



REFERENCES:

NHMRC (2019). Australian Guidelines for the Prevention and Control of Infection in Healthcare. Commonwealth of Australia.

A guide for the management and control of gastroenteritis outbreaks in aged care, special care, health care and residential care facilities (December 2018). Communicable Disease Prevention and Control Unit, Department of Health and Human Services, Victoria.

Respiratory illness in residential and aged care facilities – guidelines and information kit (April 2018). Department of Health and Human Services, Victoria.

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A Little Yellow Infection Control Booklet

Outbreak Management for Environmental and Support Services



Grampians Region Infection Control Group
Developed 2017 Updated 2020

ABOUT THIS BOOK

The Little Yellow Infection Control Book (LYICB) series concept was designed to fill the need for simple, point-of-use infection control information for healthcare workers.

The booklets are not designed to be a comprehensive infection control manual. Staff seeking detailed information should refer to their agency infection control manual or environmental services manual and local policies and procedures.

This book provides basic generic outbreak management and cleaning principles, as specific procedures vary from agency to agency.

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Other LYICB and resources can be found at:

<http://infectioncontrol.grampianshealth.org.au/>

MY NOTES:

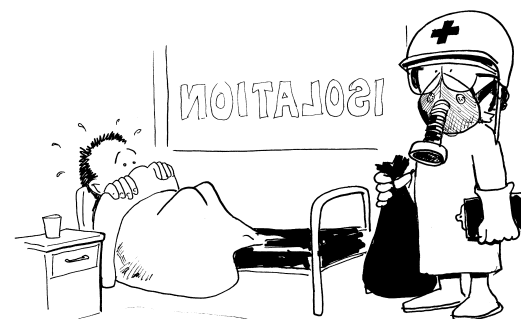
KEY POINTS TO REMEMBER:

- ⇒ Perform frequent hand hygiene
- ⇒ Use appropriate PPE carefully
- ⇒ Clean all frequently touched surfaces
- ⇒ Don't spread the bug
- ⇒ Use disposable cleaning cloths and equipment where possible
- ⇒ Use appropriate disinfectant where directed
- ⇒ Check you are using the correct concentration of disinfectant
- ⇒ Check disinfectant is within the use by date
- ⇒ Use a 3-step clean whenever surfaces have been soiled with faeces or vomit
- ⇒ Avoid aerosolization
- ⇒ Handle waste and linen carefully
- ⇒ Look after yourself—do not come to work if you are sick.



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THE IMPORTANCE OF CLEANING

Dust, soil and microbes known as infectious agents (bugs) on surfaces can all transmit infection. Cleaning removes foreign material and reduces the numbers of infectious agents (bugs) making transmission of infection less likely.

Every health care facility must have documented policies and procedures to ensure its environment is clean and these must include the additional care required during an outbreak situation.

These policies must specify:

- The areas and equipment that need cleaning, how they will be cleaned and how often.
- How waste will be disposed of - soiled materials, chemicals sharps, etc.
- The method of cleaning and related equipment - how often, the specific cleaning materials to be used and any manufacturer operating instructions that need to be observed.
- Health care facilities must comply with set cleaning standards, but not all areas are equally susceptible to the spread of infection, so not all surfaces need the same level of cleaning. Cleaning practices are based on levels of risk; areas with a higher risk of infection are cleaned more regularly with more detailed cleaning. For example there is a much higher risk of infection when cleaning an operating theatre compared to an administration office.

- Blankets must be washed or dry cleaned.
- Change privacy curtains when they are visibly soiled and at final clean- up.
- Carpets that have been soiled with vomit or faeces must be steam cleaned with an appropriate steam cleaner.
- All communal areas and high traffic clinical areas must be cleaned and sanitised using chlorine 1000 ppm with particular attention to frequently touched surfaces.



FINAL CLEAN-UP (OR TERMINAL CLEAN)

AFTER OUTBREAK HAS BEEN DECLARED OVER—usually a minimum of 48 hours after the vomiting and diarrhoea has ceased in the last case for “gastro” and 5-7 days for “flu”.

Your infection control staff will inform you when the outbreak is over.

