to the cloth or sponge. This procedure is important as some pathogens can be transmitted when released into the air.

- **Mopping**

Mopping is similar to damp dusting because it uses a cloth to absorb spills, dust and even microorganisms on floors. The main difference between the two is that mops have handles and are usually used on floors.

- **Washing**

Washing is the process of cleaning something using water and soap or detergent.

- **Drying**

Drying is the process of removing water or liquid from an object. This is most commonly done by exposing the item to heat, air or sunlight.

Here are the best practices for environmental cleaning of surfaces that you can use as your guide:

- Use fresh cleaning cloths at the start of each cleaning session (e.g. routine daily cleaning in a general inpatient ward).
- Change cleaning cloths when they are no longer saturated with a solution for a new, wetted cloth. Store soiled cleaning cloths for reprocessing.
- For higher-risk areas, change cleaning cloths between each patient zone (i.e., use a new cleaning cloth for each patient bed). For example, use a fresh cloth for every bed/incubator in a multi-bed intensive unit.
- Ensure that there are enough cleaning cloths to complete the required cleaning session.

You must also be familiar with the procedure for conducting surface cleaning:

Wet or soak a fresh cleaning cloth in the environmental cleaning solution thoroughly.

Fold the cleaning cloth in half until it is about the size of your hand. This will ensure that you can use all of the surface area efficiently. You may also fold it in half, then in half again, so it has eight sides.

Wipe surfaces using the general strategies as above (e.g. clean to dirty and high to low), making sure to use mechanical action (for cleaning steps) and making sure to that the surface is thoroughly wetted to allow required contact time (for disinfection steps).

Rotate and unfold the cleaning cloth to use all of the sides.

When all of the sides of the cloth have been used or when it is no longer saturated with solution, dispose of the cleaning cloth or store it for reprocessing.

Repeat the first step.

You must have the essential supplies for surface cleaning to perform this task well. This includes portable containers like bottles or small buckets for storing environmental cleaning products. A surface cleaning cloth is necessary as well.

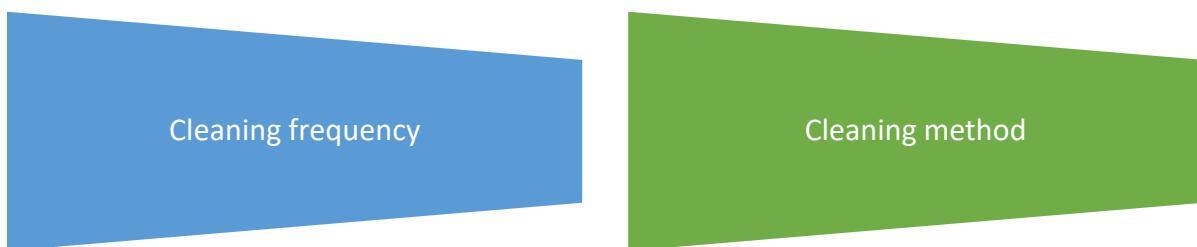
As for cleaning floors, you must have a mop or cleaning squeegee with a floor cloth. Buckets and wet floors or caution signs are also needed.

Remember to conduct environmental cleaning from cleaner to dirtier areas and from high to low surfaces.

Cleaning Schedule

The cleaning schedule provides the requirements for cleaning. When establishing a cleaning schedule, you can designate a specific activity for a particular time or date. For example, damp dusting must be done every morning, while mopping must be done twice daily. This helps in the organisation of tasks. It can also make task delegations easier to do.

A cleaning schedule is composed of two elements:



- **Cleaning frequency**

Cleaning frequency is how often a surface needs cleaning. This is determined by the kind of surface to be cleaned. A surface is classified as minimally touched or frequently touched:

- **Minimally touched (also known as low-touch) surfaces**

These have minimal contact with the hands of people in the work area. Examples include floors, ceilings and walls. These areas typically have lower risks of cross-infection and contamination.

- **Frequently touched (also known as high-touch) surfaces**

These surfaces have frequent contact with hands. Examples include doorknobs, bedrails and switches. These areas have higher risks for cross-infection and contamination. As such, these must be cleaned more often than minimally touched surfaces.

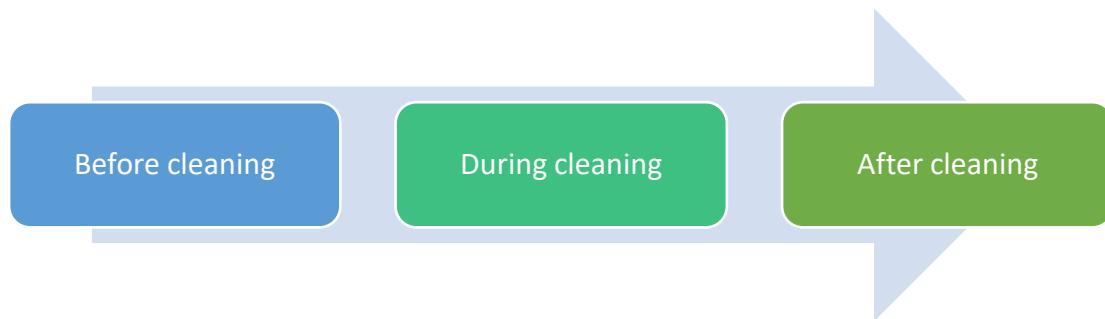
In some cases, you may have to deviate from the usual cleaning method or frequency. Some of these cases are:

- When a person in the work area has chemical sensitivities, you may need to forego scheduled cleaning using chemicals
- When there is a high risk for contamination by body fluids, like those in aged-care units
- When there are blood or body substance spills

You may have to clean more frequently or less often in such cases. Always consult the work facility guidelines and your supervisor before deviating from the prescribed cleaning method and frequency.

▪ **Cleaning method**

The cleaning method refers to the products and processes used when cleaning. This can be divided into three stages:



1. Before cleaning

This is the preparation phase. You usually perform the following in this phase:

- Prepare the cleaning solution according to the instructions of the manufacturer.
- Wear the appropriate PPE (e.g. disposable aprons and gloves).
- Perform hand hygiene before and after entering a room.
- Prepare a checklist of everything you need to clean to ensure you do not miss anything.
- Remove clutter (e.g. equipment and people's belongings lying around the room).

IMPORTANT: Be careful of needles and other sharp objects. Do NOT pick them up with your bare hands.

2. During cleaning

This happens as you are cleaning the surface of the environment. Consider the following tips for the given situations:

The following are general environmental cleaning techniques. As a general rule, you must proceed with the following:

- From high to low (top to bottom)
- From least contaminated (least soiled) to most contaminated (most soiled)
- From environmental surfaces to floors

Toilets have a higher risk of contamination than general areas and should therefore be cleaned last.

Do the following when cleaning toilets:

- Clean both surfaces and fixtures within the toilet, including walls, sinks, faucets, handles, toilet seats and floors. Replace shower curtains as often as required by your facility.
- Dry all surfaces using well-wrung cloths or paper towels.

Except for cases of spills, the use of disinfectants is not necessary because floors are considered minimally touched areas.

Do the following when mopping work area floors:

- Perform dry mopping to collect dust and debris from the floor in preparation for wet mopping.
- Immerse the mop in the cleaning solution. Perform wet mopping.
- Proceed from the area farthest from the exit and work towards the exit.
- Change the mops and cleaning solutions as frequently as needed.



Non-critical patient care equipment refers to equipment that comes into contact with intact skin.

Some electric equipment, such as keyboards and other medical devices, cannot be adequately cleaned. In such cases, consider using plastic coverings to protect these from contamination. Plastic coverings should be replaced between patients, even when the equipment is unused.



Further Reading

The link below leads to the Centers for Disease Control and Prevention's discussion of more specialised cleaning procedures for healthcare workers. It discusses the three types of cleaning required for general patient areas.

[Environmental Cleaning Procedures](#)

3. After cleaning

This phase refers to the actions you take after cleaning the different workplace surfaces. Here are some examples of these actions:

Launder mop heads and reusable cleaning cloths daily or as often as prescribed by your facility's guidelines. Dry each mop head thoroughly before using it again.

Clean the housekeeping trolley/cart.

Take reusable PPE to the reprocessing area of your facility.

Complete the required documentation and sign-off sheets.

Report anything that needs to be replaced or repaired (e.g. ceiling tiles, walls, or fixtures like a wall clock and cleaning equipment or PPE).

Based on Environmental Cleaning in Resource-Limited Settings. Source: CDC. Reference to specific commercial products, manufacturers, companies, or trademarks does not constitute its endorsement or recommendation by the U.S. Government, Department of Health and Human Services, or Centers for Disease Control and Prevention

The table below shows a sample cleaning schedule for various areas in the workplace. The frequency, method and process of cleaning are provided for your reference:

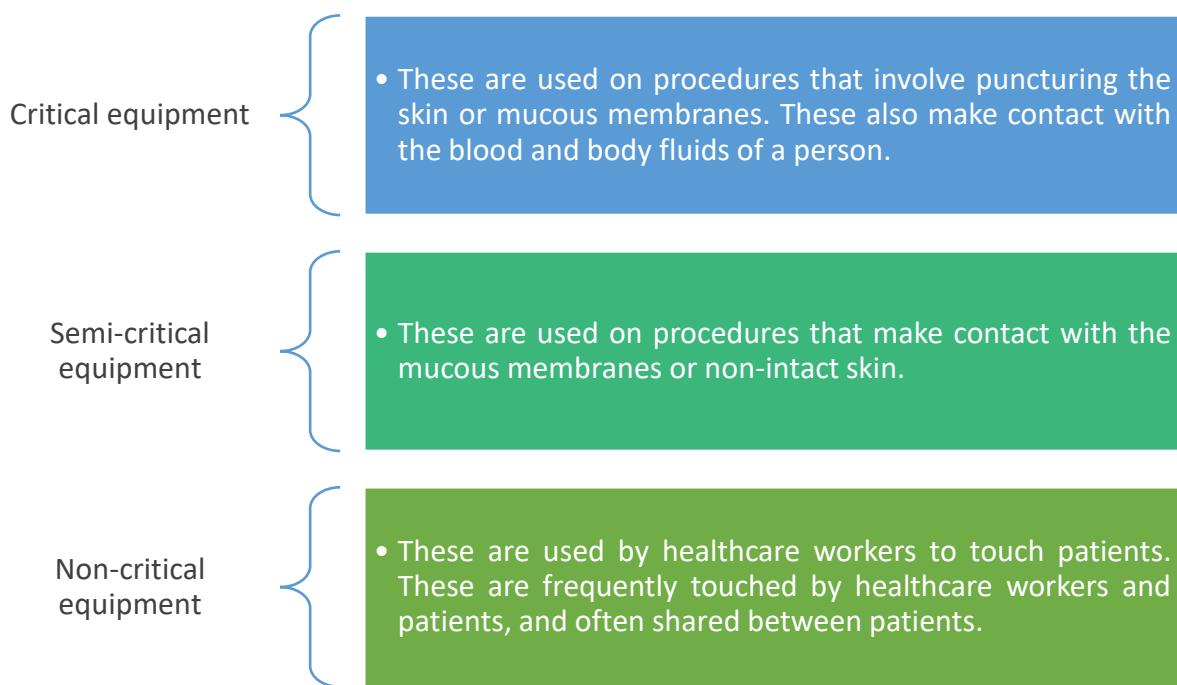
Area	Frequency of Cleaning	Method of Cleaning	Process of Cleaning
Waiting area	At least once daily	Clean	<ul style="list-style-type: none"> ▪ High-touch surfaces and floors
Consultation area	At least twice daily	Clean	<ul style="list-style-type: none"> ▪ High-touch surfaces and floors
Inpatient wards	At least once daily and more frequently in high-intensity and high-traffic areas	Clean and disinfect	<ul style="list-style-type: none"> ▪ High-touch surfaces and floors ▪ Handwashing sinks
Public toilets	At least twice daily	Clean and disinfect	<ul style="list-style-type: none"> ▪ High-touch and frequently contaminated surfaces (e.g. handwashing sinks, faucets, handles, toilet seats, door handles) ▪ Floors

2.4.2 Equipment Cleaning

Equipment cleaning refers to removing pathogens and dirt from the surface of equipment used at work.

The types of equipment you use at work vary depending on your role and work setting. Some equipment, like those used in healthcare contexts, require specialised treatment. For instance, reusable equipment like cutting tools for surgery goes through reprocessing before they can be used again. Other equipment like cloth or linen requires special attention as well.

The following lists different types of equipment and their description:



The types of equipment above are based on the Spaulding Classification System. This will be discussed further in Section 2.4.5 of this chapter. In the meantime, we will focus on the cleaning procedures for different types of equipment in this section. Keep in mind that cleaning critical and semi-critical equipment does not fall under the responsibility of the environmental cleaning staff. This is because critical and semi-critical equipment requires specialised reprocessing procedures.

On the other hand, when cleaning non-critical patient care equipment, you can refer to the best practices below to serve as your guide:

- Clean all equipment using the methods and products available at the facility.
- Follow instructions on the cleaning equipment. All equipment should include detailed written instructions for cleaning and disinfection from the manufacturer. This includes pictorial instructions if disassembly is required.
- Train the staff responsible for cleaning equipment on procedures before the equipment is used.
- Do not purchase, install, or use equipment that cannot be cleaned and disinfected unless fitted with plastic or other material coverings. This applies in patient care areas.
- Clean the equipment protected by plastic coverings regularly. Inspect coverings for damage regularly and repair or replace them as needed.

Remember to clean and disinfect non-critical care equipment before and after each use or between patients.

In general, you can refer to these suggestions to clean work equipment:

- **Review the organisation's policies and procedures regarding the maintenance and cleaning of equipment.**

Policies and procedures specify what your responsibility is when it comes to equipment cleaning. Some roles may not require workers to clean their equipment. Their responsibility may lie in proper storage so those who clean the equipment can collect them safely. There may also be instances when you may be asked to perform low-level cleaning. This requires removing visible dirt or foreign substances on the equipment's surface.

Whatever your responsibility is, a review of policies and procedures will help tell you what you need to do.

- **Read their manufacturer's specifications.**

This is especially useful if you are cleaning specialised equipment. Specifications usually describe how to maintain and clean equipment. This ensures that you do not miss any special requirements when cleaning. For example, specifications may restrict you from submerging electric-powered tools in cleaning solutions.

Higher-level cleaning of equipment requires reprocessing. Section 2.4.3 will discuss this further.



2.4.3 Management of Linen and Clothing

Management of linen and clothing refers to handling used linen and clothing. Proper handling of used linen is essential to preventing exposure and contamination of clothing. It also helps to avoid spreading pathogens from the linen or clothing to people. Linen is usually used in nurse stations, healthcare settings, office infirmaries, sleeping quarters or wherever there is a bed in a work area.

Laundering and management work clothing was previously discussed in Section 2.1. Those would apply to clothing that workers can bring home with them. For the management of clothing left at work, collecting, storing and cleaning them works the same way as with linen.

Regarding healthcare settings, handling lines used for all patients must follow the general principles set by the Australian Guidelines. This refers to the following:

Appropriate PPE is worn during handling of soiled linen to prevent exposure of skin and mucous membrane to blood and body substances.

Used linen is 'bagged' at the location of use into an appropriate laundry receptacle.

Used linen must not be rinsed or sorted in patient care areas or washed in domestic washing machines.

Linen souled with body substances should be placed into leak-proof laundry bags for safe transport.

Hand hygiene is performed following the handling of used linen.

The Australian guidelines also have the following practices that must be followed when handling a patient's personal items, like their clothing:

- Use domestic-type washing machines for a patient's personal items. This does not include other linen.
- Use the appropriate detergent and hot water when washing.
- Wash individual patient loads one at a time if hot water is unavailable.
- Use clothes dryers for drying.

To handle used linen and clothing, you would need to work with these three processes:



1. Collecting

Collection of linen happens when you retrieve used or stored linen. In collecting linen, you want to make sure that you know what type of dirty linen you are taking.

The different types of dirty linen include the following:

- **Used linen**

Linen that is not visibly soiled but was used by someone in the workplace

- **Soiled linen**

Linen that is visibly contaminated with blood, body fluids and the like

- **Infectious linen**

These are linen that people on transmission-based precautions use

Unlike soiled linen, contamination is not visible. This usually happens when an outbreak occurs. Someone in the workplace may need to be isolated. If the place where they stay has linen (like in an office infirmary), that linen gets treated as infectious.

- **Infested linen**

These are linen used by people or animals with parasites such as fleas, bedbugs or lice.

Practise the following precautions and procedures when collecting linen:

- Wear the appropriate PPE (e.g. long-sleeved gown and disposable or heavy-duty rubber gloves) when you collect linen. This is especially important when collecting used linen, as you will expose yourself to it.
- Do the following when removing linen from a bed:
 - Fold linen towards the centre of the bed.
 - Move the folded linen from the bed to a linen hamper or cart.
 - Place the soiled, infectious or infested linen in waterproof plastic bags. Ensure there is no leak, as the liquids will carry pathogens.
 - Keep the dirty linen away from yourself as best you can.

- Carefully roll up and avoid shaking soiled linen when you collect them. Soiled linens can be contaminated with blood, faeces and other body fluids potentially containing microorganisms like bacteria, viruses or fungi. Shaking linen can disseminate these microorganisms in the air and may spread infection.

2. Transporting

Transporting linen means moving linen. This can be the movement to and from storage, processing area or place of use.

To transport linen, here are some suggestions:

- Transport linen in a cleaned and closed linen cart or bag.
- When unloading linens from the linen cart or trolley, ensure you are on a flat surface.
- You may use the same trolley to deliver clean and dirty linen as long as the trolley has been thoroughly cleaned and dried.

Suppose the linens are transported to the processing facility in mobile trolleys. In that case, the transport vehicle should have the means to secure them firmly inside. The linens should not move during transport. This can be done using nylon webbing straps or chains.

3. Processing

Proper processing of linens involves laundering them following AS/NZS 4146:2000, which specifies the general laundry practices for commercial, industrial, healthcare and other facilities. Laundering must be done at a separate facility. When collecting linen, do not do this in patient-care areas or domestic washing machines.



