

Infection Prevention and Control Induction Program



Grampians Region Infection Control Group
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Introduction

This is an introduction to the basics of infection prevention and control.

This presentation will discuss the following:

- ▶ what is an infection
- ▶ how microorganisms are transmitted
- ▶ strategies we use in our everyday practice to reduce the risk of infection transmission to ourselves, patients/residents and visitors, and
- ▶ your health and safety.

What is an Infection?



An infection occurs when invading microorganisms cause ill health such as:

- ▶ Viruses
- ▶ Bacteria
- ▶ Fungi
- ▶ Parasites
- ▶ Prions



Pain, tenderness, swelling, redness, pus fever

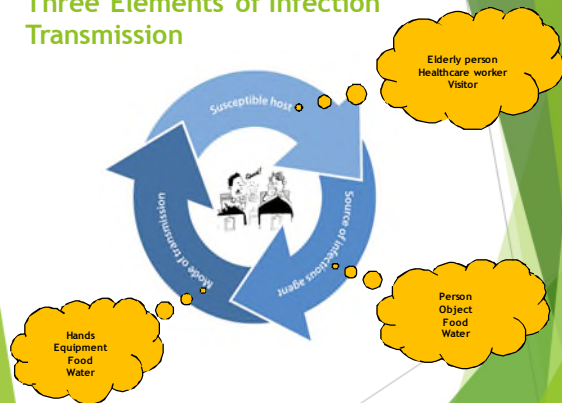
Microbial Reservoirs

Microbes can survive in many environments:

- ▶ on or in people, as normal flora
- ▶ on or in people who have infections
- ▶ on or in animals as normal flora or infections
- ▶ contaminated food or fluids
- ▶ contaminated articles, and
- ▶ contaminated environment.



Three Elements of Infection Transmission



Methods of Reducing the Spread of Infectious Agents

Successful infection prevention and control involves implementing work practices that prevent the transmission of infectious agents through a two-tiered approach:

1. Standard Precautions
2. Transmission-Based Precautions



Being Alert for infection

Infection prevention and control alert screening for all presentations to the emergency department or urgent care, and all admissions, will assist with the timely and appropriate implementation of transmission based precautions.

This will reduce the risk of infection transmission and potential outbreaks.



Tier One Standard Precautions



- ✓ Hand hygiene
- ✓ Respiratory hygiene and cough etiquette
- ✓ Personal protective equipment
- ✓ Aseptic technique
- ✓ Appropriate reprocessing of reusable instruments and equipment
- ✓ Appropriate handling and disposal of sharps
- ✓ Use of environmental controls
- ✓ Appropriate waste management
- ✓ Appropriate handling of linen



Tier Two Transmission Based Precautions

Transmission based precautions are based on the mode of transmission. The below chart shows how infectious agents could be transmitted:



Transmission Based Precautions

Contact Transmission

1. **Direct contact** with another person can transmit their microbes to you by hands, injection or ingestion.
2. **Indirect contact** is when a third person or an article transmits the microbes from one person to another through equipment or the environment.



Droplet transmission occurs when **large** respiratory droplets, that are heavy and travel short distances before dropping onto something or someone.

Airborne transmission occurs when a **fine** spray is coughed into the air and can be carried on air currents for a long distance.

Special Disease Event: All 3 modes of transmission
A special disease event is an infectious disease of high consequence such as a pandemic or large outbreak commencing outside or within Australia involving a virus or bacteria currently not endemic in Australia. Instructions for PPE requirements will be given at the time of this event.



Transmission Based Precautions

- ▶ Single room with ensuite.
- ▶ Cohorting if single room not available and dedicated toilet.
- ▶ Special ventilation requirements may be required.
- ▶ Additional use of protective equipment.
- ▶ Rostering of immune staff to care for infectious patients.
- ▶ Dedicated patient equipment.
- ▶ Enhanced cleaning.
- ▶ Restricted movement of patients, staff and visitors.



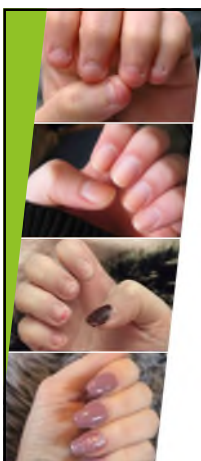
Hand Hygiene refers to:

- ▶ Hand washing using soap and water.
- ▶ Hand decontamination using alcohol based hand rub.
- ▶ There will be posters throughout the health service on correct methods for hand hygiene using these 2 methods.



Strategies to support successful hand hygiene

- ▶ Don't bite nails.
- ▶ Keep nails short.
- ▶ Get skin conditions assessed by a medical practitioner to ensure appropriate treatment and reduce the risk of infection transmission.
- ▶ No fake nails or nail polish.
- ▶ Plain wedding ring only.
- ▶ No wrist watches.
- ▶ Cover any cuts or abrasions on hands with a water proof dressing.
- ▶ Adhere to the 5 moments of hand hygiene!