- Staff performing cleaning must put on appropriate PPE when performing terminal clean (mask if using steam cleaner).
- All surfaces, furniture, bedding, equipment and items in contact with ill persons must be cleaned and sanitised using chlorine 1000 ppm.
- Mattresses, pillows, curtains, blinds and other soft furnishings that have been contaminated with vomit or faeces must be steam cleaned.
- All single use equipment in the ill persons room must be discarded – items taken into the room should be kept to a minimum during the outbreak.
- Toilet roll in ill persons rooms must be discarded in the event of a gastro outbreak and replaced with fresh

RESPONDING TO OUTBREAKS

Responding to potential infection outbreaks is an important part of infection control and environmental services policies and procedures.

As few as two or three people becoming ill in an aged care or acute facility can be considered to be the start of an outbreak of flu or gastro.

This is because these diseases are contagious and can spread quickly. Health care and aged care facilities must act immediately to control the spread of infectious agents (bugs) and protect other patients, residents, staff and visitors from becoming ill. For example if there is an outbreak of Influenza or Gastroenteritis, a number of extra precautions will be taken to prevent the spread of infection—transmission-based precautions.



SHOULD YOU BE AT WORK?

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

Respiratory infections such as Influenza (flu), can be transmitted to patients by respiratory secretions shed by coughing/sneezing and from your hands.

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

Diarrhoeal infections such as Gastroenteritis (gastro) can be transmitted to patients and other staff by your hands, on articles you have touched, on food you have handled.

- Staff with influenza-like illness should not come to work.
- Staff with influenza may need to stay away from work for up to 7–10 days.
- Staff with symptoms of gastroenteritis must be sent home or asked not to come to work if they become sick overnight.
- Staff with gastro must stay away from work until at least 48 hours after their vomiting or diarrhoea have stopped.

Note: You may excrete some virus in your faeces for over a week. Therefore diligent hand hygiene (preferably **hand washing**) is very important.



STAFF MOVEMENT

EXTRA CARE DURING AN OUTBREAK ...

- Staff from outbreak areas should not mix with staff from non-infected areas during meal breaks.
- Staff who have been in contact with infected persons do not prepare or serve food.

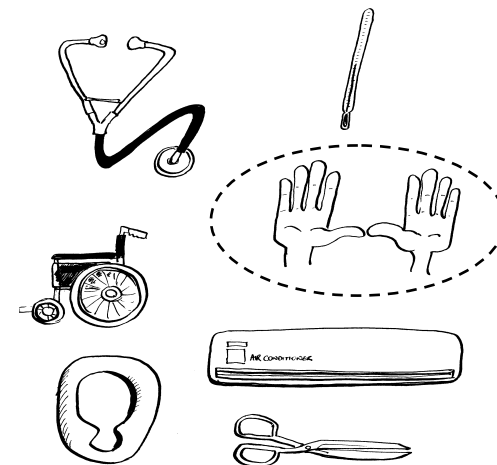


STANDARD PRECAUTIONS ARE FOR EVERYONE

Strategies to prevent the spread of infection include:

- 5 Moments of hand hygiene.
- Clean and reprocess shared patient/resident equipment.
- Use of personal protective equipment.
- Respiratory hygiene and cough etiquette.
- Appropriate handling and disposal of sharps and sharps containers.
- Using an aseptic technique for clinical procedures.
- Routine environmental cleaning.
- Appropriate waste management and handling.
- Appropriate linen management and handling.

Many objects can transmit infectious agents (bugs) but carers' hands are the most common



Standard precautions are used as required depending on what you are doing!

TRANSMISSION-BASED PRECAUTIONS

Some times standard precautions are not enough

Transmission-based precautions are used when the spread of infection may not be completely interrupted by standard precautions.

Transmission-based precautions are always used **in addition** to standard precautions.

Transmission-based precautions (isolation) will be put into place as soon as an outbreak is suspected. Most commonly these will be contact precautions and/or droplet precautions.

Contact Precautions

For viral illnesses and resistant bacteria which are transmitted by direct or indirect contact with the patient/ resident or the patient's/ resident's environment.

E.g. Gastro, MRSA, VRE, CPE, C. auris

Droplet Precautions

For respiratory infections transmitted by larger respiratory droplets which only travel about one metre and do not remain suspended in air (E.g. when someone with these infections talk or cough).