The typical laundry process involves the following:

- **Pre-wash** – The staff must wear PPEs before handling dirty linen. This ensures that the risk of exposure to blood and body substances in the linen will be minimised. In addition, they must be placed in their appropriate containers instead of on the floor or other surfaces. This prevents microorganisms in the linen from dispersing further.
- Sorting dirty linen can also help in easing the laundry process.
- **Main wash** – Dirty linen is washed within a specific duration. Some linen also requires thermal disinfection within a prescribed temperature. This is why sorting dirty linen before washing is helpful. You can achieve the appropriate wash results depending on the type of linen and the number of stains.
- **Rinse** – Washed linen is rinsed with water and dried afterwards. Remember to have separate places for dirty and clean laundry to avoid cross-contamination of infectious agents.

If there are problems with the resources used for laundry, you must be able to come up with ways to address the problem. For example, suppose hot water is unavailable while washing soiled linens. In this situation, soiled linens must be reprocessed manually. To do this, you can perform the following steps:



- Immerse the soiled linen in detergent solution and use mechanical action (e.g. scrubbing) to remove soil.
- Disinfect by one of these methods:
 - Immersing the linen in boiling water
 - Immersing the linen in disinfectant solution for the required contact time and rinsing with clean water to remove residue
- Allow the linen to dry in the sun fully.

In addition, laundry cycle settings depend on the load size and laundry chemicals used. Always read the manufacturer's instructions about the laundry equipment and chemicals to ensure correct usage.

4. Storing

Storing linen is the process of keeping linen organised in a secure location. Proper storage ensures that you can easily retrieve clean linen for use. It also ensures that used linen has a secure space to be placed in. This last part is important as it may not be possible to process linen all day.

To store linen, here are some suggestions:

- Do not place clean linens in the same area as dirty linens. Ensure that there is clear segregation between them.
- Store clean linens in a clean and dry place where aerosols, dust, moisture, or pests cannot contaminate them. Clean linens may also be wrapped in a protective covering, as necessary.
- Bag linens and place them in a designated area. Ensure that access to the storage area of dirty linen is restricted until it is collected to be laundered.

2.4.4 Managing a Blood or Body Fluid Spill

Blood or body fluid spill refers to situations when blood, mucous, sweat, cough droplets and other similar bodily fluids flow onto surfaces. Accidents can happen in any workplace. Injuries may cause blood or body fluids to spill. Sometimes it might be accidents caused by moving containers. Regardless of the cause, these fluids can potentially carry infectious agents. So, the surface they come into contact with must be cleaned properly.



The Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019) recommends six important points for managing blood and bodily fluids. This includes the following:

- Blood and body fluid or substance spills should be dealt with immediately.
- Spills should be attended to as soon as they are safe in operating rooms or in circumstances where medical procedures are underway.
- Care should be taken to thoroughly clean and dry areas where there is any possibility of bare skin contact with the surface (e.g. examination couch)
- PPE should be used for all cleaning procedures, disposed of, or sent for cleaning after use. Hands should be washed and dried after cleaning.

- Where a spill occurs on a carpet, shampoo as soon as possible; do not use disinfectant. Steam cleaning may be used instead.
- Wash hands thoroughly after cleaning is completed.

The Australian Guidelines also suggest that the use of hospital-grade disinfectants depends on the risk of transmission of infectious agents. The material where the fluids are spilled should also be compatible with the disinfectant. Subchapter 3.4 will discuss this process further.

Follow the steps below for managing blood and body fluid spills:



Sourced from [Appendix B1 – Cleaning procedure summaries for general patient areas](#). Source: [CDC](#). Reference to specific commercial products, manufacturers, companies or trademarks does not constitute its endorsement or recommendation by the U.S. Government, Department of Health and Human Services, or Centers for Disease Control and Prevention

Checkpoint! Let's Review



1. Environmental cleaning is part of the standard precautions for infection control and prevention.
2. Equipment cleaning refers to removing pathogens and dirt from the surface of equipment used at work.
3. Proper handling of used linen is essential to preventing exposure and contamination of clothing.
4. Blood or body fluid spill refers to situations when blood, mucous, sweat, cough droplets, and other similar bodily fluids flow onto surfaces.

2.4.5 Reprocessing Reusable Equipment or Instruments



Reprocessing reusable equipment or instruments refers to a series of steps that aim to render equipment and instruments suitable for reuse.

Single-Use Medical Equipment

Note that not all equipment can undergo reprocessing. If you see a symbol like the one on the right, then the equipment is designed for single use only. They must not be reused or reprocessed in any way.

There are different levels of reprocessing, depending on how the equipment is classified. The next part will cover the most commonly used classification, the Spaulding Classification. It will also include the recommended practices for reprocessing.



Spaulding Classification of Equipment

The Spaulding Classification is based on the degree of risk for infection involving the use of the equipment.

The table below shows the definition, examples and level of reprocessing associated with each classification:

Classification	Definition	Level of Reprocessing
Critical equipment	<p>These items confer a high risk for infection if contaminated with any microorganism.</p> <p>Examples of critical equipment include the following:</p> <ul style="list-style-type: none"> ▪ Laparoscope ▪ Surgical instruments ▪ Invasive dental equipment ▪ Cardiac and urinary catheters 	Cleaning followed by sterilisation
Semi-critical equipment	<p>These items come into contact with mucous membranes or non-intact skin.</p> <p>Examples of semi-critical equipment include the following:</p> <ul style="list-style-type: none"> ▪ Transvaginal probe ▪ Respiratory therapy equipment ▪ Anaesthesia equipment 	<ul style="list-style-type: none"> ▪ Cleaning followed by high-level disinfection, at the minimum ▪ Sterilising is ideal
Non-critical equipment	<p>Healthcare workers use non-critical patient care equipment to touch patients, frequently touched by healthcare workers and patients and often shared between patients.</p> <p>These items come into contact with intact skin but not mucous membranes.</p> <p>The following non-medical equipment usually falls under this category:</p> <ul style="list-style-type: none"> ▪ Intravenous pump ▪ Biometric scanners ▪ Power tools 	<ul style="list-style-type: none"> ▪ Cleaning followed by low-level disinfection ▪ Cleaning alone is enough at the minimum

Based on material provided by the National Health and Medical Research Council. Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019), used under CC BY 4.0.

Be familiar with the general actions involved in reprocessing critical reusable medical devices:

- Clean thoroughly as soon as possible after using.
- Sterilise after cleaning by steam under pressure.
- Sterilise through an automated low-temperature chemical sterilant system, other liquid chemical sterilant or ethylene oxide sterilisation. Do this if the equipment is heat or moisture sensitive.
- Ensure critical items are sterilised between each patient's use.

The three actions required for reprocessing semi-critical reusable medical devices include the following:

- Clean thoroughly as soon as possible after using.
- Steam sterilisation is preferable.
- Use a high-level Therapeutic Goods Administration (TGA)-recommended chemical or thermal sterilant or medical device disinfectant. Do this if the equipment will not tolerate steam.

Lastly, the two actions for reprocessing non-critical reusable medical devices refer to the following:

Clean as necessary with a detergent solution.

Disinfect with compatible low or intermediate-level TGA-included sterilant or medical device disinfectant after cleaning if decontamination is necessary.

Reprocessing generally includes cleaning and disinfection. The table below shows the suggested reprocessing methods across the various types of reusable medical devices:

Category	Reprocessing Method
Critical	Cleaning followed by sterilisation
Semi-critical	Cleaning, followed by high-level disinfection
Non-critical	Thorough cleaning is sufficient for most non-critical items after each use, although intermediate or low-level disinfection may be appropriate in specific circumstances.

Level of Reprocessing

As seen in the Spaulding Classification, the three levels of reprocessing are as follows:

Cleaning

- Removes visible foreign material from a surface
- Removes but does not kill microorganisms

Disinfecting

- Uses disinfectants to remove most microorganisms, but not all bacterial spores

Sterilising

- Eliminates all forms of microbial life
- Can be done using physical or chemical methods

Reprocessing Practices

There are several routine practices that you must follow to ensure that reprocessing is carried out correctly. Below are the Australian Guidelines' four principles below for reprocessing reusable medical devices:

- Only Therapeutic Goods Administration (TGA)-included reusable medical devices should be used; before purchase, healthcare facilities should ensure that the manufacturer's reprocessing instructions are provided and can be followed by the healthcare facility.
- All reusable medical devices and patient-care equipment used in the clinical environment must be reprocessed according to their intended use and the manufacturer's advice.
- Single-use medical devices must not be reprocessed.
- Suppose a healthcare facility makes a decision to reprocess single-use devices. In that case, the facility must be licensed by the TGA. It will be considered a manufacturer under section 41BG(2) of the Therapeutic Goods Act 1989 and will be subject to audit for conformance.

The following section will discuss some cleaning agents, equipment and techniques you can use in environmental cleaning. Using the right equipment or cleaning agent ensures that the environment or object is clean and that you use them safely.

2.4.6 Cleaning Agents and Equipment

Cleaning equipment refers to the tools you use to clean. These allow you to apply cleaning agents.

Some examples of cleaning equipment include the following:

Cleaning Equipment	Description
Housekeeping rooms/closets	<p>These are areas dedicated to storing appropriate PPE and cleaning equipment and agents. Housekeeping rooms/closets should:</p> <ul style="list-style-type: none"> ▪ Have an adequate water supply and a sink/floor drain for easy cleaning ▪ Be locked when not in use and have restricted access to unauthorised persons ▪ Be appropriately sized ▪ Have adequate lighting and ventilation
Cleaning carts (also known as cleaning trolleys)	<p>These are used to store and transport:</p> <ul style="list-style-type: none"> ▪ Cleaning equipment and agents ▪ Soiled materials, such as laundry and linens
Surface cleaning cloths	<p>These serve as the main equipment used for cleaning. Cloth is commonly made of cotton or microfibre. Alternatives to cotton or microfibre cleaning cloths include disposable wipes saturated with an appropriate detergent or disinfectant-detergent solution.</p>
Dust control equipment	<p>Feather dusters and brooms are not recommended because these can generate and disperse dust. Vacuums fitted with high-efficiency particulate air (HEPA) filters are preferred, especially in healthcare.</p>
Mops	<ul style="list-style-type: none"> ▪ Change the mopping water and detergent solution frequently. ▪ Store mops properly to allow proper drying and prevent cross-contamination of the mop heads.

Cleaning Equipment	Description
Personal protective equipment (PPE)	<p>PPE is a piece of equipment worn to minimise exposure to potential hazards such as dangerous chemicals and blood or other body fluids.</p> <p>Domestic rubber gloves should reach at least mid-arm to protect against chemical and organic materials. These gloves are reusable. However, each must be inspected thoroughly for tears or leaks and reprocessed before reusing. When using potentially dangerous chemicals, heavy-duty rubber gloves are preferred.</p> <p>Plastic aprons should be used when performing any activity that may result in splashes.</p>

Cleaning agents are the materials you use to clean. You apply them on surfaces to remove foreign substances like dirt, oil, and on occasion, microorganisms.

Here are examples of cleaning agents:

Cleaning Agent	Description
Detergents	<p>Detergents are sometimes confused with disinfectants. But they are different products with different uses.</p> <p>Detergents are synthetic cleaning agents that break up oil, grease and dirt with water. They cannot eliminate microorganisms.</p> <p>When choosing detergents, they must be approved by the workplace and compatible with your cleaning surfaces.</p>
Disinfectant	<p>These are cleaning agents that can eliminate microorganisms that are on nonliving objects. However, they cannot remove dirt, oil, grease and dirt. They are usually applied after detergents have been used.</p> <p>When choosing disinfectants, use those which are Therapeutic Goods Administration-listed hospital-grade.</p>

In particular, chlorine-based and alcohol-based solutions are commonly used as disinfectants for cleaning equipment. You can refer to the table below for the considerations you must remember while using these disinfectants. The best practices for using them when cleaning non-critical patient care equipment are also provided.

Disinfectant	Material Compatibility Consideration	Best Practice for Cleaning Non-critical Patient Care Equipment
Chlorine or hypochlorite-based	Corrosive to metals	<ul style="list-style-type: none"> ▪ The concentration of the solution should not exceed 1000 ppm or 0.1% ▪ The equipment must be rinsed with clean water after disinfection
Alcohol (60% to 80%)	<ul style="list-style-type: none"> ▪ Could deteriorate glues ▪ Could cause damage to plastic tubing, silicone and rubber 	Good for disinfecting small equipment or devices that can be immersed (e.g. stethoscopes, thermometers)

Colour-Coding System for Cleaning Agents and Equipment

This technique helps ensure that cleaning equipment is not used in multiple areas. You do this to reduce the risk of contamination and cross-infection. For example, blue-coloured tags can be used on cleaning materials for a specific room.

Implementing this requires that the system be clear and permanent. Staff should be trained regarding the colour codes.



2.4.7 Management of Waste

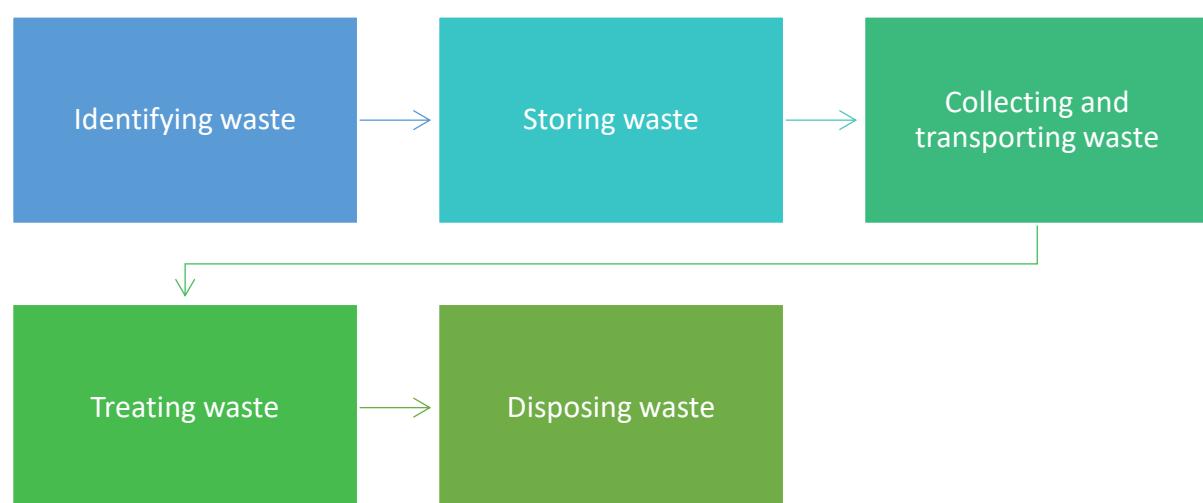
Waste refers to materials that are no longer usable and valuable. Waste can be general waste or contaminated waste.

General waste refers to waste material that has not come into contact with reservoirs of infectious agents. They include non-medical solid, liquid and hazardous wastes. The focus will be on managing contaminated or infectious waste in controlling and preventing infection.

Contaminated waste contains infectious material, blood, bodily fluids or other contaminants that can cause injury, infection or disease. These are mostly found in healthcare settings but can exist in non-healthcare settings too. For example, all workplaces will have people coughing or sneezing at some point. The used tissues to cover their mouths and noses will contain bodily fluids. These can carry pathogens. If these used tissues touch high-contact surfaces, the pathogens it carries can spread to anyone touching that surface. It also puts the people who handle waste at risk.

Managing contaminated waste is then an important part of infection prevention and control. Poor waste management could undo all your other efforts to prevent infection.

To manage waste, you need to know the following process:



Identifying Waste

General waste can be solid, liquid or hazardous waste. These types of waste are non-medical in nature. This means they have not come into contact with infectious agents. These can be segregated for reuse, recycling, treatment and disposal with little to no worry of spreading pathogens. While they have minimal risk of spreading infection, it is still important that their bins be labelled properly. Their storage space must also be different from where contaminated waste goes.

Contaminated waste, on the other hand, is different. The first step in handling them is identifying their type. This is important as waste collection, transport, storage, treatment, and disposal depend on the type of waste.

Wastes that are contaminated with infectious substances and have the chance of causing people infection are called clinical waste. The table below shows the further classification of clinical waste into various categories:

Waste	Description
Animal waste	<ul style="list-style-type: none"> ▪ Includes carcasses, body parts, blood or bedding from animals contaminated with an infectious agent ▪ Originates from research, production of biologicals (e.g. serums, vaccines, antigens), or pharmaceutical testing
Discarded sharps	<p>Refers to an object or device that has sharp points or cutting edges. Examples include used hypodermic and medical needles, scalpel blades, scissors, broken laboratory glass and other contaminated sharp-edged objects.</p>
Human tissue waste	<ul style="list-style-type: none"> ▪ Tissue, blood, blood products and other body fluids ▪ Specimens of tissue, blood, blood components and body fluids, including containers and other materials heavily contaminated with blood ▪ Discarded material such as swabs, masks, gowns, dressings or clothes that are saturated with blood or body fluids
Laboratory waste	<ul style="list-style-type: none"> ▪ Cultures and stocks of infectious agents ▪ Other devices used to transfer, inoculate, or mix cultures include flasks, vials, tubes, stirring devices, etc.

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If not disposed of correctly, contaminated waste can spread disease and infection through the following:

- Puncture, abrasion or cut
- Mucous membranes of the eyes, nose or mouth
- Inhalation
- Ingestion

Storing Contaminated Waste



Storing waste means keeping waste material in secure locations in an organised manner. Storage of contaminated waste should be done in such a way that the threat to health, safety and the environment are minimised.

Clinical waste must be stored in a container that complies with the standards. It should possess the physical characteristics below to ensure that clinical waste is stored safely and securely:

- Plastic bags must be strong enough to contain clinical waste safely.
- Plastic bags and mobile garbage bins must be colour coded according to the type of clinical waste they contain.
- Mobile garbage bins must have a smooth and impenetrable internal surface.
- Mobile garbage bins must have rigid walls that are resistant to rupture and corrosion.
- Mobile garbage bins must be washable.
- Mobile garbage bins must be leak-resistant.

