

References

NHMRC (2010) Australian Guidelines for the Prevention and Control of Infection in healthcare. Commonwealth of Australia
<http://www.nhmrc.gov.au/guidelines/publications/cd33>

Victoria: Disease Information and Advice (online)
<https://www2.health.vic.gov.au/public-health/infectious-diseases/disease-information-advice>

Victoria: Environment Protection (Industrial Waste Resource) Regulations 2009

EPA Victoria: Industrial Waste Resource Guidelines—Clinical and Related Waste Operational Guidance 2009
<http://www.epa.vic.gov.au/business-and-industry/guidelines/waste-guidance/clinical-waste-guidance>

Additional Resources

For other booklets and resources visit the Grampians Region Health Collaborative Website—Infection Control at:

Cartoons in this booklet by
<http://www.davegibb.com.au/index.htm>



THE ORIGINAL LITTLE YELLOW INFECTION CONTROL BOOK

INFECTION CONTROL
STARTS WITH ME



Grampians Region Infection Control Group

2018

ABOUT THIS BOOK

The Original Little Yellow Infection Control Book was designed to fill the need for simple, point-of-first-use infection control information for healthcare workers.

It is not designed to be a comprehensive infection control manual. Practitioners seeking detailed information should refer to their agency Infection Control Manual.

This book attempts to provide appropriate infection control principles, as specific procedures vary from agency to agency.

Concept and production by:

Bruce Fowkes

Mary Smith
mary.smith@dhhs.vic.gov.au

Sue Atkins
sue.e.atkins@dhhs.vic.gov.au

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Answers to self-test questions

1 — a,b,c,d,e	6 — c	11 — c
2 — b	7 — b	12 — b
3 — a	8 — b,c	13 — c
4 — b	9 — a,b,c,d	14 — a,b,d
5 — c	10 — b,c	



Disclaimer:

Every effort has been taken to confirm the accuracy of the information presented in this booklet, however, the authors, are not responsible for errors or omissions or for any consequences from application of the information in the booklet and make no warranty, express or implied, with respect to the contents of the publication. In view of ongoing research, changes in government regulations and the flow of other information, the information is provided on the basis that all persons undertake responsibility for assessing the

Chlorine solution – Concentrations Required for Disinfection—comes in tablets, sachets and solution

Concentrated chlorine with 4% available chlorine (household bleach) can be diluted using the table below to achieve the concentrations shown					Granular Chlorine (5,000 ppm Sachet) dilution	
Water volume to which chlorine added	200 ppm	500 ppm	1000 ppm	5000 ppm	One sachet 5,000 ppm	Water volume to which chlorine added
1 litre	5 ml chlorine	12.5 ml chlorine	25 ml chlorine	125 ml chlorine	5000 ppm (1 sachet)	1 litre
5 litres	25 ml	62.5 ml	125 ml	625 ml	1000 ppm	5 litres
10 litres	50 ml	125 ml	250 ml	1250 ml	500 ppm	10 litres
50 litres	250 ml	625 ml	1250 ml	6250 ml	200 ppm	25 litres

USE	DILUTION
Blood / body fluid spills	5,000 ppm
Clostridium difficile (<u>minimum</u> 1000 ppm)	1,000 ppm
Viral gastroenteritis/ Pandemic flu	1000 ppm
VRE	500—1,000 ppm
Food preparation area	200 ppm

Note: Tablets, sachets and solution come in different strengths – check strength before diluting to desired concentration.

Sanitisers/disinfectants will not work correctly if the surface to be sanitised has not been thoroughly cleaned first.

Sanitisers will only work correctly if they are used in the correct concentrations and the instructions are followed.

The effectiveness of chemical sanitisers can be directly affected by:

- temperature
- pH
- concentration of the sanitiser solution used (too little or too much)

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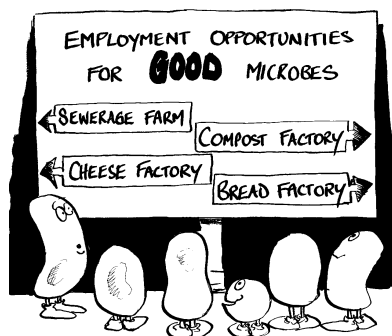
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ABOUT MICROBES

Microbes are microscopic living organisms which live in environments which provide the factors they require to survive.

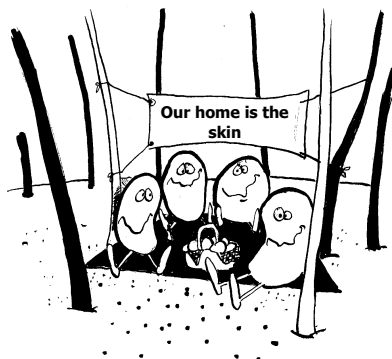
Different species of microbes are found almost everywhere.

Most microbes are of benefit to humans, as they are vital for many fermentation, and degradation processes.



Several species of microbes live on or in humans and animals on the skin or in the large bowel, and do not cause harm unless they gain access to parts of the body which are usually microbe-free such as the blood, kidneys, brain, etc.

These groups of microbes are called commensals, normal flora, or indigenous microflora.