5 moments for HAND HYGIENE

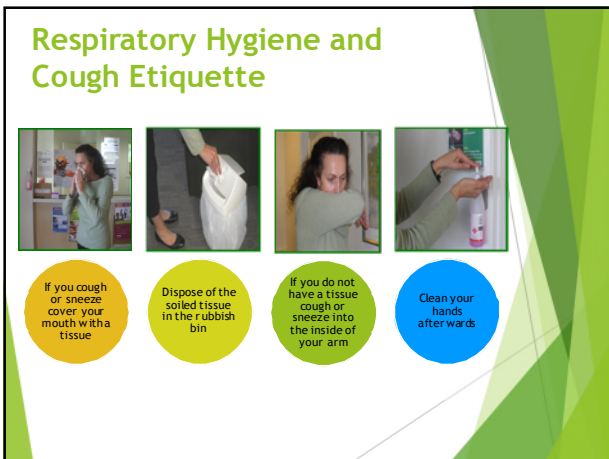
Online Learning Packages Available

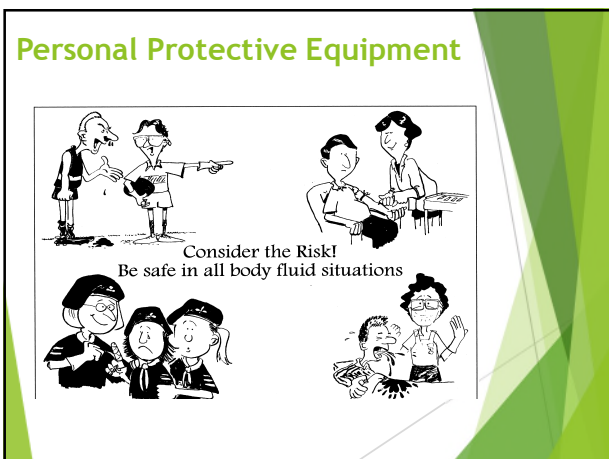
Standard
Medical
Nursing/Midwifery
Allied health
Non Clinical
Student Health Practitioners
Others


<https://www.hha.org.au/online-learning/learning-module-information>











Gloves

- ▶ Used when contact with body fluids is anticipated.
- ▶ Single use - must be discarded after patient contact.
- ▶ Must perform hand hygiene after removal of gloves.

Gowns

Used when contact or splash with body fluids is anticipated

Reusable gowns must be placed into the linen skip immediately after use and must not be reused

Single use gowns must be discarded immediately after each episode of care


Hand hygiene must be performed after removing gowns



Masks

Surgical Mask or P2/N95 Respirator

- ▶ Single use item.
- ▶ Use surgical mask when splash with body fluids is anticipated.
- ▶ P2/N95 for airborne diseases.
- ▶ Fit check each time you put a mask on.
- ▶ Replace when moist.
- ▶ Dispose of directly into waste bin.
- ▶ Perform hand hygiene before and after removal.



Danger Zone for Absorption

- ◊ Eyes
- ◊ Nose
- ◊ Mouth



Protective Eyewear Goggles or Face shield




Used when splash
with body fluids
is anticipated

Single use must
be discarded
after patient
contact

Reusable must
be cleaned after
each use

Must perform
hand hygiene
before and after
the removal of
protective
eyewear




PPE for Standard Precautions

The PPE used in standard precautions are used alone or in combination and include:

- ▶ aprons and gowns
- ▶ surgical masks
- ▶ protective eyewear (goggles or face shields), and
- ▶ gloves.

Sequence for Putting on PPE



Perform hand
hygiene

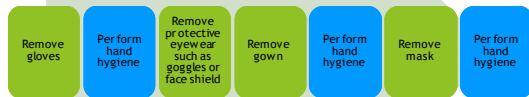
Put on gown

Put on mask

Apply
protective
eyewear such
as goggles or
face shield

Apply gloves

Sequence for Removing PPE



Aseptic Technique

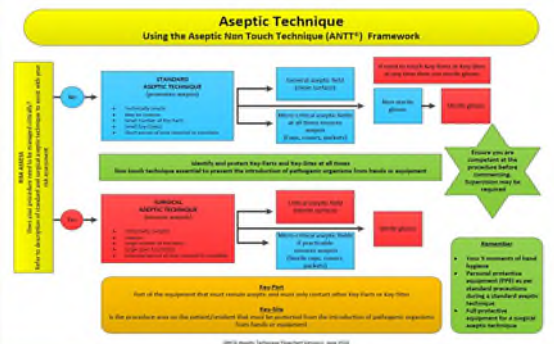
Aseptic technique is a practice to promote or ensure asepsis. The ANTT® framework is a set of principles that allows the clinician to determine the method required to maintain asepsis during the task/procedure to be performed using sterile and/or clean equipment.