Similar to clinical waste, sharps must also be placed in their designated container. This container must be compliant with the standards of AS/NZS 4261:1994 and has the following characteristics:

- It must be made of heavy-duty plastic.
- It can be closed with a tight-fitting, puncture-proof lid.
- It must be able to contain sharps so they would not be able to come out or stick out.
- It must be leak-resistant and properly labelled.

These containers are usually obtained from first aid suppliers or depot stores. Coordinate with your supervisor to know the nearest supplier where you can get sharps containers.

Storing waste can be done by observing the following:

- Ensure that the storage area:
 - Is clean, dry, well-ventilated, and free from pests and vermin
 - Has locks that can prevent access by unauthorised persons
 - Has an impermeable and hard-standing floor with good drainage
 - Has adequate water supply for easy cleaning and disinfection
 - Is easily accessible to waste collection vehicles
- Supply cleaning equipment, PPE and waste bags near the storage area.
- Treat waste mixed with infectious waste as infectious waste. Do *not* attempt to remove items from a container after disposal or place different types of waste together.
- Contain sharps in a leak and puncture-proof container.

Collecting and Transporting Waste

Waste should never be allowed to accumulate. It must be collected daily or as frequently as required.

Collecting waste refers to the process of retrieving waste material in storage. When collecting contaminated waste, you must ensure handling them properly according to the guidelines. This reduces the risk of getting infected with pathogens.





The important guidelines for handling contaminated waste include the following:

- Wear appropriate PPE when handling contaminated waste.
- Never compact plastic bags that contain contaminated waste by hand.
- Hold the items away from the body when handling contaminated waste.

It would be best if you also observed procedures for the safe handling of sharps. These objects can bring blood-borne diseases such as HIV/AIDS and Hepatitis A, B or C if they come into contact with unprotected skin. As such, unprotected hands should not be placed anywhere you cannot clearly see sharps. When you pick up waste containers, keep them away from your body.

Safe handling of sharps includes the following actions:

- Consider all found sharps objects as potentially infectious.
- Use tongs to pick up needles or syringes. Do this as well when picking up containers on the ground, especially if the contents cannot be seen (e.g. paper bags, garbage bags and containers).
- Wear gloves if tongs are not available.
- Hold the needle or syringe by the barrel.
- Handle the needle or syringe away from the fingers and body.
- Do not walk long distances while carrying sharps.

Based on "Sharps" Handling Policy, used under CC BY 4.0.

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Transporting waste means moving collected waste to and from storage. The end destination may be on-site (within the workplace) or off-site (outside the workplace).

To transport waste on-site, here are some suggestions:

- Mobile garbage bins and trolleys must have the following characteristics:
 - It can be locked, closed or covered as necessary to prevent the spill of liquids.
 - It must be dedicated only to collecting and transporting waste.
 - It must have washable and easily cleanable surfaces.
 - It must be rigid-walled (e.g. have hard and unbending sides and are resistant to breaks and splits) and puncture-proof.
- Mobile garbage bins and trolleys must be cleaned after each use.
- On-site transportation must not be done during peak activity times to minimise exposure. This means on-site transportation should happen when there are fewer people.
- Waste should not be transported through general or public areas.
- Waste chutes should not be used for transporting contaminated waste. Using waste chutes increases the risk of the bag breaking or waste spilling.

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To transport waste off-site, here are some suggestions:

- A transport company must only collect contaminated waste. The Environment Protection Authority must license the company.
- The transport vehicle should be used only for collecting and transporting contaminated waste. As much as possible, it should not be used to transport general waste to avoid cross-contamination.
- The transport vehicle should also have the following characteristics:
 - The driver area must be separated from the transport area to prevent exposure to waste.
 - The transport vehicle must be easy to load and clean.
 - The vehicle must have the means to secure containers to prevent them from moving or falling while moving.

Compaction of Contaminated Waste

Compaction is an automated, enclosed process. It involves using pressure to reduce the volume of waste before it is taken to a treatment or disposal facility. This process does not apply to sharps, human and animal body parts, chemical waste, cytotoxic and radioactive waste.

When undertaking compaction, a suitable compaction unit must be used. A unit for general waste is not suitable for contaminated waste.



Treating Waste

Treatment refers to the methods to make contaminated waste non-infectious or unrecognisable. It is done before disposing of waste in a landfill.

The common treatment methods for contaminated waste in Australia include the following:

Incineration

- Involves the use of high temperature

Autoclave or steam sterilisation

- Uses a combination of time, temperature and pressure
- Does not make waste unrecognisable
- Used together with a shredding process

Chemical disinfection using sodium hypochlorite

- Involves soaking waste in disinfectant liquid for around 15 minutes before being shredded

Chemical disinfection using hydrogen peroxide

- Involves spraying waste with disinfectant while shredding

Microwave disinfection

- Involves the use of pre-heated steam and microwave radiation

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The table below shows recommended treatment methods for common clinical wastes:

Clinical Waste	Treatment Method
Human tissue	Incineration
Contaminated sharps	Autoclave or steam sterilisation
Recognisable anatomical body parts	Incineration

Disposing of Waste



Disposing of waste is the process of getting rid of it by reusing, recycling, burying, or storing it in landfills. Protocols for waste disposal vary depending on the type of waste. This section will discuss the methods for disposing of general and contaminated wastes and sharps.

General wastes are materials that are not recyclable or hazardous. They can be an organic matter that decomposes after some time. They can also be wastes that take a long time to degrade, like non-recyclable packaging and plastics.

Examples of items that are considered general waste include the following:

- Styrofoam cups
- Styrofoam containers
- Pens
- Pencils
- Tissues, napkins and paper towels
- Disposable utensils
- Disposable straws
- Food waste
- Plastic bags, packaging and wrappers
- Disposable coffee cups

General waste items are disposed of in dark green wheelie bins with red lids. Although they are separated from contaminated waste, it is best to wear protective equipment like gloves when disposing of them. This protects you from the dirt and microorganisms in the waste, especially when handling organic matter. Ensure that the containers are tightly sealed and without leaks before they get collected.

Once waste collectors pick them up, general wastes are compacted before getting deposited in landfills and buried under the ground. They can also be incinerated and used as alternative energy sources.

On the other hand, clinical wastes contain harmful substances which can harm people and the environment. As such, proper disposal of this kind of waste must be strictly followed.

The two common methods of disposing of contaminated waste are:

Landfill disposal for treated contaminated

- This should not be undertaken for chemical, cytotoxic, pharmaceutical, and radioactive waste as well as human body parts.
- This applies to treated contaminated waste.

Supervised burial for untreated contaminated waste

- This must be done under the supervision of a local government representative.
- The waste should be covered immediately.
- This applies to untreated contaminated waste.

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Further Reading



The link below leads to the description of general waste on the Environmental Protection Agency of South Australia website. The page also contains suggestions on how to dispose of general waste:

[Waste disposal](#)

You must also follow the proper way of disposing of sharps.

Remember to keep the pointed end of the sharps away from the body when discarding sharps like needles or syringes. Drop them inside the sharps container and close them afterwards.

The things that must be avoided when handling needles and syringes include the following:

- Re-capping or bending used needles
- Removing the needle from the syringe because the needles could fall, fly off or get lost
- Placing them in areas that children can reach
- Throwing them in the general trash or putting them in the recycle bin

Once the sharps container is full, seal it and dispose of it at the proper sharps disposal bin. You can also contact your local council or health department to know the appropriate ways of disposing of the sharps container.

2.4.8 Relevant State/Territory Legislation

Contaminated waste must be handled, stored, transported and disposed of or treated following the legislation of your state/territory. The table below shows some relevant legislation in each state/territory.

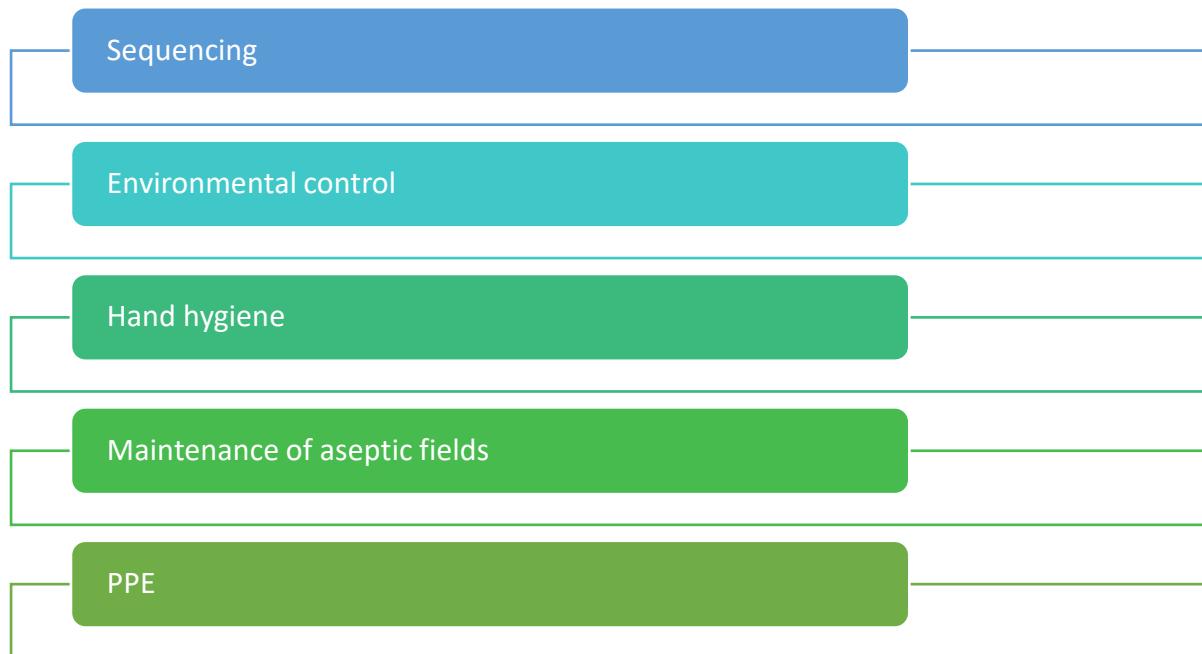
Note that the list does not show all applicable legislation. It is still best to consult with local authorities and your healthcare facility to know which legislation you should follow.

State/Territory	Waste Disposal Legislation
Australian Capital Territory	Clinical Waste Act 1990 Waste Management and Resource Recovery Act 2016
New South Wales	Protection of the Environment Operations Act 1997 No 156 Protection of the Environment Operations (Waste) Regulation 2014
Northern Territory	Waste Management and Pollution Control Act 1998
Queensland	Environmental Protection Regulation 2019
South Australia	Environment Protection Act 1993
Tasmania	Environmental Management and Pollution Control (Waste Management) Regulations 2020
Victoria	Environment Protection Act 2017
Western Australia	The Environment Protection (Controlled Waste) Regulations 2004

2.4.9 Aseptic Technique

Much like other standard precautions, the aseptic technique aims to minimise contamination. It is made up of practices and stricter rules to prevent infection. The goal is a state of asepsis. *Asepsis* is the state where one is free from infection or infectious material. This technique is usually applied to healthcare environments. However, some of its principles may be useful in other work environments.

The Australian Guidelines for the Prevention and Control of Infection in Healthcare identifies five essential principles for the aseptic technique:



- **Sequencing**

The aseptic technique requires analysis of procedures or work tasks with infection risks. This process of analysis follows this sequence:

1. Performing a risk assessment
2. Pre-procedure preparation
3. Performing the procedure
4. Post-procedure practices, handover and documentation

- **Environmental control**

Prior to aseptic procedures, workers must ensure there are no avoidable nearby environmental risk factors. Environmental risk factors are people or objects that could carry infectious agents that are not related to the work task.

- **Hand hygiene**

Perform hand hygiene before and after a procedure or exposure to body fluids. Refer to Subchapter 2.2 for more information on hand hygiene.

- **Maintenance of aseptic fields**

Aseptic fields are areas or spaces which have been cleaned and sterilised. The following practices help keep these spaces aseptic:

- **Cleaning and/or disinfection of equipment and person before the procedure(s)**

All materials and equipment must be cleaned before use. The same thing is required from a person before they undergo a procedure. You can also apply a skin or surface disinfectant after cleaning to meet the standards of asepsis.

- **Establishing an aseptic field**

An aseptic field is covered with sterile drapes. It can only be accessed by people who conducted proper aseptic techniques. In addition, sterile instruments must be placed in a sterile stand.

Only healthcare workers who perform asepsis are allowed to use sterile equipment. Keep in mind that only sterile equipment can be used in a person. If you have doubts about the sterility of equipment, do not risk using it.

- **Maintaining the aseptic field, including protecting the key sites and key parts**

To maintain the condition of an aseptic field, it is best only to allow a limited number of people to enter it. This lessens the probability of contamination. There must also be proper ventilation and safety signs in this area.

- **Using non-touch technique**

The non-touch technique avoids touching a person's wound or body part where cross-contamination is possible. However, if the procedure requires it, you must use sterilised gloves.

- **PPE**

Select and use sterile and non-sterile PPE in appropriate situations. The general selection of PPE is discussed in Subchapter 2.3.

Based on material provided by the National Health and Medical Research Council. Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019), used under CC BY 4.0.





The *Principles of aseptic technique: Information for healthcare workers* outlines the relevance of hand hygiene and PPE in performing this procedure.

The table below shows an example of how the principles of asepsis can be applied to a specific job role. It is written from the perspective of a support worker.

Your Job Role:	Support worker
Principle of Asepsis	Relevance of the Principle to the Job Role
Hand hygiene	Hand washing must be done regularly. The five moments of hand hygiene and correct hand washing procedures must also be followed. Doing so reduces the risk of disease transmission and the spread of infection in the workplace. This ensures that clients in my care remain healthy and well.
Personal protective equipment (PPE)	PPE must be worn during certain procedures or interactions to protect my client and me from transmissible diseases. PPEs worn must correspond to the situation, e.g. protective eyewear must be worn when there is a risk of splattering blood or bodily fluids. PPEs must also be worn and removed in the correct order and then disposed of accordingly.

Further Reading



Access the *Principles of aseptic technique: Information for healthcare workers* through the link below to learn more:

[Principles of aseptic technique: Information for healthcare workers](#)

Checkpoint! Let's Review



1. Reprocessing reusable equipment or instruments refers to a series of steps that aim to render equipment and instruments suitable for reuse.
2. Cleaning equipment refers to the tools you use to clean. These allow you to apply cleaning agents.
3. Waste refers to materials that are no longer usable and valuable.
4. Contaminated waste must be handled, stored, transported, and disposed of or treated following the legislation of your state/territory.
5. Asepsis is the state where one is free from infection or infectious material.



2.5 Respond Using Transmission-Based Precautions or Enhanced Cleaning

The processes discussed in Subchapter 2.1 until Subchapter 2.4 all fall under standard precautions. Recall that standard precautions are measures taken regardless of infection status. These are practices that are done at the minimum. However, additional precautions must be implemented if there is a confirmed or suspected infection outbreak.

Two of these additional precautions are:

Enhanced cleaning

Transmission-based precautions

- **Enhanced cleaning**

This refers to cleaning procedures applied on targeted high-contact areas. It uses the same cleaning procedures discussed in Subchapter 2.4 but is done more frequently.

Enhanced cleaning is different from normal routine cleaning. Enhanced cleaning involves cleaning and disinfecting high-traffic areas and shared items at least two to three times daily. Meanwhile, normal routine cleaning involves cleaning and disinfecting areas regularly (e.g. once a week).

- **Transmission-based precautions**

These are additional precautions implemented with existing standard precautions. These precautions aim to limit the means of transmission of infectious agents. These measures are classified according to which means of transmission it limits.

Enhanced cleaning and transmission-based precautions are used in addition to standard precautions. These additional measures are usually taken when the risk of infection spreading is high. Note that enhanced cleaning is also a measure taken when implementing transmission-based precautions.

2.5.1 Identifying Situations Where Additional Precaution Is Required

This refers to the process of determining if the infection risk is high enough that additional precautions are needed.

To identify situations where additional precaution is required, here are some suggestions:

- **Monitor signs of possible infection outbreaks**

Additional precautions are usually applied when there is a suspected or confirmed infection outbreak. Outbreaks occur when the infection rate at a certain time and location increases quickly.

The best way to confirm this is through reliable news sources like government websites. Additional precautions should be taken when there is a warning for infection outbreaks.

When there are no official warnings of outbreaks, the workplace can note how many people are calling in sick and their reasons. Investigating this should help the workplace prepare for the possibility of infection spreading. It may not be a national or global infection outbreak. However, it may still be an outbreak localised to your work environment. It would be wise to implement additional precautions in that scenario. For example, suppose several people have already called in sick due to colds. In that case, you should consider increasing the frequency of cleaning and disinfecting the work environment.

- **Watch for the common symptoms of infection**

Symptoms of infection usually differ from one disease to another. However, you can look out for the common ones. For example, you could watch for people coughing, sneezing or showing signs of fever. Recall that infectious agents usually take routes via contact, air, droplets or a combination of routes to move from one person to another. Constant coughing and sneezing could be a sign to take additional precautions to ensure that the means of transmission for infection is limited.



Once you notice that many people are getting sick or showing symptoms of sickness, it might be a sign that additional precautions are necessary. The next section will discuss how you can respond to these situations.

2.5.2 Responding to Situations Where Additional Precaution Is Required

This process means taking the appropriate action in response to suspected or confirmed infection outbreaks. These responses could lean towards a combination of enhanced cleaning and transmission-based precautions.

Increasing the frequency of cleaning procedures to match the level of risk for infection is an example of a response under enhanced cleaning. This may be done as part of transmission-based precautions.

Responding by applying transmission-based precautions means creating measures to limit the means of transmission of infectious agents. This is done when you have a suspected or confirmed case of infection. A suspected or confirmed infection means that the person infected would have been in the work environment. People, objects and surfaces would have likely been in contact with that person.

To prevent the spread of infection, you need to know the different types of transmission-based precautions to implement.

Transmission-based precautions according to the routes of transmission are as follows:

Contact precautions

Droplet precautions

Airborne precautions

Contact Precautions

Contact precautions are applied when there is a direct or indirect contact transmission risk.