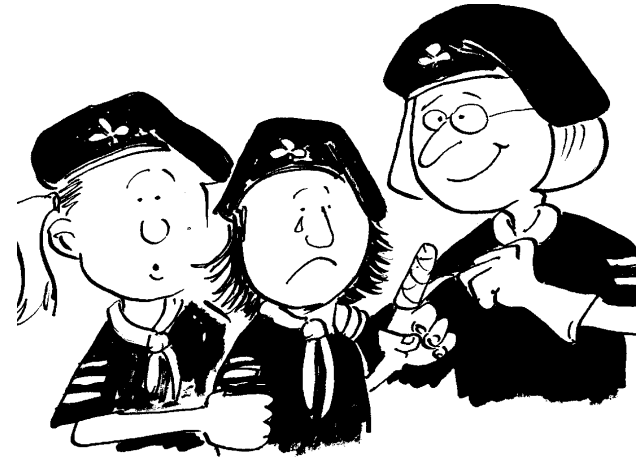


Droplet Precautions	Contact Precautions
Haemophilus influenza meningitis/epiglottitis Neisseria meningitidis septicaemia/meningitis Ψ Diphtheria (Pharyngeal) Mycoplasma (pneumonia) + Pertussis Influenza + Parainfluenza Mumps ** Parvovirus B19 Rubella ** Pneumonic plague Group A Streptococcal infections in infants and young children Group A Streptococcal pneumonia, scarlet fever in all age groups Ψ	Resistant Bacteria (MRSA, VRE, others named by Infection Control Committee) + C.difficile + RSV + Herpes simplex (neonatal or mucocutaneous) Highly contagious skin infections (i.e. scabies, lice, impetigo)+ Infants/young children (<6 years), or any patient incontinent with: Enterovirus Hepatitis A Rotavirus, Shigella, Giardia, other forms of gastroenteritis
Yes	If possible, or cohort with patient with like condition
No	No
Yes	Yes
See Standard Precautions	Yes
See Standard Precautions	If HCW's clothing will have substantial contact with the patient, environmental surfaces or items in the patient's room
Yes	See Standard Precautions
See Standard Precautions	See Standard Precautions
See Standard Precautions	Single use or disinfect before next patient
Regular mask for patient Notify area receiving patient	Notify area receiving patient
Cohort requires one metre of patient separation	Remove gloves and gown, wash hands before leaving patient room
+ Refer to specific local policy Ψ Droplet precautions for Haemophilus and meningococcal infections only need to be continued until the patient has had 24 hours of effective antibiotic treatment. The same applies for Group A Streptococcal infections, as far as pharyngeal carriage is concerned. Group A Streptococcal infections may need to be isolated in special circumstances, such as burns units, until there is evidence of clearance of the organism from the burn.	

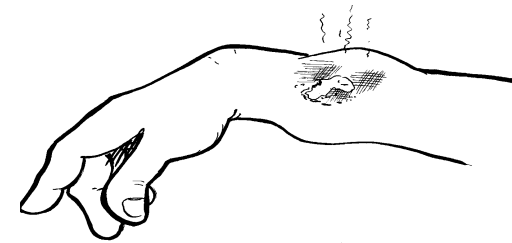
Isolation Type	Standard Precautions	Airborne Precautions
Disease Examples	All patients All blood, body fluids, secretions (except sweat), excretion and contaminated ites	TB—suspect/confirmed Measles ** Add Contact Precautions as well: Varicella (chickenpox) ** Zoster, disseminated ** Zoster, immunocompromised ** Viral haemorrhagic fever, e.g. Ebola ***
Single Room	No *	Yes—door closed
Negative Pressure	No	Yes—keep room vacant one hour post discharge of patient 2—3 hours for Measles
Hand Washing	Yes	Yes
Gloves	For body substances	See Standard Precautions
Gown	If soiling likely	See Standard Precautions
Mask	Protect face if splash likely	Particulate mask for TB only. All others, regular mask.
Goggles/Face Shields	Protect face if splash likely	See Standard Precautions
Special Handling of Equipment	No—all blood/body substances handled with care ****	See Standard Precautions
Transport of Patients	Cover all patient's open wounds	Particulate mask for patient with TB. All others, regular mask for patient. Notify area receiving patient
Miscellaneous	Avoid contaminating environmental surfaces with gloves	Teach patient to cover nose and mouth when coughing or sneezing
<p>* Except certain circumstances determined by Infection Control, e.g. neutropenic/transplant patients</p> <p>** All personnel should know their varicella, measles, mumps and rubella status (only immune personnel should care for these patients).</p> <p>*** All waste should be treated as "Clinical Waste"</p> <p>**** Handle needles, syringes and sharps with care. Use rigid containers for disposal. DO NOT recap, break or bend needles. Exposure to blood/body substance—immediately wash site, notify supervisor and seek management of exposure.</p>		

ABOUT INFECTIONS

Many species of microbes can cause infection/disease in humans. Infection-causing microbes are called pathogenic microbes. Pathogenic microbes vary in their ability to cause infections in humans depending on their ability to invade, overcome body defences, survive; and multiply within the body.



The normal flora of an area can cause infections (become pathogenic) if they are able to access, or are carried to, body areas which are usually microbe-free,. For example, microbes which are normal flora on the skin may gain access to the tissues by accidental or surgical penetration of the skin.

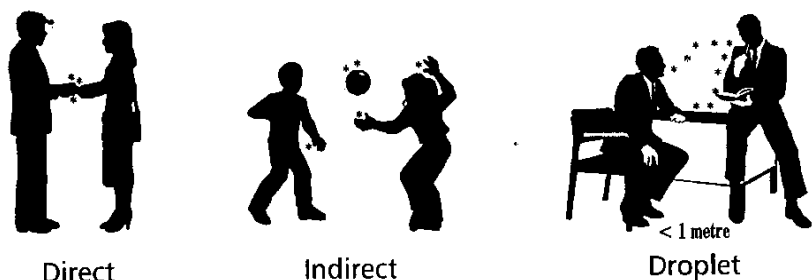


MICROBIAL RESERVOIRS

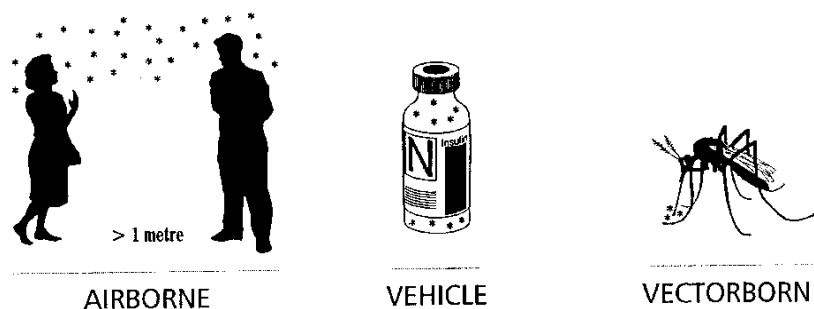
Microbes can survive in many environments:

- on or in people, as normal flora
- on or in people who have infections
- in a large range of animal species as normal flora or infections
- in contaminated food or fluids
- on contaminated articles

Microbes are transmitted by:



CONTACT



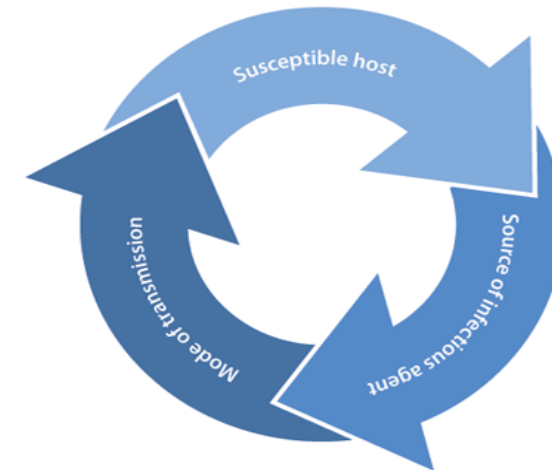
Health Canada

	GASTROENTERITIS
	Norovirus , other - foodborne, waterborne, antibiotic related
	Nausea and/or vomiting – can be explosive Diarrhoea – can be projectile Stomach pain/cramps, fever, generally feeling unwell
	Range 10 – 50 hours – usually 1 -2 days
ing sick	48 hours after last symptom of vomiting and/or diarrhoea
	2 or more cases (residents or staff) within 72 hours
	Faecal specimen as soon as possible after onset (from up to 5 cases)
	Infection control consultant ICC commences case list Fax to 1300 651 170
t team ected 24 hours	Executive staff – may establish outbreak management team DHHS CDU – 1300 651 160 Local EHO -
	Contact (Droplet when dealing with vomit or diarrhoea)
ose contact spiratory	Gown and gloves when entering the room of unwell resident Gown, gloves and mask when dealing with vomit and/or diarrhoea
ed	Hands that are visibly soiled are washed with soap and water before and after all patient contact, ABHR is readily available in the unit
d at least	Frequently touched surfaces are cleaned and sanitised at least <u>twice</u> daily. Surfaces soiled with faeces or vomit must be cleaned with detergent and water followed by wiping with a chlorine solution 1000 ppm – leave for 10 minutes – then rinse with cold water and dried
	Chlorine 1000 ppm
et of	A minimum of 48 hours after symptoms have ceased in last case

Version 1 - GRICG February 2017

	RESPIRATORY ILLNESS
Causative organisms:	Influenza , other - RSV, adenoviruses, rhinoviruses
Case definition:	Sudden onset of fever (>38°C) <u>plus</u> Cough and/or other respiratory symptoms <u>plus</u> Fatigue, muscle soreness, headache (one or more)
Incubation period:	Range 1-4 days - average 2 days
Period of infectivity:	Shortly before symptoms up to 5 – 7 days after becoming ill
Definition of an outbreak:	3 or more case (residents or staff) within 72 hours
Diagnostic specimens:	Nose and throat swabs within 48 after onset
Report to:	Infection control consultant ICC commences case list Fax to 1300 651 170
ICC reports outbreak to:	Executive staff – may establish outbreak management DHHS CDU – 1300 651 160 – ASAP if outbreak is <u>suspected</u> Notify DHHS of any hospitalisations or deaths within 24 hours
Transmission based Precautions	Droplet
PPE (in addition to Standard Precautions)	Surgical face mask when entering the room for any clinical care Gown, gloves, mask and eye protection when taking respiratory specimens
Hand hygiene	ABHR Wash with soap and water when hands are visibly soiled
Cleaning	Frequently touched surfaces are cleaned and sanitised <u>twice</u> daily.
Disinfectant	Alcohol or chlorine 1000 ppm
Declaring outbreak over	If no new cases have occurred in 8 days from the onset of symptoms of the last resident case.

Three Requirements for Infection Transmission



1. Susceptible host

- Older person
- Babies
- Someone with a chronic medical condition
- Smoker

2. Source of infectious agent

- Food
- Water
- Objects
- Environment

3. Mode of transmission

- **Contact**
Directly or indirectly from person or object
- **Droplet**
Large droplets from respiratory secretions that float in the air for a short time and then drop to the ground
- **Airborne**
Small droplets from respiratory secretions that float in the air for some time before settling.

PREVENTING INFECTION TRANSMISSION

Consistent use of proven infection control precautions has been shown to substantially decrease infections occurring in both clients and staff.

Infection control precautions are of two levels depending on the possible mode of transmission, and the risk posed by contaminating microbe.

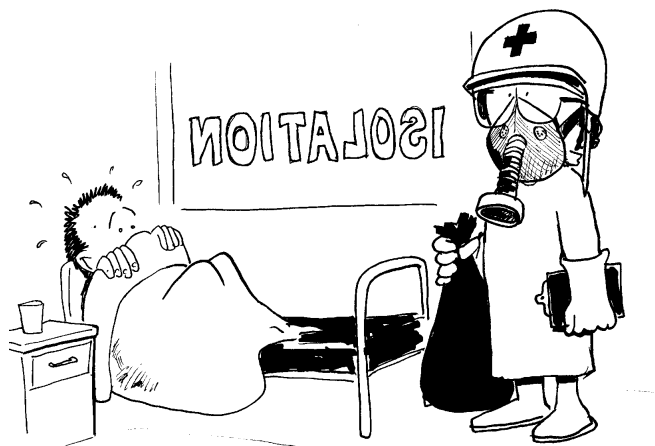
Standard Precautions

Used for **all** patient contacts

Transmission-based Precautions

Used in addition to Standard Precautions when the infecting microbes require more stringent precautions to contain, for example: multiple antibiotic resistant organisms like MRSA.

Also used when the infecting microbes are transmitted by the respiratory route, for example: TB, Influenza



BIOLOGICAL SPILL

- Assess the volume of spill to be removed
- Prevent access to the spill area
- Don protective apparel
- Soak up spill with paper towel/absorbent granules
- Dispose of absorbent material into infectious waste bag
- Clean area of spill using neutral detergent/warm water
- A chlorine compound (sodium hypochlorite 5,000 ppm) MAY be necessary for bench top spills following cleaning) - consult your infection control manual.

Examples:

Contain 5,000 sachet—1 sachet to 1 litre of water

OR

Household Bleach 125 ml to 1 litre of water; leave on for 10 mins, then sponge off using clean cloth and warm water

- Place all used disposable protective apparel into the infectious waste bag and tie securely
- Wash hands.

FOOD HYGIENE

Microbial growth/toxin production in food can cause serious outbreaks of food poisoning.

Risk Management:

- Hand washing/disposable glove use in food preparation/serving
- Regular cleaning of food preparation/serving areas and food storage units
- Prepared food stored in refrigerators dated and covered with glad wrap
- Maintenance of temperatures which inhibit microbial growth **to point of food consumption**
 - ✧ Hot food $>60^{\circ}\text{C}$
 - ✧ Cold food $<5^{\circ}\text{C}$
 - ✧ includes salads and pre-made sandwiches
 - ✧ Pest and dust control
- Pest and dust control



STANDARD PRECAUTIONS

Rationale

Standard Precautions are used for all patient care to prevent infection transmission because any person, their body fluids and excretions; may be colonised or infected with transmissible microbes.

Precautions consist of:

- Hand hygiene
- Use of Personal Protective Equipment (PPE)
- Safe use and disposal of sharps
- Routine environmental cleaning
- Reprocessing of reusable medical equipment
- Respiratory and cough hygiene
- Aseptic non-touch technique
- Waste management
- Appropriate handling of linen

Standard Precautions should be used in handling of blood (including dried blood); all other body substances, secretions, and excretions (excluding sweat), regardless of whether they contain visible blood, non intact skin and mucous membranes.