There are two types of aseptic technique - surgical or standard.






Ensuring and promoting asepsis

Use the flowchart to choose the type of aseptic technique needed!



Appropriate reprocessing of reusable instruments and equipment

Reusable instruments and equipment are reprocessed or cleaned based on how that instrument or equipment is used, and the potential risk of infection posed to the patient/resident.

Patient Contact	Examples	Device Classification	Minimum Inactivation Level
Intact skin		Non-Critical	Cleaning and/or Low/Intermediate Level Disinfection
Mucous membranes or non-intact skin		Semi-Critical	High Level Disinfection
Sterile areas of the body including blood contact		Critical	Sterilization

Critical and semi-critical items would be reprocessed in a sterilisation department. Non-critical items can usually be cleaned and/or disinfected in the patient care area.

Single Use Policy


- ▶ Any items marked by manufacturer as single use should be discarded after use.
- ▶ Single use vials or ampoules must be used wherever these are available.
- ▶ Multi dose vials must only be used on the same patient then discarded.
- ▶ Items marked "Single Patient Use" must only be re-used on same patient then discarded.



Safe Handling of Sharps




- ▶ Always use safety devices when they are available and ensure you activate the safety feature.
- ▶ Use appropriate sharps containers.
- ▶ Discard used sharps immediately.
- ▶ Do not pass sharps by hand.
- ▶ Avoid recapping needles.
- ▶ Do not force sharps into container.
- ▶ Do not over-fill sharps containers.
- ▶ Segregate correctly.



Environmental Cleaning

Deposits of dust, soil and microbes on surfaces are a potential source of infection. Cleaning tips:

- ▶ Neutral detergent is used for routine cleaning.
- ▶ Disinfectants may be required in some situations - gastro, MROs.
- ▶ All cleaning equipment should be stored dry.
- ▶ Surfaces should be cleaned regularly and immediately following blood and body fluid spills.



Blood and Body Substance Spills

The nurse is responsible for cleaning up blood or body substance spills immediately. Cleaners can clean the area once this is completed.

Spill cleaning tips:

- ▶ use personal protective equipment
- ▶ confine and contain the spill
- ▶ treat waste as infectious
- ▶ clean spill site according to hospital policy
- ▶ clean carpet with neutral detergent and arrange carpet steam cleaner as soon as possible, and
- ▶ use a chlorine based disinfectant for hard surfaces as directed by your hospital policy.



Waste Management

- ▶ Waste should be segregated at point of generation.
- ▶ Know before you throw - put the right waste in the right bin.
- ▶ Place **clinical waste** in yellow containers or bags bearing biohazard symbol.
- ▶ Do not over fill bags or containers.
- ▶ Do not compact by hand.
- ▶ Follow relevant jurisdiction legislation, guidelines or codes of practice as outlined in local policy.

Linen Management

CLEAN LINEN



- Do not over fill bags (3/4 full).
- No sharps into soiled linen.
- Do not carry soiled linen in your hands.
 - Prevent seepage.
- Do not leave/store linen bags on the floor.
 - Use gloves to handle moist linen.

Food Hygiene

- ▶ Food safety training required if preparing food.
- ▶ Appropriate hand hygiene.
- ▶ Regular cleaning of serving and storage areas.
- ▶ Pest and dust control.
- ▶ Date and cover prepared food stored in the fridge.
- ▶ Maintain safe food temperatures and keep records as per local policy:
 - ▶ Hot food - $>60^{\circ}\text{C}$
 - ▶ Cold food - $<5^{\circ}\text{C}$



Occupational Exposure



Immediate management:

- ▶ First aid - washing of area.
- ▶ Eye splashes - rinse thoroughly.
- ▶ Report incident promptly.
- ▶ Evaluation of exposure to determine risk.

Follow-up action:

- ▶ Counselling.
- ▶ Blood tests if required.
- ▶ Full documentation of incident.

Your Health and Safety

- ▶ Always follow local policy and procedures.
- ▶ Maintain good personal hygiene.
- ▶ Seek prompt diagnosis and treatment of personal illness.
- ▶ Some illnesses require you to be away from work until symptoms cease. For example 48 hours after the last bout of diarrhoea for Gastroenteritis and 5-7 days for Influenza.
- ▶ Staff immunisation:
 - ▶ Hepatitis B
 - ▶ Influenza
 - ▶ MMR
 - ▶ Pertussis
 - ▶ Varicella zoster



Take Care

.... of yourself and your patients



Infection Prevention and Control Phone Number:.....