Contact transmission happens when people can come into contact with a contaminated object or person infected. There are two types of contact transmission:

- **Indirect transmission**

This happens when an infectious agent is transferred from a contaminated intermediate object or person to a susceptible host.

It starts when a person infected, Person A, comes into contact with an object or another person, Person B. Upon making contact, infectious agents move from Person A to the object or Person B. Indirect transmission happens when someone else comes into contact with Person B or the contaminated object and gets infected.

For example, a person suffering from influenza may cough and sneeze into their hands. The influenza pathogens may cling to the pen's surface when they touch a pen. If you then borrow a pen and they lend it to you, there is a good chance that the influenza pathogen gets indirectly transmitted to you.

- **Direct transmission**

This happens when an infectious agent is transferred without a contaminated intermediate object or person. This can occur when an infected person's blood or other body fluids come into contact with a susceptible host's mucous membrane or non-intact skin.

In the previous example, the pen is taken out of the equation. The person with influenza pathogens may chat and laugh with you. If sputum accidentally makes contact with you, the pathogens are transmitted directly to you.

To limit direct and indirect transmissions, here are some examples of contact precautions:

Contact Precaution	Description
Limiting the number of people in a space	<p>This depends on how busy your workplace is. The more people in a space, the higher chances for physical contact. This, in turn, increases the risk of contact transmission.</p> <p>One way to prevent this is to limit the number of people allowed in a space at work. Government or health organisations usually offer recommendations about maximum capacity for places in times of suspected or confirmed infection outbreaks.</p>
Assigning equipment and materials exclusive to a person	<p>This limits the possibility of indirect transmission because no other person comes into contact with another person's equipment and materials.</p>
Using appropriate personal protective equipment (PPEs)	<p>Personal protective equipment helps you avoid contact transmissions by creating a layer that prevents direct contact with contaminated surfaces. Refer to Subchapter 2.3 for more information on using PPE.</p>

Contact Precaution	Description
Minimising the number of times people have to move to different locations	Consider the routes people take to get from one place to another in a workplace. When transmission-based precautions are needed, consider modifying and optimising the routes. Do this so that one person does not have to come into contact with more places than they need to.

Droplet Precautions

Droplet transmission occurs through the droplets produced when a person infected coughs, sneezes, or talks. These droplets can cause infection when they enter directly on the mucosal surfaces (e.g. nose, mouth, or eyes) of a susceptible host.

Droplet precautions are applied when there is a risk of droplet transmission. These precautions reduce infections transmitted via respiratory droplets. Transmission through droplets requires close contact since, unlike aerosols, droplets cannot travel far.

To limit droplet transmissions, here are some examples of droplet precautions:

Droplet Precaution	Description
Using appropriate personal protective equipment (PPEs)	Personal protective equipment helps you avoid droplet transmissions by creating a layer that prevents direct contact with contaminated surfaces. Refer to Subchapter 2.3 for more information on using PPE.
Minimising close contact between people at work	Because droplets require close contact, creating space between individuals helps minimise transmission via droplets. This can be done by setting social distancing policies in the workplace. Like contact transmissions, limiting the number of people allowed in a workplace helps maintain distance between people at work.
Apply enhanced cleaning to high-contact areas	Make sure to clean and disinfect the areas in which a person infected has been. Using detergent and the appropriate disinfectant could remove the pathogen-carrying droplets from surfaces.

Airborne Precautions

Airborne precautions are applied when there is a risk of airborne transmission.

Airborne transmission involves aerosols produced when an infected person coughs, sneezes or talks. Aerosols are liquid or solid particles suspended in the air. Due to their small size, aerosols overcome gravity, allowing them to stay suspended in the air for long periods. They can disperse over long distances and be inhaled by a susceptible host.

When another person inhales these infectious particles, they are at risk of becoming infected. Airborne transmission can occur in the same or different rooms, depending on the air current.

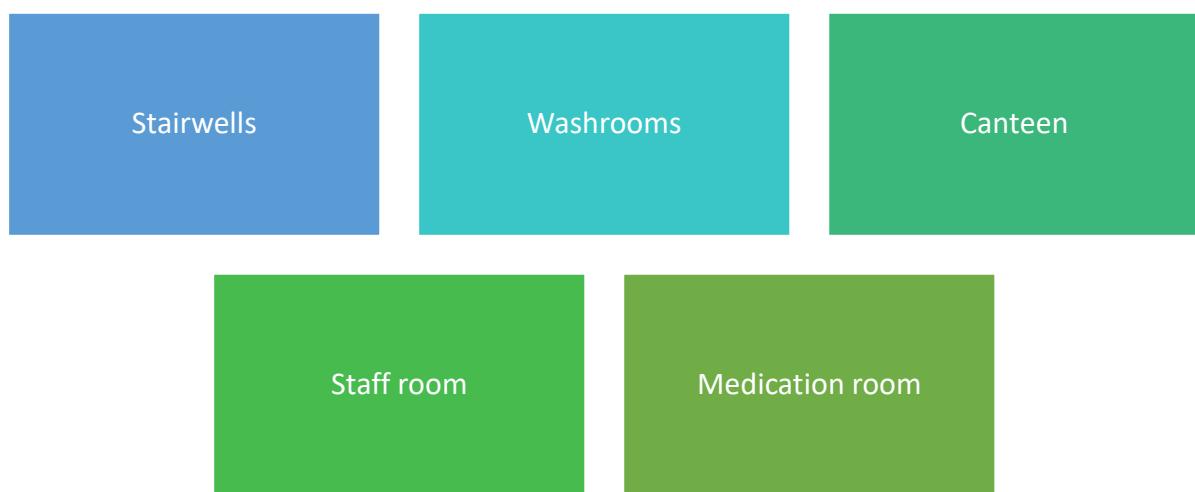
Based on material provided by the National Health and Medical Research Council. Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019), used under CC BY 4.0.

Airborne precautions require planning for the risk of people breathing in the pathogens in the air. The main method for limiting airborne transmissions is the proper use of PPE. Review the discussion in Section 2.3.2 about P2 respirators. Proper PPE for persons infected is also important to limit the release of aerosols carrying pathogens.

2.5.3 Identifying Situations Where Enhanced Cleaning Is Required

As mentioned in the opener of this subchapter, enhanced cleaning involves standard cleaning procedures but is done more frequently. This is carried out in areas where many people go due to the high risk of transmission of pathogens.

Areas that have high risks of contamination include the following:



These areas require enhanced cleaning due to the reasons below:

- Places like break rooms and reception areas require enhanced cleaning because the staff and visitors frequently visit. Interactions among large groups of people can be a source of infection outbreaks if IPC controls are not strictly implemented.
- Places like restrooms and kitchen areas are breeding grounds for microorganisms. A lot of people use toilets and urinals every day. Hands from many people open and close doors. Raw foods are placed on tabletops in the kitchen. Hence, the transmission of viruses, bacteria, fungi and parasites will most likely happen in these areas.
- Places like treatment areas might not host many people, but these are where sick people are treated. They have a high risk of contamination, especially if a person has a contagious disease.

High-touch surfaces or frequently touched items in public or shared areas also require enhanced cleaning. This includes the following:

Doorknobs or doorhandles	Elevator buttons	Handrails	Faucet handles
Sinks	Toilet flush handles	Touch screens	Counters
Communal tables	Light switches		Cabinet handles

Enhanced cleaning is performed when any of the following instances occur in the workplace:

- When there are individuals infected with organisms that can persist for a prolonged time within the environment and which may be relatively resistant to standard disinfectants
- When microorganisms that pose an extreme risk to individuals are present
- When there is a disease outbreak and the environment may be contaminated

Enhanced cleaning ensures that high-touch items and high-traffic areas which may serve as vehicles for disease transmission are frequently disinfected, which reduces the likelihood of the disease spreading.

2.5.4 Responding to Situations Where Enhanced Cleaning Is Required

Identified cases that require enhanced cleaning must be responded to as soon as possible. Be familiar with your organisation's policies and procedures relevant to enhanced cleaning, such as the following:

- **Required tasks for enhanced cleaning**

This refers to the scope and process for carrying out cleaning and disinfection. IPC's policies and procedures enumerate protocols for enhanced surfaces and equipment cleaning.

- **Schedule of enhanced cleaning**

This refers to the time when enhanced cleaning must be done. For example, enhanced cleaning must be done before your workplace opens at 8 am.

- **Frequency of enhanced cleaning**

This refers to how often enhanced cleaning must be done. Areas that are less frequented and have a low risk of contamination are cleaned once daily. However, this must be done more than once for areas with high-touch surfaces and when they are already visibly dirty. *Multiple people often touch high-touch surfaces*, like doorknobs, handrails and faucets.



- **Spaces that require cleaning and disinfection**

These are places that must be routinely cleaned to prevent infection.

- **Roles and responsibilities of people in enhanced cleaning**

Remember that enhanced cleaning is not only assigned to designated staff (i.e. custodial services). Even regular users play a vital role in maintaining cleanliness in the workplace.

Determine if you are assigned to clean a particular area and ask your supervisor about the scope of your roles and responsibilities. If this is not the case, then be familiar with the roles and responsibilities of a regular user. This includes basic etiquette, like cleaning the area after using it. You may also be mandated to report to the authority if you encounter any infection-related incident.

Aside from browsing your organisation's policies and procedures, you can directly ask your supervisor about the enhanced cleaning protocols. They may have a document about it that they can share with you. In addition, there are often posters and signs in the workplace that include details about cleaning and disinfecting areas.

Checkpoint! Let's Review



1. Enhanced cleaning refers to cleaning procedures applied more frequently on targeted high-contact areas.
2. Transmission-based precautions are additional precautions implemented with existing standard precautions.
3. Additional precautions are usually taken when the risk of infection spreading is high.
4. Contact precautions are applied when there is a direct or indirect contact transmission risk.
5. Droplet precautions are applied when there is a risk of droplet transmission.
6. Airborne precautions are applied when there is a risk of airborne transmission.



Learning Activity for Chapter 2

Well done completing this chapter. You may now proceed to your **Learning Activity Booklet** (provided along with this Learner Guide) and complete the learning activities associated with this chapter.

Please coordinate with your trainer/training organisation for additional instructions and guidance in completing these practical activities.

III. Respond to Potential and Actual Exposure to Infection Risks Within Scope of Own Role



The previous chapter discussed the standard and transmission-based precautions you must follow at work. Doing so ensures that you do your part to minimise the risk of spreading infection. However, there will be situations when you may still be exposed to infection risks.

This chapter will explore how you can respond to potential and actual exposure to infection risks. This usually happens when there is a breach in infection prevention and control protocols.

In this chapter, you will learn how to:

- Identify, respond to and communicate risk or breach in infection control
- Manage risks according to relevant guidelines
- Report to and consult with relevant authorities about breaches in infection control and risk management
- Minimise contamination of people, materials and equipment
- Manage spills and exposure to blood or body fluids
- Document and report incidents and responses
- Store records, materials and equipment in the designated area

3.1 Identify, Respond to and Communicate Risk or Breach in Infection Control

Infection control refers to the organisation's policies and procedures to minimise the risk of spreading suspected or confirmed infection. An example is a policy requiring anyone entering the workplace to undergo a temperature check.

Infection controls differ depending on the hazards and risks identified in a workplace. Recall that hazards and risks are usually associated with the job task and work environment. This means some infection controls may apply in a workplace, and others may not.

Another term that relates to infection control is 'control measures'. Review Subchapter 1.4 for further discussion of control measures and how they are identified and selected. Infection controls are made to be strictly followed in the workplace. However, there are instances when various factors negatively affect or violate these controls. These instances can be any of the following conditions:

Condition	Description
The potential risk of infection control	<p>This refers to the <i>perceived</i> likelihood of an infection occurring. While actual risks are due to identified hazards, potential risks are perceptions caused by spotted irregularities in infection prevention and control (IPC) procedures.</p> <p>For example, infectious wastes are properly segregated in appropriate bins. However, you noticed that the lid of one bin is not tightly secured. This makes you perceive a potential risk of infection control.</p>
The actual risk of infection control	<p>This refers to the likelihood of infection occurring due to existing infection hazards.</p> <p>For example, improper disposal of sharps like needles can lead to the risk of exposure to infectious agents like blood and body fluids.</p>
A breach in infection control	<p>This happens when someone (intentionally or accidentally) does not follow the set policies and procedures.</p> <p>For example, an actual breach in infection control is someone managing to enter the workplace without getting their temperature checked.</p>

This subchapter will focus on how you can identify, respond to and communicate any of the conditions above.

3.1.1 Identify Potential or Actual Risk of Infection Control

To identify potential or actual risks in infection control, ask yourself the following questions:

How are the people informed about the infection control policies and procedures?

How are the infection control policies and procedures enforced?

- **How are the people informed about the infection control policies and procedures?**

You must review how the organisation informs people about infection control policies and procedures. Making sure that people are informed affects the likelihood of a risk occurring. It is more likely for a person to break a rule if they do not know there is one.

- **How are the infection control policies and procedures enforced?**

Review how the organisation plans to enforce the infection control policies and procedures. Will there be an assigned person? Potential and actual risks of infection control significantly decrease if there are people who enforce IPC protocols.

3.1.2 Identify Breach in Infection Control

A breach in infection control refers to the failure to follow procedures in preventing or reducing the transmission of pathogens.

When identifying the breach, you must have complete information about the following:

- **Nature of the breach**

Determine which particular IPC protocol has been breached. Assess the extent of damage or severity of the breach's consequence.

- **Type of procedure**

Identify which practices may have led to the occurrence of the breach. You can review records of IPC procedures to know which practices failed to comply with the standards.

- **Biological substances involved**

Determine what type of infectious agents the people involved were exposed to. Their body parts that came into contact with the contaminated equipment or material must also be identified.

3.1.3 Respond to Potential or Actual Risk of Infection Control

To respond means to take verbal or nonverbal action based on events or circumstances. In this section, you will read about responding to or taking action against potential or actual risks in infection control.

Responding to a Risk of or Potential Breach in Infection Control

Responding to a risk of or potential breach in infection control means taking action to minimise the likelihood of a potential or actual risk in infection control. Below are steps that can help you in performing this task:

Determine the identified risk's likelihood of occurrence.

Determine the identified risk's severity of consequence.

Use a risk analysis matrix.

Select the control measures to minimise identified risks.

1. Determine the identified risk's likelihood of occurrence.

The first step is determining the likelihood of occurrence of a potential or actual risk in infection control. You can do this by visualising or considering the harm identified hazards may bring.

For example, a policy requires everyone to throw infectious waste at a specified bin. All bins have the same shade of green, but a sign is attached to each bin's front to indicate where to throw waste. A risk may arise if people are unfamiliar with the sign or cannot recognise it immediately. They may throw infectious waste in inappropriate bins instead.

2. Determine the identified risk's severity of consequence.

Ask yourself how much harm the risks will bring. Will it lead to death, serious injuries, illness, or only minor injuries? You can then rate the severity according to the commonly used severity classification mentioned in Section 1.4.2. Your workplace can decide how to classify the severity of consequences.

3. Use a risk analysis matrix.

The risk analysis matrix is a tool to help you determine the high or low risk of a breach in infection control. Section 1.4.3 discusses this in depth. A key thing you want to note is that high likelihood and severity levels mean high risk. This, in turn, leads to more targeted, strict, and possibly complex control measures to minimise the risk.



Using information from the previous example in steps 1 and 2, you should know how likely the breach in infection control happens and how severe its effects may be. People mixing up the bins for infectious and general waste is highly likely because the colours of the bins are similar, and potentially severe life-threatening diseases might become a threat.

Referring to the risk analysis matrix in Section 1.4.3:

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
	1	2	3	4	5
A (Almost certain)	Moderate	High	High	Very high	Very high
B (Likely)	Moderate	Moderate	High	High	Very high
C (Possible)	Low	Moderate	Moderate	High	High
D (Unlikely)	Low	Low	Moderate	Moderate	High
E (Rare)	Low	Low	Low	Moderate	Moderate

You could now claim that the risk of people mixing up the bins for infectious and general waste is *very high*. This is because this breach in infection control is highly likely and potentially severe. This can now guide the next step, which involves developing control measures to minimise this risk.

4. Select the control measures to minimise identified risks.

Selecting control measures to minimise the identified risk of a breach in infection control means choosing what actions or steps you will take to prevent or minimise the effects of a breach in infection control. Section 1.4.4 shows how you identify risk control measures using the hierarchy of controls. This helps streamline how you come up with control measures. Because there is a hierarchy, the control measures you come up with must start with the most effective to the least effective. Section 1.4.4 also describes how you can identify and then choose risk control measures.

The learner guide will apply it to the previous example to demonstrate the process in action. In the last step, the risk of people mixing up bins for infectious waste with general waste was tagged as *very high*. This risk level is justified because of the following:

- It can happen in a work environment where everyone is busy.
- People can easily overlook the bin labels and not notice the difference because of the similar shade of green used.
- If the disease caused by the pathogen is life-threatening, then the consequences are catastrophic.

Given this information, you can now start thinking of ways to prevent it from happening. Ask yourself if mixing infectious waste with general waste can be avoided in the first place. In this scenario, the bin colours seem like a big problem. If the bins were colour-coded, it would be easier for people to identify them.



3.1.4 Respond to Breach in Infection Control

Similar to the previous section, responding to a breach in infection control means addressing a situation where an infection control policy was not followed. In the circumstances like this, you need to start dealing with the consequences of the breach in infection control.

To respond to actual breaches in infection control, you can follow the suggested actions below:

- **Gather additional data.**

You will need additional data to help you decide on the proper response for the breach. This refers to the following:

Instruments used in the practice that was identified as a breach

People who performed the practice that was identified as a breach

Dates when the practice was identified as a breach, were performed

Anecdotal records from staff about the breach

Depending on the data you gathered, decide whether the breach warrants additional laboratory investigation.

- **Implement IPC procedures relevant to cleaning and disinfection.**

Immediately put barriers surrounding the contaminated area to prevent the further spreading of the infectious agents. Use the materials and equipment required to manage the breach based on IPC procedures. Perform enhanced cleaning and disinfection to sanitise the area.