Routine infection control measures to be used at all times during patient care

STANDARD PRECAUTIONS



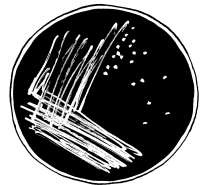
Reservoirs

- Infected or colonised persons - especially patients with purulent discharge or draining lesions
- Patient populations in which high antibiotic use selectively favours the growth of bacterial strains which have developed antibiotic resistance factors (e.g. Intensive Care Units)

Patients most at risk

Those with compromised body defences:-

- Underlying medical conditions
- Immuno-compromised patients
- Invasive medical devices — IV lines, tubes, drains
- Surgery
- Prolonged hospitalisation
- Recent antibiotic therapy
- ICU stay



Transmission

- **Hands of attending health care workers**
- Contact with equipment in general use
- Contact with “high touch” surfaces

Prevention of Transmission

1. Follow **Standard Precautions** to prevent body fluid contact with all patients:
 - Hand hygiene
 - Use of protective equipment, disposable gloves, clothing and eye protection based on degree of risk
2. Establish **Contact Precautions**:
 - Single room, or cohort with other patients with the same organism
 - Use disposal gloves for all patient contact
 - Change gloves immediately following contact with infective material, and perform hand hygiene
 - Emphasise hand hygiene with alcohol/chlorhexidine rub
 - Limit patient movement and transport, ensure precautions are continued by notifying receiving unit
 - Provide dedicated equipment
 - Clean room daily, **and** frequently disinfect “high touch” room surfaces if required for particular organism.

MULTIPLE DRUG RESISTANT ORGANISMS (MROs)

Increased antibiotic-resistance (drug resistance) occurs when bacteria previously susceptible to an antibiotic are no longer inhibited by it. There is increasing resistance-development in a number of bacterial species to a number of antibiotics. This is related to the level of use of the particular antibiotic (or family of antibiotics).

Resistance-factors may be developed in previously susceptible bacteria by mutation or by gene transfer from antibiotic-resistant species.

Antibiotic resistant bacteria of current concern include:

- Methicillin-resistant *Staphylococcus aureus* (MRSA)
- Vancomycin-resistant *Enterococcus faecium* and *faecalis* (VRE)
- Multi-resistant gram negative bacteria including those which have extended beta-lactamase enzymes (ESBL)
- Vancomycin-intermediate *Staphylococcus aureus*, (VISA), and emerging vancomycin resistant *Staphylococcus aureus* (VRSA).
- Carbapenemase-producing Enterobacteriaceae (CPE)

Effects

Although antibiotic-resistant bacteria are not usually more virulent than antibiotic sensitive strains, resultant infections are more difficult to treat due to limited antibiotic options. Increased mortality and length of hospital stay are more likely.

Differences in risk are related to complexity of health agency activity

Tertiary hospitals have more patients at higher risk of developing infection with antibiotic-resistant infections (more invasive activities, sicker patients, higher antibiotic use).

Residential care facilities may have varying degrees of resident colonisation, but appear less likely to develop infections due to antibiotic-resistant organisms, except in immuno-compromised residents.

TRANSMISSION– BASED PRECAUTIONS:






CONTACT PRECAUTIONS

IN ADDITION TO STANDARD PRECAUTIONS



- VISITORS -

PLEASE SEE NURSE IN CHARGE PRIOR TO ENTERING

Before entering room:	
	Put on apron or gown
	Perform hand hygiene and put on gloves
On leaving room:	
	Discard gloves and apron
	Clean patient-related equipment
	Perform hand hygiene



Contact Precautions are indicated for care of patients identified or suspected of having multiple-antibiotic-resistant microbes, and for isolation of patients with gastroenteritis which does not have an aerosol-spread component.

TRANSMISSION-BASED PRECAUTIONS:

DROPLET PRECAUTIONS

IN ADDITION TO STANDARD PRECAUTIONS



- VISITORS -

PLEASE SEE NURSE IN CHARGE PRIOR TO ENTERING

Before entering room:	
	Perform hand hygiene
	Put on a surgical mask
On leaving room:	
	Discard mask
	Clean patient-related equipment
	Perform hand hygiene

KEEP DOOR CLOSED AT ALL TIMES



Droplet Precautions are indicated for patients with respiratory infections which produce droplets during coughing or sneezing which travel less than 1 metre, e.g. pertussis (Whooping cough)

SHOULD YOU BE AT WORK?

Infectious diseases in staff can be readily transmitted to susceptible patients.

Respiratory infections e.g. the “flu”, can be transmitted to patients by respiratory secretions shed by coughing/sneezing/your hands.

Infections on your skin or eyes can be transmitted to patients by your hands.

Diarrhoeal infections can be transmitted to patients by your hands, on articles you have touched, on food you have handled. A **minimum period** of 48 hours free of diarrhoea/vomiting is usually required before return to work. Even after return to work following a diarrhoeal infection you may continue to excrete some virus in your faeces for over a week. Therefore diligent hand hygiene (preferably hand **washing**) is particularly important.

IF YOU ARE ILL PLEASE CONSULT YOUR GP or
STAFF CLINIC.



STAFF HEALTH AND HYGIENE

A high level of personal health, appropriate immunisations and good personal hygiene provides good baseline protection for Health Care Workers.

The adherence of staff to good infection control practices provides a further level of protection.

- Clothing - Clean work clothing
- Hair - Clean and away from face, avoid touching during ward work
- Jewellery - hand and wrist jewellery has been found to carry pathogenic micro-organisms - avoid jewellery use.

Hand Care

- Hands kept moisturised
- Fingernails short
- Artificial fingernails and nail polish have been indicted in infection transmission
- If hands affected by rash/dermatitis/reactions to hand hygiene products please see your Infection Control Professional.



TRANSMISSION-BASED PRECAUTIONS:

AIRBORNE PRECAUTIONS

IN ADDITION TO STANDARD PRECAUTIONS



- VISITORS -

PLEASE SEE NURSE IN CHARGE PRIOR TO ENTERING

Before entering room:	
	Put on a P2 mask/respirator
	Perform fit check
	Food services speak to nurse
On leaving room:	
	Discard mask
	Clean patient-related equipment
	Perform hand hygiene

KEEP DOOR CLOSED AT ALL TIMES



Airborne Precautions are indicated for patients with respiratory infections which produce fine aerosols which can be dispersed by air currents, e.g. TB, measles

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Non-sterile, disposable examination gloves are used for patient contacts where contact with body fluids could occur.