- **Assess the condition of the people involved.**

Ask yourself, ‘Have the people affected by the contamination undergone a series of tests to check their health conditions?’ If necessary, require them to self-isolate and monitor their condition under a certain period. Those who start to exhibit infection symptoms must be treated accordingly.

- **Implement measures to prevent the occurrence of future breaches**

Nobody wants a breach to happen again. Once you have identified the areas and people affected by the breach in infection control, you can think of measures to prevent it from happening again.

Look back at all the factors that contributed to the breach and develop a plan to prevent its recurrence. Ensure that control measures will be strictly enforced.

3.1.5 Communicate Potential or Actual Risk in Infection Control

It is good practice to brainstorm scenarios like this in the form of a discussion among people in the workplace. This way, different analyses and scenarios can be considered when deciding how to assign the likelihood of occurrence for a breach in infection control.

Communication can be done simply by informing people in the workplace about the risk for potential and actual risks of infection control. Bringing up the concern will alert the designated people in your workplace to act immediately.

For example, you can bring up a risk you noticed when you cross paths with a relevant authority in the hallway. This is usually best when the risk must be urgently addressed. It may be better to wait for formal settings like meetings or announcements for low-level risks. Communicating via email may also be better. This way, the communicated risk is recorded and easier for the relevant authority to review. This avoids issues where the concern you bring up gets forgotten.

Communication is also vital in determining the appropriate control measures to address the risk. Follow your policies and procedures when you talk to your colleagues in the workplace to brainstorm on this matter. This aims to choose the best control measure option. It must be under a high level of hierarchy control while reasonably practicable.

3.1.6 Communicate Breach in Infection Control

Communicating a breach in infection control refers to notifying relevant people about the situation.

These may include the following:

Infection control professionals

Risk management

Local and state health departments

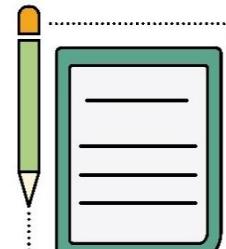
Affected healthcare providers

Relevant licensing or regulatory agencies

Review your organisation's policy when sharing information with the personnel above. They may also require you to provide an overview of the incident or fill out a report document. You may ask for help from your supervisor if they ask questions you are unfamiliar with.

In addition, the infection control breach must also be communicated to the public. Ensure that the privacy of the people involved in the incident is respected. Informing the public can be done by providing an overview of what happened. This will be followed by the control measures that must be observed to address the breach.

These details can be printed on posters and placed in various areas in the workplace. They can also be posted on official communication channels.



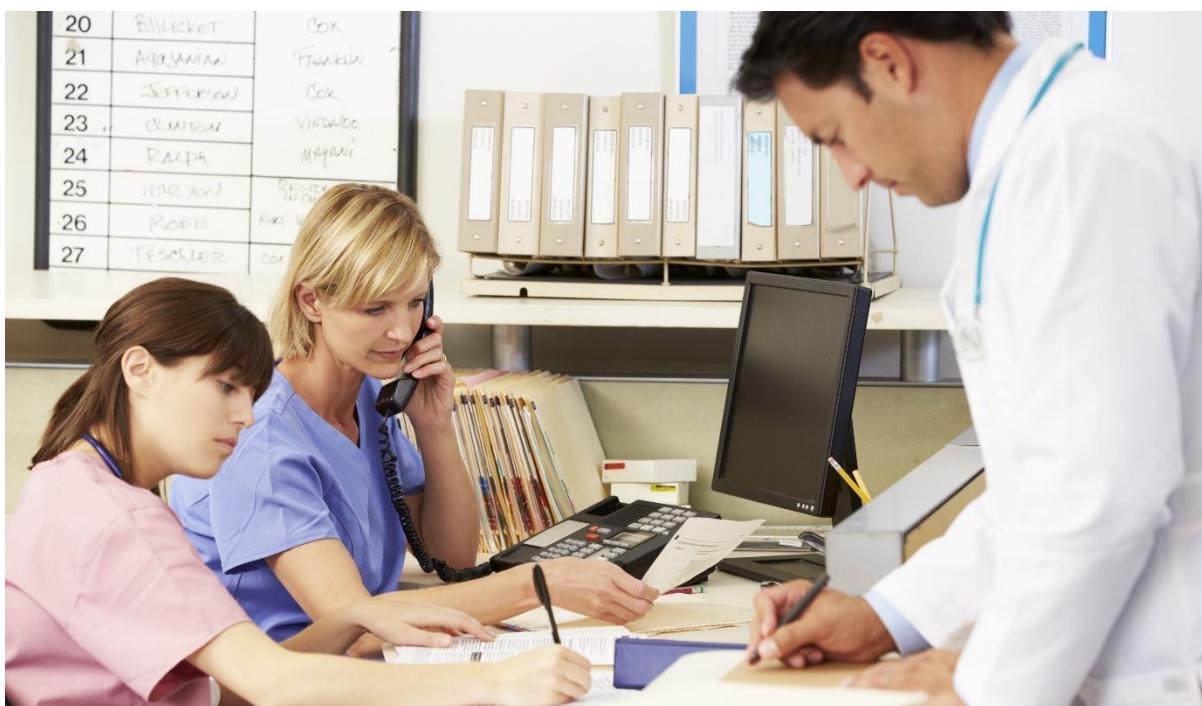
PROCEDURE



Checkpoint! Let's Review

1. In identifying potential or actual risks in infection control, you must be aware of how familiar people with the IPC in the workplace are. Determine the enforced IPC protocols to know which are not strictly followed.
2. Identifying breaches in infection control means knowing about the nature of the breach, the type of procedures and the people involved.
3. Responding to potential or actual risks in infection control involves risk analysis and implementation of control measures.
4. Responding to a breach in infection control deals with immediately securing the contaminated area and performing appropriate cleaning and sanitation procedures.
5. Communicating a potential or actual risk in infection control refers to informing your colleagues about existing infection risks in the workplace. It also involves brainstorming with others to develop the best control measures.
6. Communicating a breach of infection control means notifying relevant stakeholders and the public about the incident.

3.2 Manage Risks According to Relevant Guidelines



Reports of risk of or actual breach of infection must be acted upon immediately. These reports must be taken seriously since the infection might harm a single employee and spread to other workers. Your organisation conducts risk assessments and risk control procedures to prevent such an event. These processes are done according to your organisation's policies and procedures and the government's standards.

Assessing Risks According to Industry and Organisational Guidelines

You are already familiar with the general risk assessment procedures mentioned in Subchapters 1.4 and 3.1. Risk assessment involves identifying the likelihood of a risk causing harm to the employees.

The risk assessment can be done in various ways depending on the hazard you identified and the information and resources you gathered. You can discuss it with your colleagues or use risk assessment tools and techniques. When you identify several workplace risks, you may even consult a specialist when conducting a risk assessment.

Risk assessment procedures must be in line with the guidelines set by the industry. These guidelines refer to the following:

The current legislation requiring a hazard or risk to be controlled in a specific way

A code of practice that details a way of controlling a hazard or risk that applies to your situation

The well-known and effective control measures in your industry that are suitable to your workplace conditions

Ensure you conduct the following processes involved in risk assessment within industrial guidelines:

- Identification of the severity of harm caused by infection hazards
- Evaluation of the effectiveness of existing control measures in addressing risks
- Identification of the likelihood of harm occurring

Similarly, your organisation has its own policies and procedures relevant to risk assessment that applies to the following actions:

- The sharing of information with the staff in charge of infection control in your workplace
- The sequence of steps in conducting a risk assessment
- The documentation of files relevant to risk assessment

Be familiar with your organisation's guidelines to properly address the risk of or actual breach of infection control. This ensures that you follow the proper escalation of concerns to safety without bypassing authorities. It also ensures that you are not violating any policy when acting on the identified workplace risks.



Further Reading

For more information on risk management, you can refer to Safe Work Australia's step-by-step process for managing risks in the workplace:

[Identify, assess and control hazards](#)

Taking Immediate Action According to Industry and Organisational Guidelines

Immediate action refers to the risk control measures previously mentioned in Section 1.4.4 to address an identified risk. It can be any of the following actions:

- Eliminating risks
- Reducing risks by substitution, isolation or engineering protocols
- Reducing risks through administrative protocols
- Reducing risks through PPE



You can consider the following tips to help you decide on which control measure is suitable to address the identified risk:

- **Look for information about suitable controls.**

You can look for available information about control measures for common hazards and risks from the following:

- Codes of practice and equipment or material manual
- Manufacturers and suppliers of equipment and materials used in your workplace
- Relevant industry associations or unions

The sources above can have recommendations on controlling risks that you can adapt or modify depending on your situation.

- **Refer to the findings in your risk assessment.**

Suppose the recommended control measures do not fit the risk identified. In that case, you may have to develop your own control measure. To do this, you must refer to the results of your risk assessment. Choose a control option that will:

- Give the highest level of protection for people
- Suit your workplace conditions, process and staff
- Address the risk without introducing a new hazard to the workplace

- **Consider the cost of the control measure.**

Costs in terms of money, time and effort allotted for the control measure must also be considered. Although eliminating the risk is the best control, you can explore less expensive and practical options, especially if the risk is of a low level.

Effective infection prevention and control requires everyone working in an organisation to be responsible for providing a safe environment for everyone.

The Australian Guidelines provide the standards for risk management processes in various workplaces. This includes the following:

Organisational support for risk management

- The workplace must have a system to manage infection prevention and control with the help of professional advise.
- The workplace must provide support, training and resources for staff in charge of infection prevention and control.
- The workplace must implement a risk register.
- The workplace must provide a risk treatment schedule and integrated action plans.

Effective communication

- The staff in charge of infection prevention and control must collaborate to effect change and achieve the best possible outcomes.
- The staff in charge of infection prevention and control must provide information to employees and other stakeholders to minimise the risks.
- The staff in charge of infection prevention and control must establish and evaluate periodic goals of risk management.
- The staff in charge of infection prevention and control must seek feedback and make necessary adjustments on their risk management plan.

In addition, each state and territory in Australia has guidelines for controlling risks. Health departments release policies to ensure a consistent procedure for preventing, managing and controlling healthcare-associated infections. This, in turn, will help organisations by minimising the infection risks they would need to address.

Be familiar with the national infection prevention and control policies in your area. The table below contains the links for the Health departments per state and territory in Australia, where you can see these policies:

State or Territory	Infection Prevention and Control Policy
Australian Capital Territory	Infection Control
Northern Territory	NT - Standardised Infection Control and Prevention Signs - Landscape
Queensland	Infection prevention
New South Wales	Policies, Guidelines and Handbook
Victoria	Infection control guidelines
Tasmania	Infection prevention and control
Western Australia	WA Health Infection Prevention and Control Policies & Guidelines
South Australia	Healthcare associated infections

All the processes included in risk management must be done within national IPC guidelines across states and territories.

Similarly, your organisation has its own guidelines for implementing control measures. You are already familiar with the Hierarchy of Control and the process for identification of control measures in Section 1.4.4. Be familiar with your organisation's policies regarding these processes and ensure to follow them. Consult your supervisor in case there is something you do not understand.



Checkpoint! Let's Review

- Industries and organisations have their own guidelines for risk assessment and control.
- Ensure that you are familiar with the policies and procedures in your industry and organisation to conduct risk assessment and control processes within the boundaries of the policies.

3.3 Report to and Consult with Relevant Authorities About Breaches in Infection Control and Risk Management



Section 3.1.3 covers communicating any breach in infection control. This Subchapter will explore the process further. It will also discuss where you can get advice following an infection control breach.

3.3.1 Communicate any Breach in Infection Control and Risk Management Strategies to the Supervisor, Manager or Responsible Authority

The people in the workplace you will communicate with are discussed in Section 1.5. This section will focus on communicating with the following:

- **Supervisor**

They are co-workers responsible for ensuring that the goals set by the manager are met. They do this by ensuring the tasks are done properly and on time.

- **Manager**

They set team goals and oversee the team's success. Supervisors usually report to managers.

- **Responsible authority**

They are co-workers who have responsibilities related to overseeing health and safety in the workplace.

Communicating a Breach in Infection Control

Communicating a breach in infection control means informing people in the workplace that an infection control policy has been breached. As mentioned in the previous part, communicating breaches in infection control usually require contacting supervisors, managers or relevant authorities.

In general, to communicate a breach in infection control, you need to do the following:

Make a verbal report.

Make a written report.

- **Make a verbal report.**

Verbal communication is a quick way to inform a supervisor, manager or relevant authority of a breach in infection control. Organisations may have different policies and procedures about reporting or who to report to. Check your workplace's policies and procedures for information on how to contact supervisors, managers or relevant authorities in this situation.

Some workplaces may assign someone as a point of contact for reports about infection control breaches. In this circumstance, you can consider the point of contact as the relevant authority. In some situations, relaying information about the breach to someone in the area who can take immediate action may be enough as an initial response.

Regardless of the point of contact, make sure you communicate complete, accurate, and relevant information.

Here are some examples of relevant information to report:

- The infection status of the person who breached infection control
- The places they went to
- The people they interacted with

Recall that in Section 3.1.2, these pieces of information help the workplace respond to a breach in infection control.

- **Make a written report.**

In addition to the verbal report, you may also be required to document it on a specific form. Check your organisation's policies and procedures to see if there is a certain process for you to follow.

Similar to verbal reports, your written report should have complete, accurate, relevant information about the infection control breach. See Subchapters 1.6 and 3.6 for more information. Subchapter 1.6 has discussions on how to record identified risks. Subchapter 3.6 will discuss the process of documenting incidents and responses to infection breaches in more detail.

Communicating a Breach in Risk Management Strategies

The process for communicating a breach in risk management strategies is similar to the breach in infection control. You can personally discuss your concerns with your supervisor if you observe anyone who is non-compliant with the risk management protocols. You can also bring up cases where you observe any workplace condition that can increase the likelihood of harm from occurring.

In addition, you can file a written report outlining the risk-related concerns you have witnessed. Ensure to indicate in your report the answers to the following questions:

- What are the risks that you have identified in your workplace?
- When did you discover the existence of these risks?
- In which areas or locations did you discover these risks?
- Who are the staff or colleagues who contributed to these risks?
- Why do you think these risks must be addressed?



3.3.2 Seek Advice on Actions Required Following a Breach in Infection Control

Seeking advice on actions required following a breach in infection control means finding supervisors, managers or relevant authorities to get recommendations on handling a breach in infection control.

While you can refer to information about standard and transmission-based precautions to guide your response to a breach in infection control, it still helps to get advice from experts or authority figures. Relevant authorities are those with responsibilities and duties related to work health and safety. This means they would likely know more about proper responses to an infection control breach. Supervisors and managers usually know the workplace best. They would know what resources can be used and where they can be accessed. They also have the authority to instruct an entire team or workplace.



Seeking advice is a process that requires communication. The people you seek advice from would be the people you communicate with—supervisors, managers and relevant authorities.

Here are some tips that can help you in seeking advice on handling breaches in infection control and risk management:

- **Create your own suggested plan of action.**

The people you seek advise from, like your supervisor, can help you better if you have a suggested action plan to address the breach. They may offer recommendations and spot potential problems in your plan.

Coming up with your solution to the breach demonstrates your competency and ability to solve problems.

- **Choose your timing.**

Decide on the best way to seek help depending on the urgency of the situation brought by the breach. If you need an immediate response, it is better to approach or call your supervisor personally. This is usually the case for breaches in infection control.

However, seeking advice for breaches in risk management strategies can be scheduled instead. You can send the other person a chat or an email to find a time to discuss it.

- **Be specific.**

When asking for advice, you must provide complete details about the problem. Be specific in which aspect you would like to get help or seek advice on. For example, you can ask your supervisor what the procedures for handling and cleaning contaminated equipment should be.

- **Be respectful.**

Since you are talking to higher-ups, you must be formal and respectful when seeking advice. Respect is also demonstrated by being thankful for their input and providing updates if necessary. As such, you can establish good working relationships with these people.



Checkpoint! Let's Review

1. The people you communicate a breach in infection control to can be the following:
 - Supervisor
 - Manager
 - Responsible authority
2. Communicating a breach in infection control means informing people in the workplace that an infection control policy has been breached.
3. Seeking advice on actions required following a breach in infection control means finding supervisors, managers, or relevant authorities to get recommendations on handling a breach in infection control.

3.4 Minimise Contamination of People, Materials and Equipment

The previous subchapter discussed how to communicate and seek advice when there is a breach in infection control. One of the main reasons you communicate in this instance is for the workplace to devise ways to minimise the effects of the breach. By communicating and seeking advice, you begin the first step to minimising the contamination of people, materials and equipment.

This subchapter will discuss the control measures you can implement to minimise contamination of people, materials, and equipment.

3.4.1 Control Measures to Minimise Contamination of People

Control measures to minimise contamination of people are methods to lower the risk of getting infected.

Here are some examples of control measures you can take to minimise contamination of people:

Identifying clean and contaminated zones

Managing clean and contaminated zones

Placing appropriate health and safety signs

Identifying Clean and Contaminated Zones

A clear separation between the clean and contaminated zones of a workplace should be observed to prevent the accidental spread of infection.

To identify and distinguish clean and contaminated zones, you need to know what they are:

- **Clean zones**

Clean zones are not contaminated by infectious agents or their carriers (i.e. Droplets, aerosols and body fluids).

The lack of contamination could stem from two reasons:

- **Intentionally sterilised space**

There are areas in the workplace that organisations keep sterilised or free from microorganisms. You can think of them as aseptic fields, as discussed in Section 2.4.9. Examples of spaces like this are the following:

- Equipment storage
- Archives for facility records

- **Areas that have not come into contact with infectious agents**

These are the usual workplace locations that have not come into known contact with infectious agents. Standard precautions still need to be taken to ensure they stay clean.

You can identify clean zones based on the signages posted. Organisational policies and procedures or instructions may also specify where they are in your workplace.

■ **Contaminated zones**

Contaminated zones are designated areas contaminated with aerosols, splatter, and droplets of potentially infectious materials.