Gown or plastic apron is used to protect staff from more extensive splashes.



Protective eye wear (wrap around glasses or eye shield) is used to protect from eye splashes.



A surgical mask is adequate to protect against splash or spray of body fluid.



A high filtration mask(N95/P2) is required to protect against fine aerosols generated in TB, measles, chicken pox, and close contact with norovirus patients

More Self — test questions Page 3

11. The period of exclusion from work following the cessation of diarrhoea /vomiting caused by Gastroenteritis is:
 - A) 24 hours
 - B) 72 hours
 - C) 48 hours
12. Hot food should be served to patients:
 - A) below 40°C
 - B) above 60°C
 - C) above 85°C
13. The following items should be containerised as Clinical Waste:
 - A) clean, used bandages
 - B) used incontinence pads with no visible blood
 - C) bloody wound dressings
- 14 The following conditions are necessary for the storage of sterile supplies:
 - A) dust free
 - B) moisture free
 - C) in reusable cardboard boxes
 - D) free from strong sunlight

OCCUPATIONAL EXPOSURE

Needle stick injury or splashes with body fluids require:

- Immediate washing of area with detergent wash or antimicrobial wash
- Eye splashes should be rinsed well with water
- Report exposure to Supervisor, Nursing Administration, ICP or Staff Clinic
- Complete and lodge Accident Report
- Undertake blood tests and/or counselling organised by Nursing Administration, ICP or Staff Clinic.





OR



STAFF IMMUNISATION—ARE YOU COVERED?

There are specific immunisations recommended for Health Care Workers who have significant patient contact.

Diphtheria / Tetanus

Most health care workers will have received a primary course of diphtheria/tetanus vaccine however, if in doubt, offer three doses at one-monthly intervals. Recommend a further dose on the 50th birthday.

Polio

Most health care workers will have received a primary course of polio vaccine, however, if in doubt, offer three doses of IPV vaccine at one-monthly intervals

Pertussis

Booster dose for direct care workers in Maternity/Neonatal units, and in community outbreaks.

Measles/Mumps/Rubella

Document at least two doses of a measles-containing vaccine for all staff born since 1966. Those born prior to 1966 are considered immune. If in doubt, offer two doses of MMR vaccine a minimum of one month apart.

Chicken pox (Varicella Zoster virus)

Immunisation if no definite history of the disease and negative serology.

Hepatitis B

A full course of three staged injections, followed by a blood test to check antibody production. **It is absolutely essential to know that you have developed antibodies as a result of the immunisation!**

Hepatitis A

Staff in contact with patients from Indigenous communities, in paediatric wards, infectious disease wards, emergency rooms and intensive care units or who frequently attend patients in rural and remote Indigenous communities. Plumbers & sewage workers.

Influenza

Annual influenza vaccine to all staff in direct care of patients

Tuberculosis

See details in Management, prevention and control of tuberculosis: guidelines for health care providers—DHHS May 2015

Reference: [DHHS Immunisation Guidelines for HCWs](#)

Immunisation

- Your Extra Protective Umbrella



HAND HYGIENE

Staff hands **are the most common vehicle** for infection transmission.

Staff hands can transmit organisms from the following sources:

- Resident hand flora (own skin micro-organisms)
- Transient hand flora (micro-organisms picked up from contact with persons and articles)
- Infectious hand conditions (organisms from actual hand infections e.g. paronychia).

Risk Management:

- Application of alcohol/chlorhexidine hand rub prior to patient contacts, after patient and equipment contacts, before gloving, and after glove removal.
- Hand washing following contact with body fluids, or contact with moist soiled linen
- Use of disposable gloves to prevent gross level contamination in body fluid contact situations.

Routine (Hygienic) Hand Wash

- Only wash hands if they are visibly soiled
- 15 second wash with neutral hand wash
- Cover all hand surfaces
- Rinse and dry well (by dabbing) to avoid skin problems.

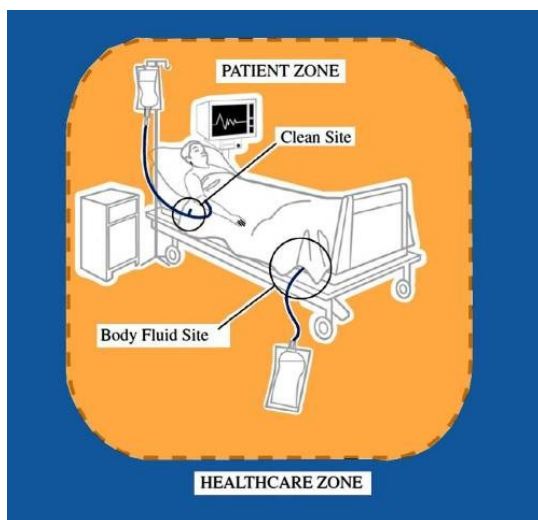
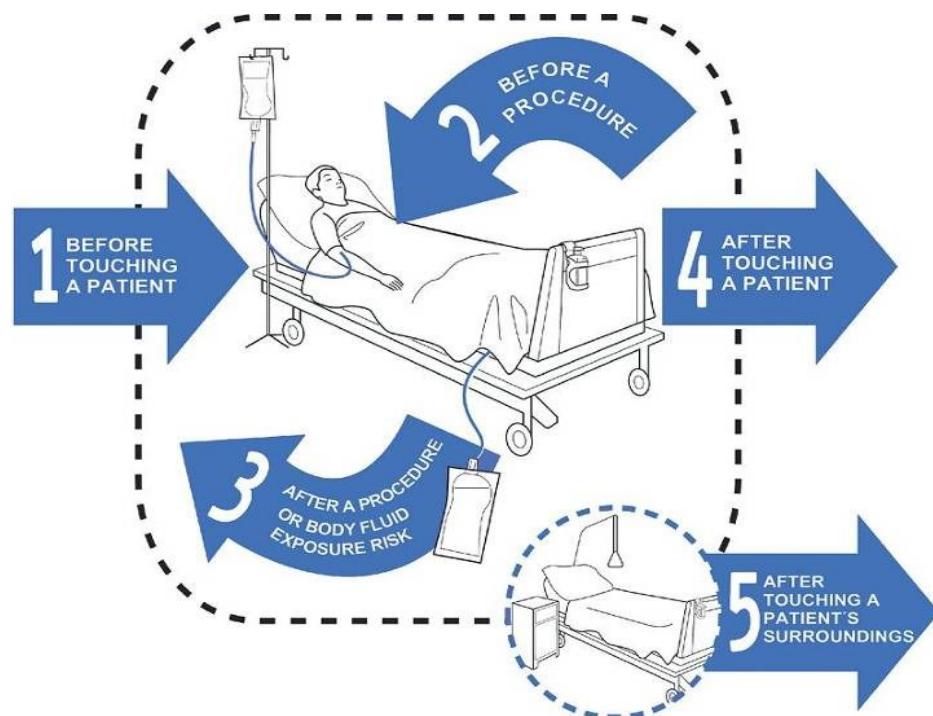
Application of alcohol based hand rub (ABHR)

- ABHR is used when hands are not visibly soiled, and **is the most convenient form of hand hygiene**
- Apply sufficient rub (usually 1-2 squirts), rub hands together vigorously for 15 seconds or until dry. Cover all surfaces including finger tips and thumbs.

Keep Hands in Good Condition

- Apply hospital-supplied water-based moisturiser at

HAND HYGIENE



SHARPS

A sharp is any item capable of penetrating human tissue.

All sharps used on people have the potential to transmit blood-borne infections.

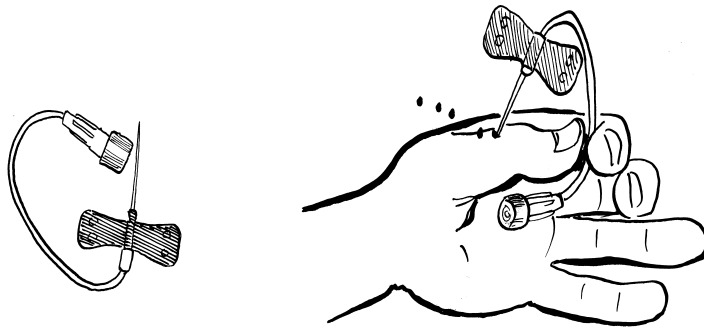
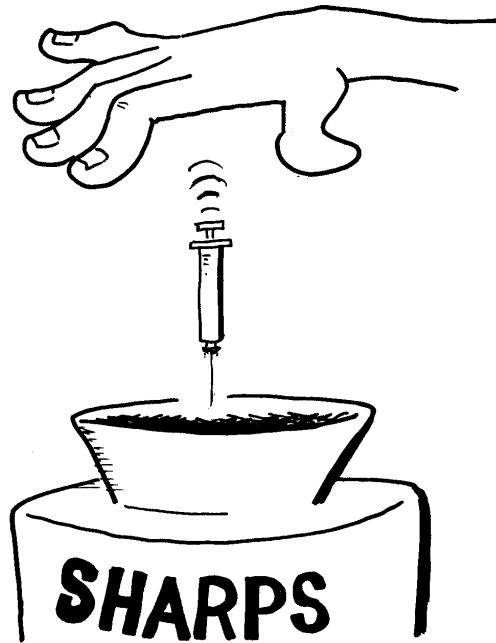
Risk Management:

Used sharps must be:

- Immediately placed in a sharps bin after use (Sharps containers must meet AS/NZ Standards 4031—non-reusable or 4261 reusable containers)
- Not handed to other staff
- Used injection needles are not removed from syringe and not recapped (except by single-handed system)
- Sharps bins securely locked when up to the FILL LINE, and safely transported to secure storage area
- Sharps containers mounted on wall or trolley, not stored on floor
- Butterfly needles are ONLY handled by both wings.

Protective devices such as needle-less injection systems and IV safety cannulae **must** be used when supplied by your agency.

RESPIRATORY (COUGH) HYGIENE



Respiratory Hygiene



When you cough or sneeze cover your mouth and nose with a tissue



Dispose of soiled tissue in the rubbish bin immediately



If you do not have a tissue, cough or sneeze into the inside of your arm



Clean your hands afterwards



GRICG 2011

GLOVE USE

Disposable examination gloves should be used when contact with body fluids is anticipated.

Allergic reactions to latex can occur, and this can be made worse by contact with glove powder.

Most examination gloves are now powder-free.

Latex-free (nitrile) examination gloves will be provided for staff who have a latex allergy.

Disposable gloves are single use, and require discarding after patient contact, prior to attention to a clean site on the same patient; and if a glove becomes damaged.

As gloves may develop minute holes during handling or use, or hands may become contaminated during glove removal, hand hygiene is always required following glove removal.



Self — test questions Page 2

6 Used sharps should be:

- A) handed to another person for disposal
- B) recapped prior to disposal
- C) immediately placed in a sharps container

7. Medical supplies labelled as **SINGLE USE** should be:

- A) re-used after soaking in an appropriate disinfectant
- B) not reused
- C) re-used after sterilisation in CSSD

8. Soiled linen which is heavily contaminated with body substances should be:

- A) rinsed off in ward sluice
- B) handled with gloved hands
- C) wrapped in other soiled linen or bagged in impermeable bag to prevent leakage

9. When caring for a patient coughing substantial blood the following PPE is required:

- A) disposable gloves
- B) plastic apron or gown
- C) protective goggles
- D) mask

10. Pathology specimens are sealed in transport plastic bags to:

- A) avoid people seeing the “yucky stuff” inside
- B) guard against spillage of potentially infectious material
- C) prevent possible separation of Request Form from specimen

Self — test questions Page 1

Please select all correct choices for each question.

1. Hand hygiene is necessary:

- A) before physical contact with a patient
- B) before performing a sterile dressing
- C) after emptying a catheter drainage bag
- D) after glove removal
- E) after contact with body substances

2. Standard precautions refer to:

- A) specific precautions used for infectious diseases
- B) routine precautions used for all patient care

3. Airborne precautions refer to:

- A) Additional precautions used for infections spread by fine respiratory aerosols
- B) Additional precautions used for infections spread by large respiratory droplets

4. The most common vehicle for spread of infection in hospitals is:

- A) contaminated linen
- B) staff hands
- C) poorly maintained air conditioning

5. When hands are visibly soiled the appropriate procedure is:

- A) application of chlorine
- B) application of alcohol based hand rub
- C) hand washing

MASK USE

Masks are single use items which need to be used and disposed of correctly to prevent transmission of infectious particles from them

Masks must be:

- Moulded to the face when applied, to produce the best seal possible
- Selected for the appropriate level of respiratory protection required:
 - ⇒ **Surgical mask** — when spray of body fluids may access the respiratory passages or the mouth
 - ⇒ **High filtration mask** — N95/P2 when fine airborne aerosols are to be protected against
- Not touched when in use
- Removed with clean hands, using the ties
- Replaced when moist
- Disposed of directly into a waste bin