You can identify that an area is a contaminated zone if there are visible signages or warnings. Instructions through meetings, announcements and sent memos should also inform you of areas that are contaminated zones. As much as possible, you want to limit going into contaminated zones.



If you enter a contaminated zone, you must take the appropriate standard and transmission-based precautions. Examples of contaminated zones include the following:

- PPE removal area
- Contaminated waste storage
- Used linen storage
- Isolation rooms for people with infectious disease
- Reprocessing area

Maintaining Clean and Contaminated Zones

Maintaining clean zones ensures that they remain sterile or, at the very least, free from infectious agents. The workplace usually takes standard precautions and performs enhanced cleaning to make this happen. The measures discussed in Subchapter 2.4 help keep a clean zone stay uncontaminated.

Maintaining contaminated zones, on the other hand, focuses on the following:



- **Limiting interactions within the contaminated zone's space**

This happens when immediate decontamination is not possible. Limiting interactions may include measures like putting up barriers around a contaminated zone.

- **Decontaminating the space as soon as possible**

This is done through the application of standard and additional precautions. Subchapter 2.5 discusses additional precautions in more detail. A key thing to remember here is that you want to eliminate the infectious agents in decontaminating.

Placing Appropriate Health and Safety Signs

Signs are intended to locate or identify activities and areas requiring specialised equipment, attention, or work procedures.

Signs to identify procedures or actions usually follow this colour coding:

- **DO NOT** – Red circle and slash signs show that an activity is prohibited
- **MUST DO** – Blue circle signs show the PPE that should be worn
- **BE AWARE** – Yellow triangle signs warn about hazards in the area
- **INFORMATION** – Green square signs show information on emergency safety

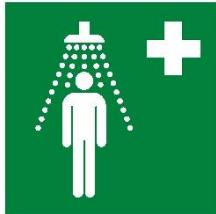
Based on [Safety signs in the workplace](#), used under CC BY 3.0 AU. © Government of South Australia

Below are some examples of safety signs:

Dangerous Goods		
Sign/Symbol	Name	Meaning
	Toxic	This sign indicates infectious chemicals that, at low and very low levels, can cause damage to health.
	Health hazard	Also known to mean 'caution', this indicates the presence of harmful and irritant substances.
	Corrosive	This indicates the presence of chemicals that can destroy living tissue on contact nearby.
	Serious health hazard	This also means 'long term health hazards'. These indicate chemicals that can cause serious and long-term damage to health.
	Environmental	This sign indicates the presence of chemicals that may harm the environment.

Hazards		
Sign/Symbol	Name	Meaning
	Biological hazard	This indicates the presence of organic substances that threaten the health of humans and other living organisms.
	Caution: Slippery when wet	This sign warns people that they can slip and fall on wet floors.
	Sharps disposal	This sign identifies the location of containers for sharps disposal, such as used syringes and blades.
	Radiation hazard	The symbol identifies sources or containers of radioactive materials and areas of potential radiation exposure.
	Sharp objects nearby	This sign indicates the presence of sharp objects that can cause cuts, scrapes and possible infection.

Emergency Equipment		
Sign/Symbol	Name	Meaning
	Automated external defibrillator (AED)	This indicates the location of an automated external defibrillator (AED). The defibrillator is used to save a person's life in cardiac arrest. It sends electric shocks through the chest and into the heart.
	Emergency exit	This indicates the location of an emergency exit that can be used for evacuation.
	Break to obtain access	In cases of not being able to open the emergency exit, this indicates a cover that requires breaking to obtain access to the emergency exit device.
	Emergency eyewash station	This indicates the location of an emergency eyewash station. Emergency eyewash stations provide on-the-spot decontamination. They allow workers to flush away hazardous substances that can cause eye injury.
	First aid	This indicates a first aid station/area nearby, which provides immediate emergency care to an injured person.

Emergency Equipment		
Sign/Symbol	Name	Meaning
	Emergency shower	This indicates the location of the emergency shower. The emergency shower is where workers flush hazardous substances from their bodies and clothing to minimise the effects of accidental exposure to chemicals. Emergency showers can also be used effectively to extinguish clothing fires or flush contaminants off clothing.
	Emergency stretcher	This indicates the location of an apparatus for moving patients requiring medical care.
	Emergency breathing apparatus	This indicates the location of an emergency breathing apparatus. This self-contained breathing apparatus provides breathable air in an immediately dangerous environment.
	Signal lamp	This sign indicates that a portable lamp, also known as an Aldis lamp, is available. An Aldis lamp has a trigger-operated shutter used to transmit Morse code.

Emergency Equipment		
Sign/Symbol	Name	Meaning
	Emergency phone	This indicates a phone specifically provided for making calls to emergency services and is most often found in a place of special danger.
	Emergency stop button	This indicates the presence of a kill switch. This is used to stop a machine quickly when there is a risk of injury, or the workflow requires stopping.

Personal Protective Equipment (PPE)		
Sign/Symbol	Name	Meaning
	Protective eyewear must be worn	This means that protective eyewear, such as goggles, must be worn. This prevents eye injuries from flying debris, dust, radiation, and chemical splashes.
	Hearing and eye protection must be worn	This means that hearing protection (e.g. earmuffs) and eye protection (e.g. goggles) must be worn to protect the worker from occupational noise and debris.
	A face mask must be worn	This means a face mask must be worn to help block large-particle droplets, splashes, sprays, or splatters containing pathogens (viruses and bacteria).

Personal Protective Equipment (PPE)		
Sign/Symbol	Name	Meaning
	Safety shoes must be worn	This means that safety shoes must be worn in the area. This helps prevent foot injuries due to slippery surfaces, rolling objects, sharp piercing edges, hot objects, splinters, electricity and chemicals.
	A hard hat must be worn	This means that hard hats must be worn to protect the head from flying objects, collisions, falling debris, and shock from falling objects, among other hazards.
	Gloves must be worn	This means that gloves must be worn. This saves the user's hands and fingers from unnecessary wounds such as cuts, blisters, splinters, skin punctures, heat, and chemical burns.
	An apron must be worn	This means that apparel such as aprons must be worn to protect workers from contact with spills and contaminated surfaces.



Consider the case study below to know what should be done to reduce contamination:

Flu Season

It is winter season, and the temperature has dropped significantly. Glen has noticed that some of his colleagues at work are coughing and sneezing. After a few days had passed, he observed that the number of people with coughs and colds had increased.

As a healthcare worker, Glen is responsible for developing measures to prevent this situation from worsening. To reduce the transmission of infectious agents, he required workers to check their temperatures and their hands sanitised before entering the work area. He also placed covered bins in multiple places where people would discard infectious materials like tissues.

Moreover, Glen required people with flu symptoms to wear masks whenever they report for work. He also asked those with severe flu symptoms like fever and dry cough to work from home to prevent potential infection outbreaks.

From the case study, you can see Glen's methods to prevent the further worsening of the situation. His control measures were able to take care of people with or without illnesses.

3.4.2 Control Measures to Minimise Contamination of Equipment and Materials

Control measures to minimise contamination of equipment and materials refer to the different ways you can lower the chance of contamination of equipment and materials.

While performing your tasks, you may leave droplets or bodily fluids on surfaces and in the air. These can potentially contaminate equipment and materials that they come into contact with.

Here are some examples of control measures to minimise contamination of equipment and materials:

Washing materials, equipment, and instruments in the designated area only

Keeping the water pressure low

Using appropriate cleaning materials

Cleaning and drying surfaces thoroughly

- **Washing materials, equipment and instruments in the designated area only**

Sinks that are used for handwashing can become contaminated by splatters. As such, these must not be used for cleaning dirty items. Dirty items must only be washed in sinks within the designated contaminated zone.

- **Keeping the water pressure low**

To reduce water splash, keep the water pressure low when washing equipment or performing hand hygiene.

- **Using appropriate cleaning materials**

The use of spray bottles and other similar equipment should be avoided as much as possible because it generates aerosols that can cause irritation to humans and spread pathogens in the environment.

Squeeze bottles or other equipment that dispenses liquid directly onto the cleaning equipment is preferred.



- **Cleaning and drying surfaces thoroughly**

You must clean surfaces using detergent and a damp cloth. Dry immediately by wiping excess water to ensure that dust and pathogens are not dispersed into the air.

Read the case study below to learn more about cleaning thoroughly:

Cleaning Toilets

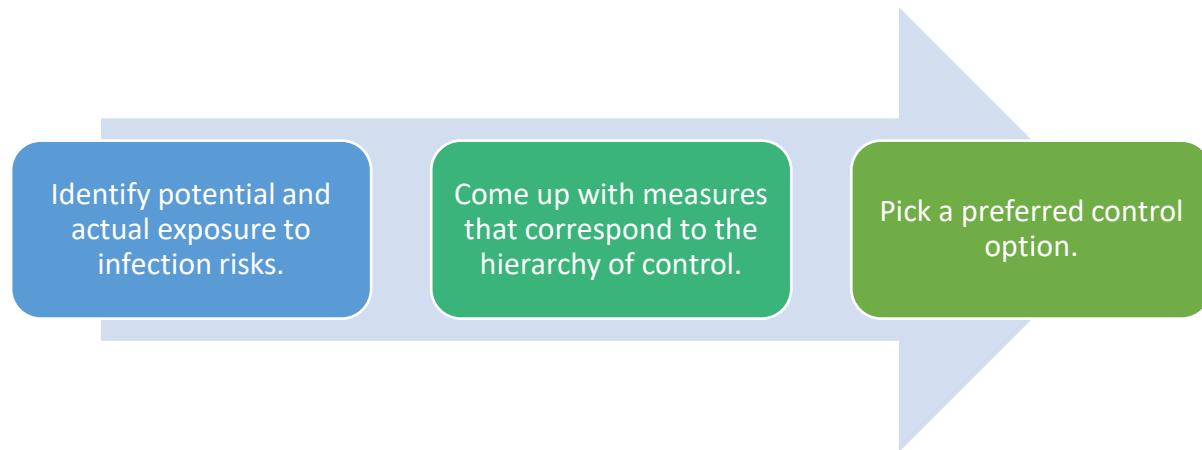
Berna is a ward assistant in a community hospital. One of her roles involves ensuring that toilets are cleaned regularly. Before starting the process, Berna reviews the protocols of her hospital relevant to cleaning and disinfection. After this, she cleans the toilet seats, bowls and walls using detergent and water. She also ensures that walls are scrubbed, and bowls and seats are adequately brushed.

Berna follows the set schedule for cleaning the toilet not to cause inconvenience to the users. In addition, once she is done cleaning, she places safety signs in the comfort room so people will be careful when walking due to the wet floor. She also cleans the equipment she used for cleaning the toilet and returns them to their proper containers.

3.4.3 Implementing Control Measures to Minimise Contamination

Implementing control measures to minimise contamination means finding ways to lower the risk of contamination. This applies to people, as discussed in Section 3.3.1 and materials and equipment in Section 3.3.2.

The steps discussed in Section 1.4.4 can be applied to minimise contamination. To implement control measures for this purpose, consider the following:



1. Identify potential and actual exposure to infection risks.

This step aims to figure out what infection risks the workplace might be exposed to. This will help pinpoint what you need to implement measures for.

Take this situation as an example:

An employee forgot to wear their surgical mask properly after they had eaten. They had walked from the cafeteria through two rooms before someone reminded them to wear the mask properly. The employee would cough several times throughout their stay in these three rooms. This situation creates potential and actual exposure to infection risks.

After such a breach, there may be new risks of contamination that could affect people. One example would be droplets that would likely be on surfaces and suspended in the air. This means that there is a risk that the employee and the people around him may get infected. This is especially concerning because the employee was coughing.

Another example of a risk because of an infection breach is with the equipment and materials. With the employee's mouth uncovered, droplets and aerosol forms could have spread in the cafeteria and the two rooms. This means equipment and materials like utensils, tables and chairs, among many other items, could be contaminated.

2. Come up with measures that correspond to the hierarchy of control.

Once you have confirmed the infection risks your workplace may be exposed to, you can devise a list of control measures. You can choose from the previous examples of control measures given earlier in this section. You may also need to develop something different that addresses your specific situation.

This step aims to create a list of control measures classified according to the hierarchy of controls discussed in Section 1.4.4.

In the previous example, the risks of contamination of people, equipment, and materials were given.

One risk involved infecting individuals who were around the employee. Because the virus in this example is transmissible through contact, droplets, and air, all these people could be sick. Start with a list of possible control measures. For example, you could list placing signs to indicate clean and contaminated zones. This could count as an example of engineering control. You can also choose to isolate everyone potentially affected through quarantine.

Another risk was that equipment and materials in the affected rooms could now be infected. To control this risk, you could implement transmission-based precautions and enhanced cleaning of the affected areas. Disinfecting identified contaminated surfaces can be an example of eliminating the risk by killing off the virus.

List other measures aside from the given examples and classify them according to the hierarchy of controls. You do this to help make picking a preferred control option easier.



3. Pick a preferred control option.

Once you have a list of possible control measures to implement, discuss and choose which one to use. Choose reasonably practicable controls. This means choosing to implement a control measure at the highest possible classification in the hierarchy of controls without sacrificing the quality of work.

The previous step gave two recommendations for possible control measures. The first measure was to ‘Isolate everyone affected through quarantine.’ To decide whether to apply this control measure, ask yourself if it sounds reasonably practicable. The answer may depend on your situation. For example, this may not be practicable if your workplace has no room for a quarantine room.

You also have to consider that while there was an infection control breach, it does not mean the infection has occurred. You may end up isolating a large number of employees for nothing. You must weigh these options and decide what is reasonably practicable for your situation.



Another suggested control measure to minimise contamination of equipment and materials involves the application of transmission-based precautions and enhanced cleaning. Ask yourself if the chosen measure is reasonably practicable for your workplace. When you perform enhanced cleaning, you will need to increase the frequency and likely use disinfectants. In doing this, how does it affect the work done in the workplace? Does the measure seem reasonably practicable when you weigh the pros and cons?

Communicating and seeking advice play a key role in making final decisions on what to implement. Deciding what is reasonably practicable must be done with the people involved.

Checkpoint! Let's Review



1. Implementing control measures to minimise contamination means finding ways to lower the risk of contamination.
2. Clean zones are not contaminated by infectious agents or their carriers (i.e. droplets, aerosols and body fluids).
3. Contaminated zones are designated areas contaminated with aerosols, splatter, and droplets of potentially infectious materials.

3.5 Manage Spills and Exposure to Blood or Body Fluids



The previous subchapter discussed implementing control measures to minimise contamination of people, equipment and materials.

This subchapter will explore a specific situation where you need to respond to potential or actual exposure to infection risks. Here, the infection risk comes from spills and blood or bodily fluids exposure. This situation was first discussed in Section 2.4.4. This subchapter will explore the scenario further.

3.5.1 Follow Processes for Management of Spills

Spills are when blood or body fluids make contact with surfaces in the workplace. This is an infection risk because blood and body fluids can carry infectious agents. More information about this was discussed in Section 2.4.4. In addition to the recommendations given in that chapter, you can also refer to policies and procedures for processes to follow to manage spills.

Policies are the guiding principles of an organisation. Processes tell you how to realise those principles. Procedures are specific steps of a process. An organisation's policies and procedures document usually has information on how certain things are done in a workplace. This includes how to manage spills for infection control purposes. For example, Lotus Compassionate Care, the simulated aged and disability care organisation referenced in our learning resources, has a specific section for managing spills. Organisations may have different styles or specific processes, so check your organisation's policies and procedures.

In general, the process for spill management would look like this:

1. Gather the spill kit.

Spill kits contain the necessary cleaning materials and PPE to respond to a spill. In case of a blood or body fluid spill, find the nearest spill kit to ensure you have the tools and equipment to deal with the spill safely.

2. Wash your hands.

Hand hygiene is at the heart of most infection control processes. As discussed in Section 2.3.1, ensure you wash your hands first before putting on PPE, such as gloves. Proper hand washing is discussed in Section 2.2.1.

3. Put on gloves and an apron.

The guidelines for wearing gloves have been discussed in Section 2.3.1. Use the appropriate glove type for the spill you will clean. If this process takes time, make sure to replace your gloves from time to time.

On the other hand, the proper wearing of an apron was previously discussed in Section 2.3.4. Make sure that the apron is fitted with its strings tied securely. Wear it while cleaning to prevent direct contact between your body and the spill.

4. Contain the spill using absorbent agents or paper towels.

The type of absorbent agent is usually determined based on what is spilled. Whichever product you use, you want to ensure that the spill does not spread to other areas.

In doing this, consider the following conditions for the spill:

- The type of body fluid involved
- The associated pathogens
- The location
- The type of surface (e.g. carpet, waterproof flooring)



Depending on these conditions, the cleaning equipment and procedures tend to vary. For example, if the spill occurred on a carpet, the carpet must be removed first from the area and processed elsewhere.

Another factor that affects this process is the volume of the spill. The volume of the spill can be categorised into three: spot cleaning, small spills (up to 10 cm diameter) and large spills (greater than 10 cm diameter).

5. Scoop up the spill and dispose of it in clinical waste bags.

Once the spill has been absorbed, use a scooper to scoop up the spill. Dispose of the spill in the clinical waste bag in your spill kit.



6. Clean the area.

Using a detergent solution to clean the surface depends on where the spill occurred. Consider using a hospital-grade disinfectant once visible dirt, grease, or oil is gone.

7. Remove gloves and the disposable apron.

After managing the spill, remove the gloves one at a time. Ensure you will not touch the outer part of the gloves while peeling them. Dispose of them in the appropriate waste bin and wash your hands afterwards.

As for removing aprons, untie their strings and touch the inside part of the apron when you pull it inside out. Place the used apron in the appropriate waste bin and wash your hands immediately.

You can review Sections 2.3.1 and 2.3.4 for the complete procedures for removing and disposing of used gloves and aprons.

8. Dispose of the used PPE in clinical waste bins or bags.

Having been in contact with the spill, your used PPE should be treated as infectious or contaminated waste. Since most PPEs are created for single use, they must be immediately discarded once you finish your task. Place them in their respective waste containers. Ensure that these bins are closed. You can also use waste bags as a container for used PPE. Make sure the bags are tightly secured.