Danger zone for absorption of viruses

- ✧ Eyes
- ✧ Nose
- ✧ Mouth



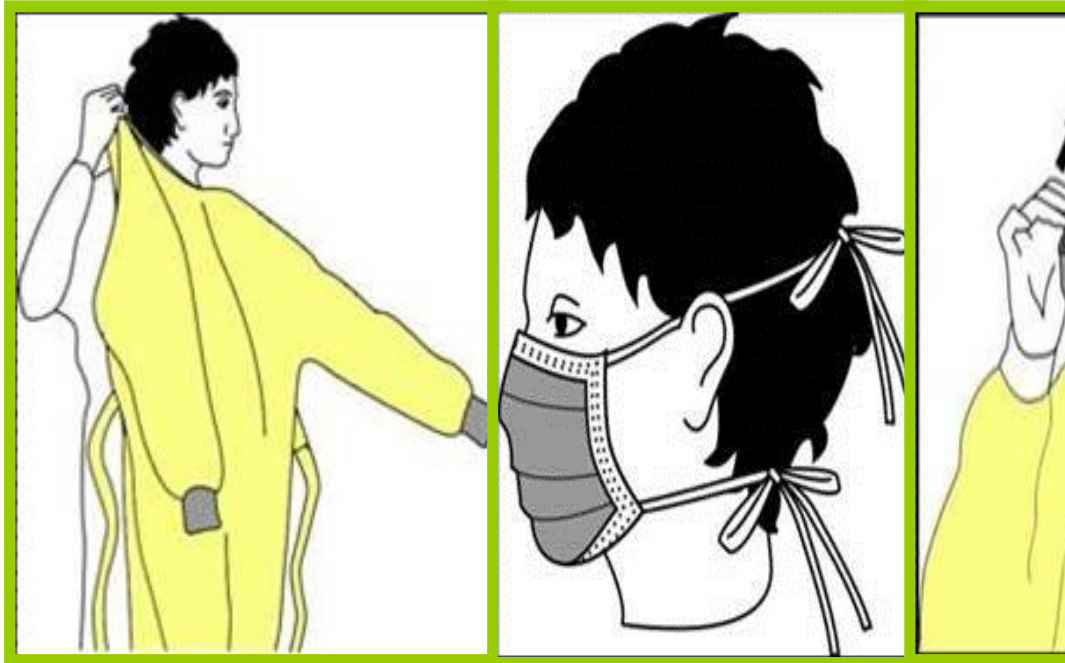
Masks and eye-wear will provide protection

Personal Protection

Gown

Mask

Eye



Putting On PPE

1. perform hand hygiene
2. put on gown or apron
3. put on surgical mask
4. apply protective eyewear such as goggles or face shield, and lastly
5. apply gloves.

PATHOLOGY SPECIMENS

Improperly sealed containers can be an infection threat to pathology staff.

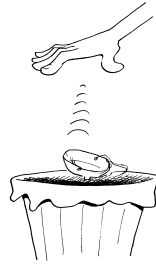
- Decontaminate outside of specimen container with chlorine solution if soiling occurs
- Ensure container is sealed
- Label container clearly with information from pathology request slip
- Place specimen and request slip in appropriate pockets of Biohazard Plastic bag
- Time is critical for transport of specimens to pathology for microbiology tests
- If prompt transport of specimens for microbiology is not possible, refrigeration is required.

Check with your Nurse Manager/Pathology manual.



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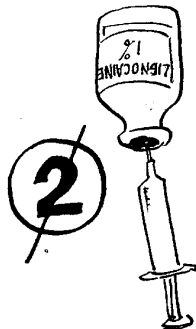
SINGLE USE



**DO NOT REUSE
“SINGLE PATIENT USE”
ITEMS ON ANY OTHER
PATIENT**

Items marked “*Single Patient Use*”
e.g. oxygen masks, nebulisers, can
be used for the same patient **ONLY**,
after washing and thorough drying

Multi-dose vials may **only** be used
on the same patient i.e. one patient
then discarded.

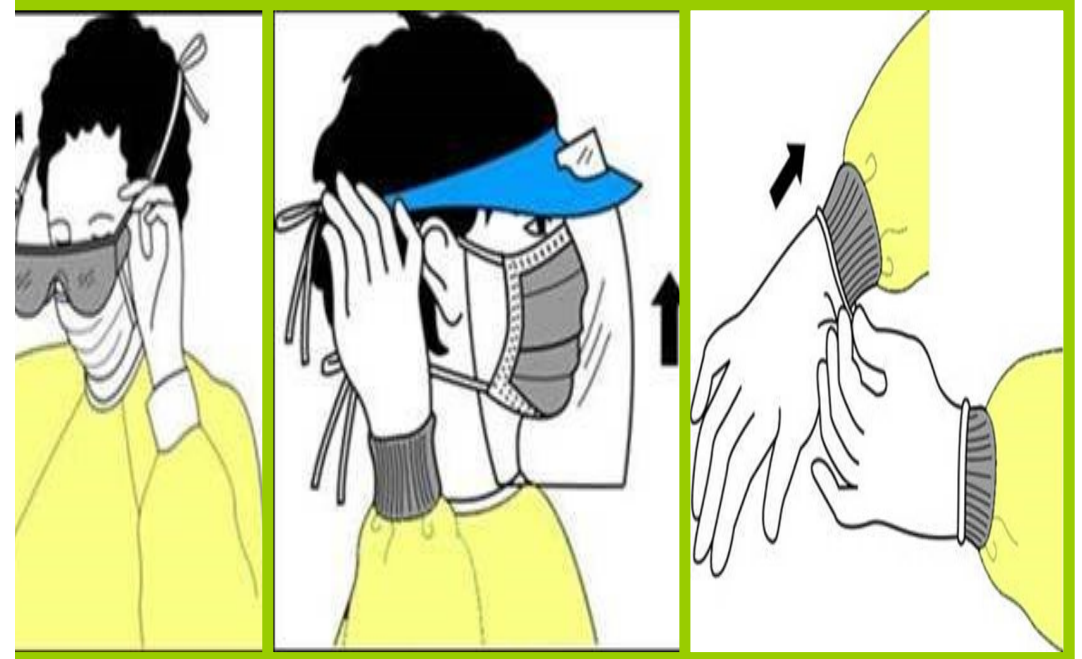


ive Equipment

Wear

Face Shield

Gloves



Removing PPE

1. remove gloves
2. perform hand hygiene
3. remove protective eyewear such as goggles or face shield
4. remove gown or apron
5. remove surgical mask, and lastly
6. perform hand hygiene again.