Place the waste bags in the waste disposal area. People in charge of waste management will pick them up afterwards.

9. Keep used materials in their own container.

Because these materials have been in contact with your gloved hand, they must be reprocessed or disinfected. Keep them in a secure container to prevent contact with them. The type of container and where to store them may differ depending on your organisation.

10. Wash your hands.

Wash your hands again according to the guidelines for proper handwashing. Wet your hands with running water and apply soap. Rub your hands together for at least 20 seconds, ensuring that all areas are washed. Rinse your hands and dry them afterwards.

You can also review Section 2.2.1 for the complete discussion on proper handwashing.



11. Report the incident to a supervisor.

The specifics of the report may differ depending on your workplace. Sometimes you may be asked to report a different person. It could be a supervisor, manager or relevant authority such as a WHS safety officer. Documenting and reporting incidents will be discussed in Subchapter 3.6.

Following processes to manage spills means sticking to the prescribed process in the policies and procedures.

Multimedia



The video below is from the GV Health YouTube channel. It demonstrates how to manage a biohazard spill using items in a spill kit:

[How to clean up a Blood or Biohazard Spill - Procedure Training | GV Health - Life.Protected.](#)

3.5.2 Follow Processes for Management of Exposure to Blood or Body Fluids

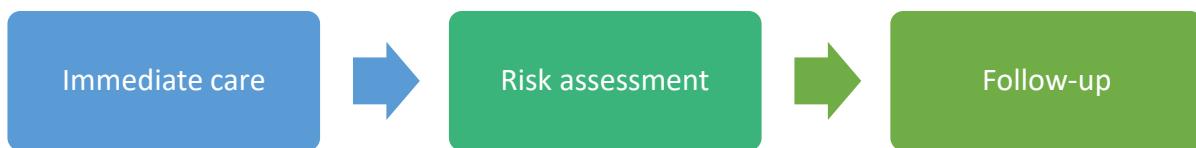
An incident will be considered an exposure if there is direct skin contact with blood or body fluids that can be a risk for bloodborne virus transmission. Examples include blood plasma, cerebrospinal fluids, vaginal secretions or semen.

Exposure incidents can also happen when there is potential contact of blood or body fluids with an open wound, abrasion or dermatitis in the skin. The same case applies when there is direct contact with the mucous membrane.

Blood and body fluids can carry infectious agents and leave them on surfaces. While Section 3.4.1 is more of a preventive measure, this section will discuss what you can do if someone gets into direct contact with blood and body fluids.

Following the process here is similar to Section 3.4.2. By doing what is prescribed in your organisation's set process, you are already following.

To see this in action, here is an example of a process to follow after exposure to blood or body fluids:



1. Immediate care

After an individual has been exposed to body fluids, the following strategies must be done as soon as possible:

- If body fluids have been in contact with the skin (whether cuts or abrasions), wash the site with soap and water. If water is not readily available, use a non-water cleanser or antiseptic. Avoid using strong solutions such as bleach or iodine.
- If body fluids enter the mucous membranes, rinse with water or normal saline. Remove contact lenses.
- If body fluids get into the mouth, spit them out and rinse the mouth with water. Repeat rinsing until all the fluids have been removed.
- If body fluids get into the eyes, rinse them under running water or with a normal saline mixture while the eyes are open.
- If exposure involves wounds or incisions, wash the site with soap and water. Apply a sterile dressing if necessary. Continue to apply pressure if the bleeding does not stop but *do not* squeeze, suck or rub the injury site.

- If the case involves bites, consider the possibility that both the person bitten and the person who inflicted the bite were exposed to blood-borne viruses or BBVs. As such, follow-up procedures may be necessary.
- If clothing is contaminated, remove clothing. Take a shower, if necessary.
- Report the incident to the supervisor or appropriate authority as soon as possible. After reporting, the healthcare worker should be released from duty to carry out a risk assessment and to confirm the nature of exposure.

Based on HIV, Hepatitis B and Hepatitis C – Management of Health Care Workers Potentially Exposed, used under CC BY 4.0. © State of New South Wales NSW Ministry of Health. For current information go to www.health.nsw.gov.au.

Consider the case study below:

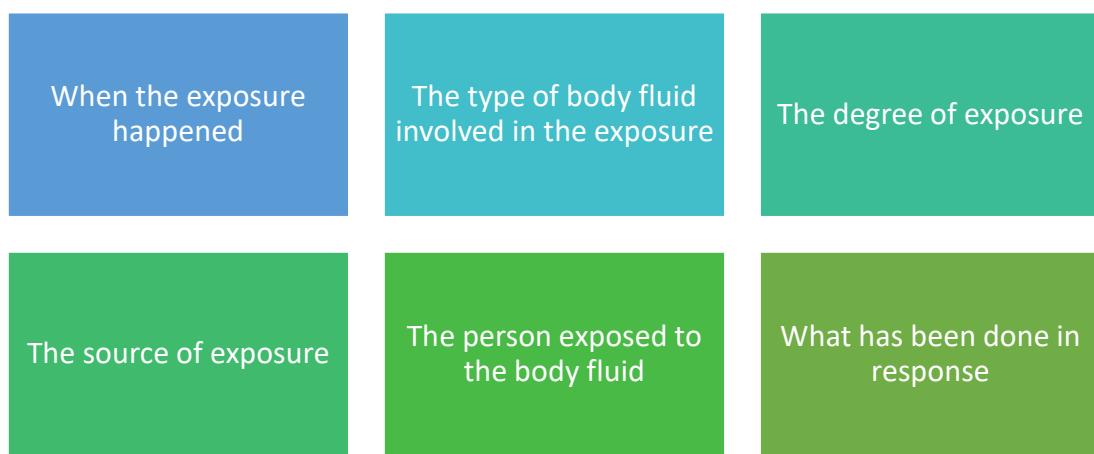
Immediate Care Measures for Infection Incidents

At lunchtime, a worker accidentally touches a surface with visible droplets and saliva from a sick co-worker. As soon as you notice the situation, immediate care should be taken. From the list above, hand hygiene procedures should be applied. The best response would be to have the person wash their hands with soap and water. In situations like this, quick and calm action is needed. You want to be quick to lower the chances of other people interacting with the person exposed to the fluid. On the other hand, being calm helps you decide what to do efficiently.

2. Risk assessment

After immediate care, the next step is ensuring no further harm is caused by blood and body fluids exposure. This is done through risk assessment. The first thing to do is to gather information about the exposure incident.

Here are some details you need to know to determine how likely someone may be infected:



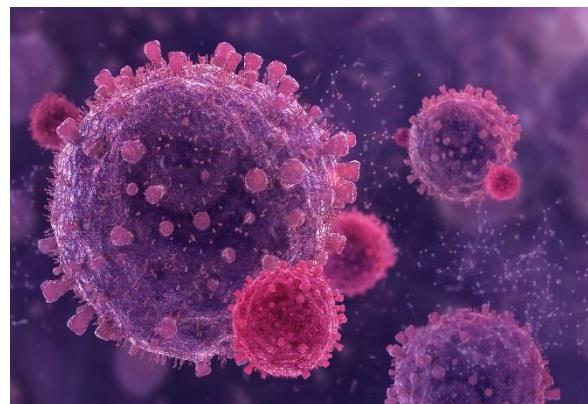
Following the case study from the first step, you can begin documenting details about the incident to help assess the risks that stem from the exposure to body fluids. Fill in the details with what you know so far. This is shown below:

Detail	Details From the Case Study
When the exposure happened	Around lunchtime on this same day
The type of body fluid involved in the exposure	Droplets and saliva
The degree of exposure	<ul style="list-style-type: none"> ▪ The person's hand had direct contact with the droplets and saliva. ▪ Not certain about how long they were exposed and how much liquid
The source of exposure	A person who is confirmed to be sick
The person exposed to the body fluid	A co-worker
What has been done in response	Hand washing as soon as the situation was noticed

Knowing that the source of the exposure is already sick raises the risk of infection significantly. Immediate care helps control the risk of infection for the worker. However, no measures have yet been taken to clean and disinfect the surface. Other people may have come into contact with the contaminated surface.

This means that a big risk at this time is getting other people in the area exposed to the contaminated surface.

This is just an example of risk assessment in action. More details on risk assessment are discussed in Subchapter 1.4 and Subchapter 3.1. Once you know the risks, you can come up with measures as a follow-up.



3. Follow-up

Follow-up refers to the action you take to minimise the risk. The actions you take depend on the information you gathered during risk assessment.

In the scenario in the second step, you realised that while the first person exposed to the contaminated surface received immediate care, no other measures were taken. This means that there is a risk of other people contacting the contaminated surface.

Possible follow-up measures can come in these forms:

- **Get the person who was first exposed to the fluids screened.**

This follow-up measure helps confirm whether or not they were infected. This is important because the source of the body fluids was confirmed to be sick.

Whether you or your colleague made contact with a contaminated surface, conducting a screening is a must. You can approach the health professional in your organisation to get checked. They may run a series of tests, especially if the source of contamination is highly infectious. Once you receive the results, you can ask your supervisor what should be done afterwards.

- **Clean the surface that the body fluid has contaminated.**

This measure ensures that no one else will get into contact with the contaminated surface. Wear appropriate PPE and clean the spill according to your organisation's policies and procedures. If you are unsure how to clean it properly, ask your supervisor for help. They may give you instructions or refer you to the staff responsible for managing spills.

Note that while this sample process may apply in general cases, your workplace may have its preferred process. As always, check if your organisation has its own processes for managing blood or body fluid exposure. Following them is simply doing what is prescribed.



Checkpoint! Let's Review



1. Spills refer to situations when blood or body fluids get into contact with surfaces in the workplace.
2. Policies are the guiding principles of an organisation.
3. Processes tell you how to realise those principles.
4. Procedures are specific steps of a process.
5. Following processes means sticking to the prescribed process in the policies and procedures.
6. Managing spills and exposure to blood and body fluids helps minimise the risk of infection and its spread.



3.6 Document and Report Incidents and Responses

The previous subchapter discussed managing spills and blood and body fluids exposure. This showed an example of a situation where a response to potential and actual risks of infection was needed. This subchapter discusses a process you must do after your initial response to infection risks.

In the next sections, you will learn how to document and report infection-related incidents according to your organisation's policies and procedures.

Recall that an organisation's policies and procedures contain the following information:

- Policies that serve as the guiding principles of an organisation
- Processes that tell you how to realise those principles
- Procedures that indicate the specific steps of a process



You refer to policies and procedures to determine how certain things are done in a workplace. This applies to documenting and reporting.

Without policies and procedures, people in the workplace may record infection-related incidents differently. For example, someone might document the entire event in narrative form. Others may just list bullet point items. Having different styles may make it more difficult for the people who need information about those incidents.

By having policies and procedures in place, the organisation ensures that the style of documenting and reporting is uniform. This makes it easier to sort through different documents and reports when looking for information.

Infection-Related Incidents and Responses

Infection-related incidents are incidents that involve potential and actual exposure to infection risks. This includes some of the situations discussed:

- A potential or actual breach in infection control
- A blood or body fluid spill
- Exposure to blood or body fluid
- Exposure to people or objects infected

Infection-related responses are the actions done to address potential and actual exposure to infection risks. Some examples of this are the following:

- Analysing risks, as discussed in Section 3.1.2, to respond to a potential breach in infection control
- Communicating with a supervisor, manager, or relevant authority when there is potential or actual exposure to infection risks
- Applying transmission-based precautions when there is a suspected or confirmed outbreak of infection

Risk analysis and control measures can apply to any potential exposure to infection risks.

3.6.1 Documenting Infection-Related Incidents and Responses

Documenting infection-related incidents means recording potential or actual exposure to infection risks. On the other hand, documenting infection-related responses means recording the actions taken in response to an infection-related incident.

Documenting means creating something that people can refer to. This aims to learn about an infection-related incident and the actions taken in response to that incident. Having a document makes it easier to review infection-related incidents and responses. For example, say you witnessed a breach in infection control. Interested parties such as supervisors, managers or relevant authorities will need to know what you witnessed. A documented account allows them to access information about the incident without asking you every time.

Since documents are sources of information, you need to ensure that they contain relevant information. So, make sure that the document contains the following:

What happened

- These are the things involved in the incident.

When it happened

- These are times and dates relevant to the incident.

Where it happened

- These are relevant locations to the incident.

How it happened

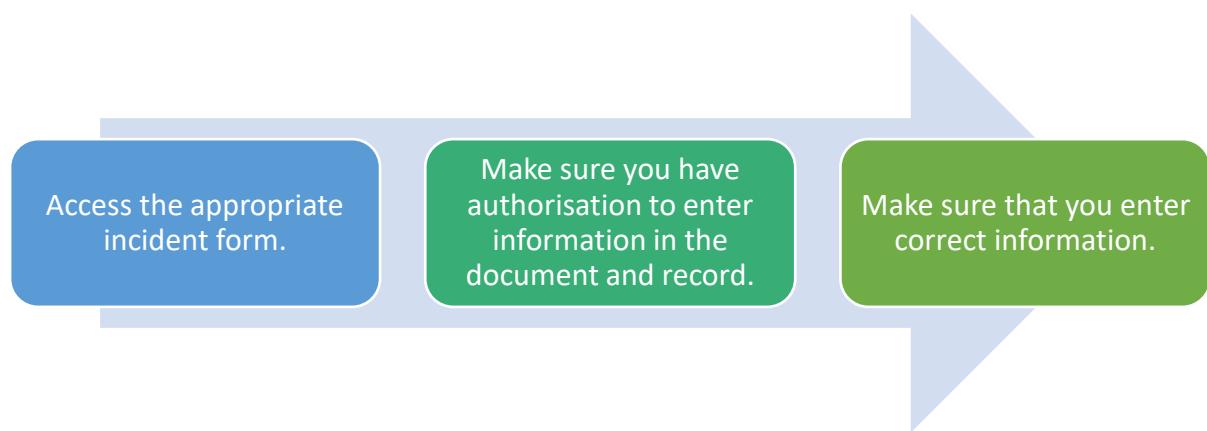
- These describe the manner in which an incident happened.

In addition, you must be familiar with the policies and procedures of your organisation relevant to documenting infection-related incidents. These refer to the rules you must follow regarding the following:

- The appropriate department in your organisation that you must notify when infection-related incidents occur
- The timeframe by which the document must be submitted
- The appropriate incident report form that you must fill out
- The information that must be included in your document
- The appropriate person to whom you must submit the document to

You must know the details above before filling out forms to create a written document. Remember to cross-check them with the policies and procedures of your organisation. If you are unsure what to do, reach out to your supervisor so they can guide you during the process.

To document infection-related incidents and responses, you must do the following:



1. Access the appropriate incident form.

Check the list of forms available in your organisation and access the appropriate incident form. While most use one incident report form for injuries, infections, abuses or other notifiable events, your workplace may have a specific form for infection-related incidents and responses.

If you have trouble finding this document, you can approach your supervisor or a relevant authority, like the workplace's health and safety representative.

You want to ensure that you are using the correct form to avoid having to rewrite information. Using the correct form also ensures that it gets stored in the correct location. Properly stored or filed documents make it easier for people to access them.

2. Read the sections, headers and guide questions

Once you have the correct document on hand, you can begin the process of writing details about the infection-related incident and response.

Read the sections, headers and guide questions in the document. They will help you select and sequence the information entered into the form. Make sure to write relevant information under the proper section.

For example, say you plan to write about what you did when you saw a person come into contact with blood on a table. Make sure that you look for the appropriate section in the document. This might be labelled as a 'response to the incident' as in Lotus Compassionate Care's incident report form. Follow the guides and instructions as sometimes the form asks you to tick a box or choose in one section. Then in a different section, have a space to write freely.



Lotus Compassionate Care

Access and review Lotus Compassionate Care's incident report form through the link below:

[Forms and Templates](#)

(username: newusername password: new password)

3. Make sure that you enter the correct information.

Ensure that you record clear, complete and accurate information about the infection-related incident. The previous suggestion helps make sure that you record complete information. Write the information in a straightforward and concise manner.



Do your best to record information in a way that is easily understood by people who will read the document. This means jargon must be used only when necessary. As you write, ask yourself if your writing is relevant to the incident. This helps you avoid writing unnecessary information that would increase the length of your document. Unnecessary information makes it difficult for people to find what they need in your document.

3.6.2 Report Infection-Related Incidents and Responses

Reporting infection-related incidents and responses can be made in verbal or written form. You generally report incidents and responses in the same way. The goal of reporting is to inform people in the workplace about infection-related incidents and the actions done in response to them.

The people you report to are the same as the ones you communicate with. Review the table below for the people in the workplace you report to:

People	Description
Supervisor	These are co-workers who have a position of authority in the workplace. They can respond with at least a team-wide measure in case there is potential or actual exposure to infection risks.
General practitioner	They are doctors. You communicate with general practitioners to report health-related information. This can include your health or an incident involving others. They are also good sources of advice in case of potential or actual exposure to infection risks.
Health care professional	Health care professionals refer to nurses, receptionists, pharmacists, or other job roles related to health care. Your interactions with them may be similar to those with general practitioners.
Carer	Carers refer to individuals tasked with overseeing the well-being of other individuals. They may have some overlap with health care professionals.
Responsible person	Responsible persons are those with duties and responsibilities related to health and safety in the workplace. Workers and colleagues in the same role usually fall under this. At the minimum, all people in the workplace have duties to keep themselves healthy. When reporting to responsible persons, it is usually to relay instructions or information from announcements.

People	Description
Responsible authority	<p>Responsible authority refers to those with duties and responsibilities related to overseeing health and safety in the workplace. They may include PCBUs and health officers.</p> <p>An example of a responsible authority is a health and safety representative. The <i>Health and Safety Representative (HSR)</i> is an employee elected as the representative in work health and safety matters. The HSR ensures the organisation follows health and safety practices. As such, the HSR can also help you address infection-related incidents. The HSR can help you record incidents and injuries so that they can be prevented in the future.</p>

Reporting will involve informing these people about potential or actual infection risks. This is usually done after you have identified the potential or actual infection risk and responded to the immediate needs of the affected people. However, in some cases, you may need to report right after identifying a potential or actual infection risk. This applies to cases that you have not been trained to respond to. For example, say a soap dispenser is about to run out. Recall that Section 2.2.1 warns against topping up soap dispenser containers. The best you can do here is report the situation to a responsible person or authority.