STORAGE OF STERILE GOODS

Sterile goods of commercial, or CSSD origin must be stored in the following conditions to maintain sterility:

- Dust free (preferably in containers with lids)
- Moisture free
- Separate from used items
- Not in strong sunlight
- Store items at least 220 mm from floor
- Store items 440 mm from ceiling
- Do not reuse cardboard boxes for storage containers
- Do not use elastic bands around packaging
- Do not squash packages into small containers
- Not stored in a contaminated environment (eg pan room)
- Separate from non-sterile supplies.



DISINFECTION/STERILISATION

The ONLY effective technique for sterilisation of reusable medical articles in hospitals is STERILISATION BY STEAM UNDER PRESSURE.

Instruments requiring steam sterilisation after ward use are rinsed under running water, and placed in the CSSD collection bin for return to CSSD.

Level of processing required:

Critical: Entry or penetration into sterile tissue, cavity or blood stream

Sterilisation by steam under pressure

Semi critical: Contact with intact mucosa or non-intact skin

Sterilisation by steam under pressure or if heat sensitive use high level chemical disinfection or thermal disinfection

Non critical: Contact with intact skin

Clean as necessary with detergent and water.



LINEN MANAGEMENT

Risk Management:

Contamination of clean linen by dust, moisture, and contact with soiled linen must be prevented during storage and use.

Soiled linen has sometimes caused:

- Sharps injury to porters and laundry workers
- Contamination of surfaces and staff hands due to seepage of body fluids through laundry bags
- Staff back injuries when handling full, wet bags of linen.

Laundry bags are not filled more than 2/3 full. Do not allow sharps or other objects into soiled linen. Prevent seepage from wet linen by following your agency system for dealing with wet linen. Use gloves for handling moist linen. Do NOT wash linen contaminated with faeces in a ward sluice or sink as infectious aerosols are produced.

Specific Linen Procedures:

From your Infection Control Manual write in your agency system for:-

1. Ordinary linen -
2. Wet linen -
3. Foul linen -
4. Isolation linen -
5. Theatre linen -
6. Special linen -

Guide to Healthcare Waste Signage

Recycle



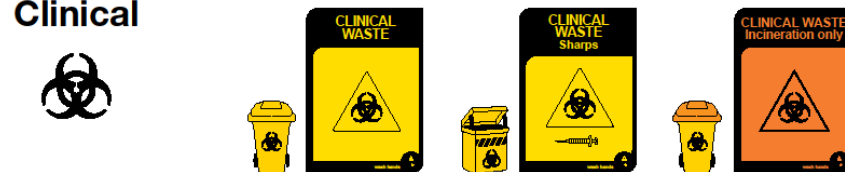
Reuse



Rubbish



Clinical



Cytotoxic



Radioactive



WARD CLEANING

Patient units are cleaned daily. Carpeted floors are vacuumed daily, using a vacuum cleaner fitted with a particulate (HEPA) filter.

Most hard surfaces can be adequately cleaned with hot water and detergent by mopping. Used mops should be changed after use, and sent for laundering.

Drying the cleaned surface is important.

Your agency may require disinfectant use following cleaning, in limited situations for certain patients with resistant micro-organisms (see your Infection Control Manual for cleaning/disinfection of Isolation Rooms).

Cleaning Alternatives

Your agency may use special electrostatically-charged mops with hot water, without any chemicals.

- Ensure that you understand the altered cleaning technique required for use of this system
- Change mop heads as required by your procedure
- Ensure that mops are laundered at the required **HIGH** temperature.



The above is specific to Victoria. Refer to your state or territory Environmental Protection Authority (EPA) for local requirements



CLINICAL & RELATED WASTE

Clinical (infectious) and related waste can cause injury and infection transmission if improperly handled.

Risk Management:

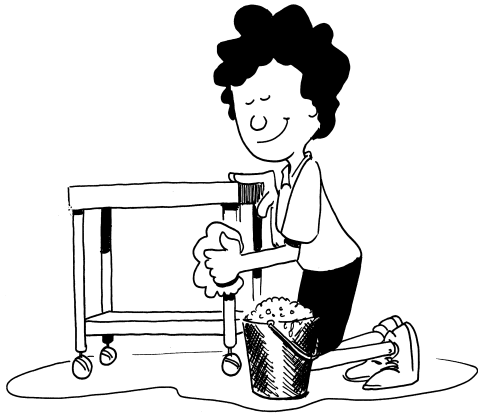
- Appropriate disposal of sharps
- Appropriate safe organisation of clinical waste to facilitate appropriate containment and disposal
- Containerised liquid wastes (disposable suction receptacles, placentas) are surrounded by impervious plastic, or absorbent materials
- Tie off/seal bags when 2/3 full
- Persons handling waste bags to wear protective clothing and gloves (PPE)
- Infectious waste, when bagged, is kept under refrigerated, secure conditions.

Table 1: Summary treatment processes in Victoria.

Waste types	Incineration	Autoclave without shredding	Autoclave & shredding	Hypochlorite & shredding	Peroxide, Lime & shredding	Microwave/ shredding
Sharps	Y	N	Y	Y	Y	Y
Clinical	Y	Y	Y	Y	Y	Y
Human tissue	Y	N	N	N	N	N
Recognisable anatomical body parts	Y	N	N	N	N	N
Cytotoxic	Y	N	N	N	N	N
Pharmaceutical	Y	N	N	N	N	N
Chemical	N	N	N	N	N	N

Treatment Processes in Victoria:

Source: [EPA Victoria](#)



CLEANING

Routine Cleaning of Ward Equipment

Most hard surfaces can be adequately cleaned with warm water and detergent.

Drying the cleaned surface is important.

Your agency may require disinfectant use following cleaning, in limited situations with certain patients with resistant micro-organisms or for patients with particular infections.

(See your Infection Control Manual for cleaning/disinfection of Isolation Rooms)

CLEANING ALTERNATIVES

Your agency may use special electrostatically-charged/microfiber cloths with hot water, without any chemicals.

- Ensure that you understand the altered cleaning technique required for use of this system
- Use clean cloth sections for each surface
- Ensure that cloths are laundered at the required **HIGH** temperature — follow manufacturers instructions.

CLEANING

Shared Equipment Between Patients

- The ideal is to have individual, non- shared patient care equipment e.g. BP machines. However, this is often not practical.
- When equipment is shared between patients and it is visibly soiled disposable detergent wipes are often used. They do not replace periodic, more –thorough cleaning.
- When equipment is **not visibly soiled** wipes containing disinfectant can be used between patients , e.g.: wipes containing alcohol, or other disinfectant approved for use within your agency.