You must follow workplace reporting procedures in reporting potential or actual infection risk. Doing so ensures that the potential or actual infection risk is addressed correctly without causing further damage or harm. Workplace procedures will inform you about what to do in these situations.

The following is an example of a step-by-step process showing how to report infection-related incidents and responses:



1. Verbally report the incident to a designated person

You must inform the designated person about the infection-related incident. Remember to do this immediately so they can act on it faster.

2. Provide the details you know about the incident.

Recall the important details of the incident when you make a report. This refers to the information regarding the following:

- Nature of the incident
- Cause of the incident
- People involved in the incident
- Time and date the incident happened
- Location of the incident
- Supporting details (e.g. injuries)

3. Seek advice on the next steps you can take to respond to the incident.

Consult the designated person on the protocols for responding to an infection-related incident. Emergency services must be contacted if the incident puts people in danger.

4. Respond to the incident following the designated person's advice.

Infection-related incidents must be dealt with swiftly and appropriately. Follow the instructions of the designated person when managing the incident location. This is to prevent infection from spreading.

5. Document the incident and response using an incident report form.

Details about the incident, like background information and an action plan, must be recorded in a single document. Ensure to write them down in a clear and organised manner.

6. Submit the completed incident report form following workplace procedures

Be familiar with your organisation's policies and procedures when filing an incident report. Remember to follow instructions. Ask your supervisor if you are not sure what to do.

7. Report to a WHS regulator.

There will also be incidents requiring the organisation to report to the WHS regulator. You must notify your regulator about serious safety incidents. Notifiable incidents are those that result in the following:

- A person's death
- A person's serious injury or illness
- A dangerous incident



Based on [Responding to an incident](#), used under CC BY 4.0. © Commonwealth of Australia 2020

For notifiable incidents, the employer must report them to WHS authorities. You must be aware of the proper line of reporting in your role. In the case of notifiable incidents, follow the usual reporting process to your direct supervisor. Notifiable incidents are serious cases that require the attention of regulatory authorities. In such cases, you must report to your supervisor as soon as possible so your employer can also fulfil their reporting duties.

Do the following when reporting incidents:

- **Provide an overview of the incident.**

Explain in detail the nature of the incident, what caused it and when and where it happened.

- **Identify the people involved in the incident.**

List down the people who received injuries or were in critical situations because of the incident.

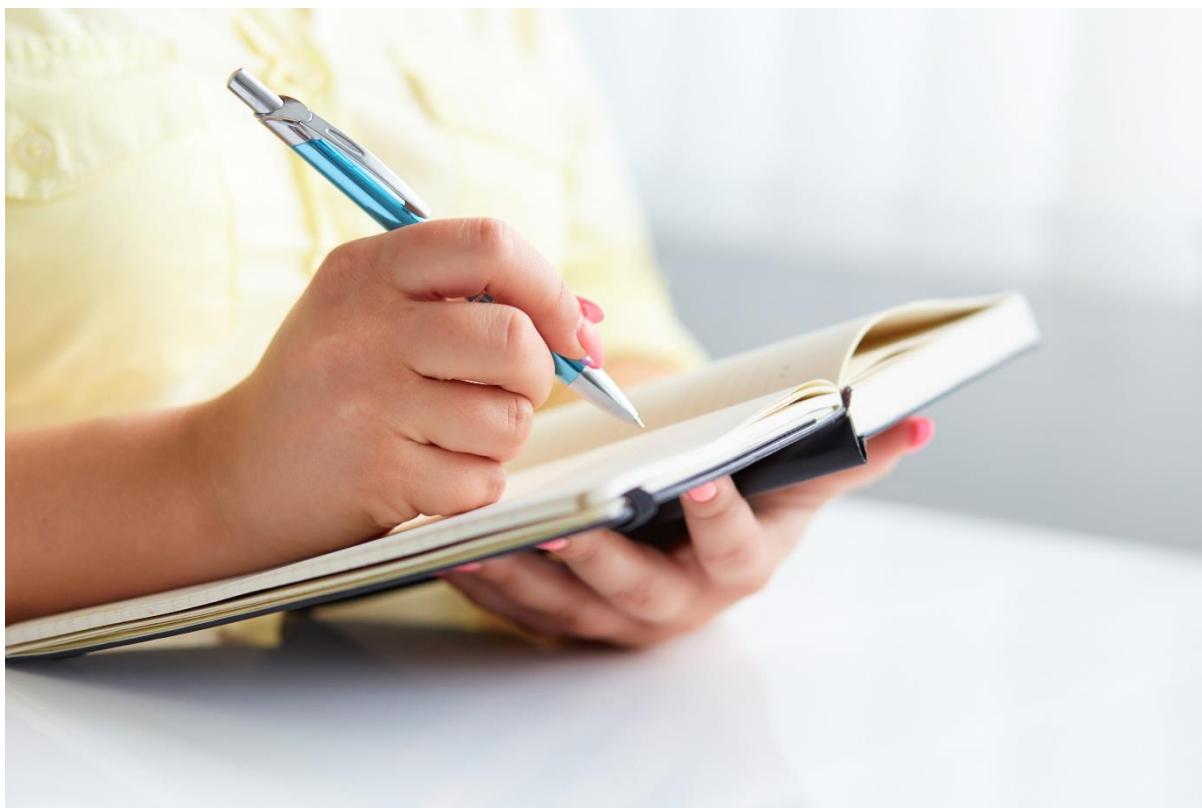
- **Describe the condition of who was involved in the incident.**

Explain the extent of physical injury the people involved in the incident received. Provide details about their current conditions, like the type of medical assistance they require.

- **Describe the status of any equipment.**

Enumerate the damages done in the workplace because of the incident. Explain as well what equipment has been contaminated. This is to identify how they will be disinfected and if they must be replaced.

Incident reports are assessed against hazard and risk registers. These reports allow the workplace to cross-reference known hazards and risks with what occurred in the incident. They can then determine if the incident's hazard or risk was prepared for. Wherever the lapse is, the workplace can fill those gaps with policy and procedure changes or additions.



Lotus Compassionate Care



Access and review Lotus Compassionate Care's policies and procedures on incident reporting through the link below:

[Policies & Procedures](#)

(username: newusername password: new password)



Further Reading

Follow the link below for more information about incident reporting from the Safe Work Australia site:

[Incident reporting](#)



Checkpoint! Let's Review



1. Infection-related incidents are incidents that involve potential and actual exposure to infection risks.
2. Infection-related responses are the actions done to address potential and actual exposure to infection risks.
3. Documenting infection-related incidents means recording an account of incidents of potential or actual exposure to infection risks.
4. Documenting infection-related responses means recording the actions taken in response to an infection-related incident.
5. The goal of reporting is to inform people in the workplace about infection-related incidents and the actions done in response to them.

3.7 Store Records, Materials and Equipment in the Designated Area



The previous subchapter discussed how to document and report infection-related incidents and responses. Both actions aim to inform other people in the workplace about potential and actual exposure to infection risks and the response to it.

This subchapter discusses how to ensure the following are stored in a designated clean area:

- The records you documented and reported in the previous chapter
- The materials and equipment used to respond to an infection risk

You want to ensure that in storing these items, you put them in a designated clean area. Clean areas are also called clean zones. Recall that Section 3.3.1 defined clean zones in the following way:

Clean zones are areas that have not been contaminated by infectious agents or their carriers (ex. droplets, aerosols, and body fluids).

A space in the workplace must be dedicated to storing records, materials and equipment. You designate an area to become the known access point for these items. Doing this makes it easier to set localised rules. These rules could include specific cleaning schedules, PPE use, and procedures for accessing the space to store or retrieve items.

Storing records, materials and equipment in a designated clean area also helps protect the people accessing them. Clean areas are regularly maintained, so it would be reasonable to expect they are free from contamination.

Improper storage of records, materials and equipment could lead to the spreading of infection. Suppose there are no designated clean and contaminated areas in the workplace. In that case, mixing used, contaminated equipment with non-contaminated ones is risky. When this happens, everything ends up contaminated. If someone uses contaminated equipment to perform their task, it would likely come into contact with other people.

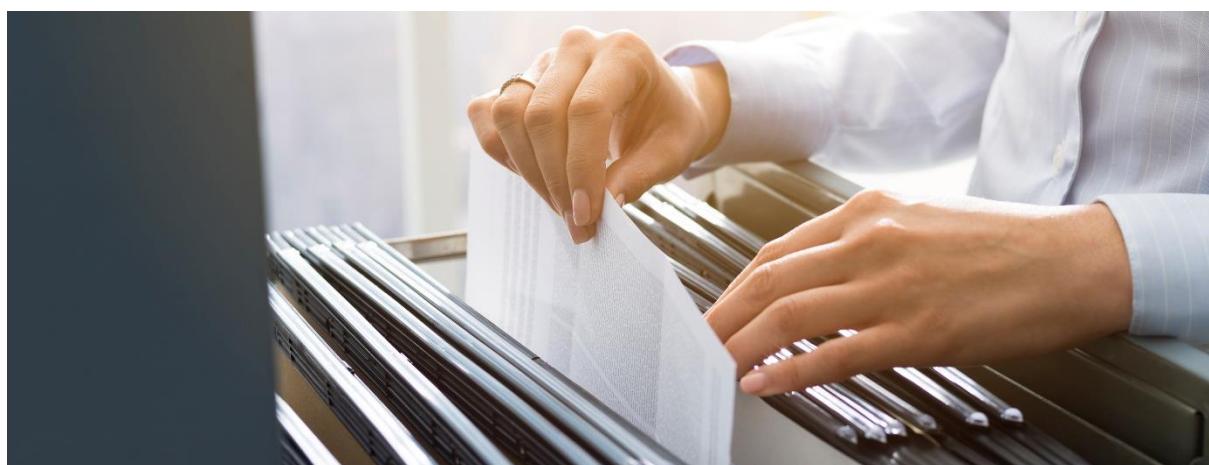
The next sections will discuss ensuring that these items are stored in designated clean areas.

Ensuring Records and Non-contaminated Materials and Equipment Are Stored in a Well-Designated Clean Zone

Documents and records are essential to the audit, research, delivery of services and effective decision-making in a workplace. Some are meant to be archived for years. Records must be kept in containers free from splatter, dust, aerosols and droplets to keep them intact.

Containers like drawers and shelves must be properly labelled and closed. The labelling is particularly important in ensuring that these documents can be returned and retrieved properly.

Keep sterilised materials and equipment that have not yet been used in a clean room to prevent contamination. These items must only be taken out of the clean zone when necessary.



To ensure that these items are stored in a well-designated clean zone, here are some things the workplace can do:

Make sure that people in the workplace know about the designated clean zone.

Set rules about how to enter and exit the clean zone.

Place appropriate signs to indicate the location is designated clean zone.

Return only non-contaminated records, materials and equipment.

- **Make sure that people in the workplace know about the designated clean zone.**

If people do not know about designated clean zones, storing non-contaminated records, materials, and equipment would be difficult. Communication is key here.

You can do different things to make it happen. If you have authority, you can send out memos or announcements. If you do not, just reminding a co-worker or yourself about the designated clean zone for records, materials, and equipment helps.

- **Set rules about how to enter and exit the clean zone.**

You must set rules to ensure that a clean zone remains sterile and free from infectious agents. One of the biggest risks of contaminating a clean zone is going in and out of the room. As such, controls like wearing PPE are commonly put in place when going inside clean rooms. Requiring permission to access the room also helps by limiting the number of people entering the clean zone. Having entrance and exit logs would help ensure authorised personnel are the only ones going in and out of the clean zone. Finally, upon exit, enhanced cleaning may be applied to the room.

- **Place appropriate signs to indicate the location is a designated clean zone.**

Signs help people identify and remember that a room is a designated clean zone for records, materials and equipment. They can be printed as symbols and illustrations, or they can be in bold text.

You can use signs for the following purposes:

- **For direction**

Signs can be used to guide a person on where they must go. For example, posting signs on the doors ensure a uniform direction for people entering and exiting the clean zone room.

- **For instructions**

Signs help provide instructions to people even without direct assistance from the person in charge of the clean zone. These instructions can be about safety reminders, operational procedures and standard precautions.

- **For warnings**

Signs can also be displayed for warnings of risk or danger. Warning signs can even be colour-coded depending on the level of risk. They are often in bold colours to easily catch the person's attention.

Remember to place signs in locations that a person can easily see. Examples of safety signs have been covered in Section 3.4.1.

- **Return only non-contaminated records, materials and equipment.**

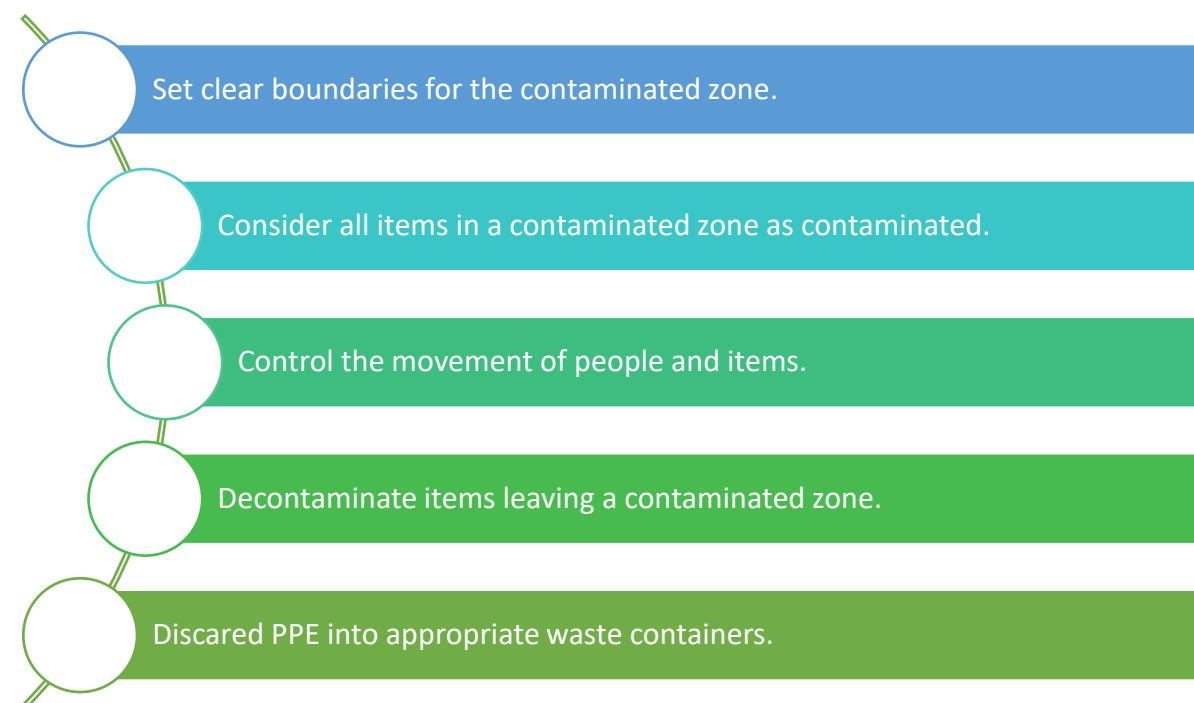
Measures must be put in place to ensure that no contaminated records, materials and equipment get returned to a clean zone. One example of this is setting up a contaminated zone. A dedicated area for contaminated items should divert the flow of contaminated items away from the clean zone. This means the designated contaminated zone must not be too close to the clean zone. The next part will discuss this further.



Store Contaminated Instruments and Equipment in a Well-Designated Contaminated Zone

Contaminated zones are areas potentially or actually exposed to infectious agents. Section 3.4.1 covered this topic. Like with clean zones, these areas can be designated. Contaminated zones could be designated because of an infection breach or by design. You intentionally set up a contaminated zone for contaminated items so that you have a place to store them. In the workplace, immediate reprocessing or disinfecting of these items is not always possible. By setting one up, you divert the flow of contaminated items away from the other areas in the workplace.

To store contaminated instruments and equipment in a contaminated zone, here are some things you can do:



- **Set clear boundaries for the contaminated zone.**

The boundaries of a contaminated zone must be clearly defined. This helps avoid situations when people accidentally step into a contaminated area.

Placing appropriate signs helps avoid this. Like clean zones, communicating and ensuring people know are good ways to ensure no one enters the contaminated zones.

- **Consider all items in a contaminated zone as contaminated.**

Recall that infectious agents can be transmitted through surfaces. Any items in a contaminated zone will likely carry the infectious agent. As such, personal items like clothing or bags should not be brought into the contaminated room to avoid cross-infection.

- **Control the movement of people and items.**

The movement of materials and equipment, as well as workers, should be controlled. The flow must always be from the clean area to the contaminated area, but not the other way around.

- **Decontaminate items leaving a contaminated zone.**

If contaminated instruments and materials need to leave the contaminated zone, they must first undergo decontamination. To ensure proper handling, they must be contained and labelled if they cannot be decontaminated.

- **Discard PPE into appropriate waste containers.**

There must be visible signs around the zone to remind people to discard the PPE before leaving the room. Waste containers must be near the contaminated area so people would not need to move to different rooms wearing or carrying contaminated PPE.



Checkpoint! Let's Review



1. Storing records, materials and equipment in a designated clean area helps protect the people accessing them.
2. To ensure that these items are stored in a well-designed clean zone, here are some things the workplace can do:
 - Make sure that people in the workplace know about the designated clean zone.
 - Set rules about how to enter and exit the clean zone.
 - Return only non-contaminated records, materials, and equipment.
 - Place appropriate signs to indicate the location is a designated clean zone.



Learning Activity for Chapter 3

Well done completing this chapter. You may now proceed to your **Learning Activity Booklet** (provided along with this Learner Guide) and complete the learning activities associated with this chapter.

Please coordinate with your trainer/training organisation for additional instructions and guidance in completing these practical activities.



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