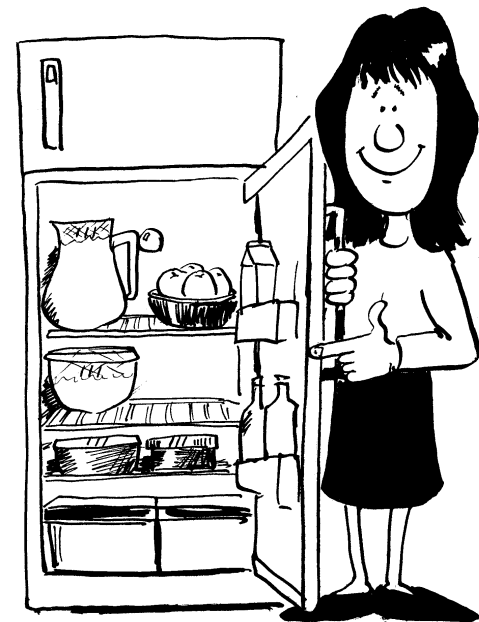
E.g. Whooping cough, diphtheria, influenza, rubella

Airborne Precautions

For respiratory infections transmitted by fine, floating particles which are easily spread by air currents (E.g. by opening and closing doors).

E.g. Tuberculosis, measles, chickenpox

- No special precautions are needed for crockery or cutlery used by those who are unwell— the combination of hot water and detergents used in dishwashers is sufficient to decontaminate these items. If there is no dishwasher for these items then, disposable crockery and cutlery should be used.
- Staff cups, crockery and cutlery must be washed in a dishwasher — not hand washed in staff tea room.
- Discard any cracked or chipped cups used in staff room.

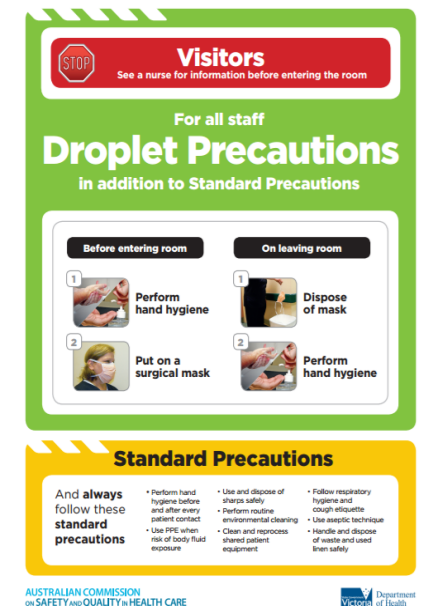
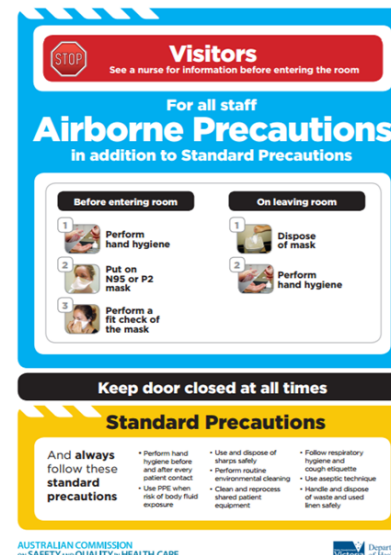


FOOD HYGIENE

EXTRA CARE DURING AN OUTBREAK ...

- Only catering staff should have access to the kitchen during an outbreak.
- If there is a suspicion the outbreak is food related, cleaning of the kitchen should take place immediately (as per the relevant outbreak guidelines) and then ongoing during the outbreak as instructed.
- Instructions from your local EHO regarding food safety and other public health instructions should be followed. Instructions are usually relayed to environmental/support services by infection control.
- Where possible ensure dedicated staff for each separate task such as food preparation, cleaning, and patient/resident care.
- Where possible, meals should be served directly to patients/residents rooms, rather than in a communal dining area.
- Any food from an isolation room, that has been handled by an infected person, or food that may have been exposed to someone vomiting in close proximity, must be discarded.
- Don't leave communal fruit, lollies, biscuit or other food around during an outbreak.
- Don't allow food to come in from community.

There will be signs on the door of isolation rooms similar to the ones below. Sometimes there may be two different signs because the infectious agent (bug) requires these actions to stop it from spreading. Please follow all instructions. If you are unsure on what to do, ask!



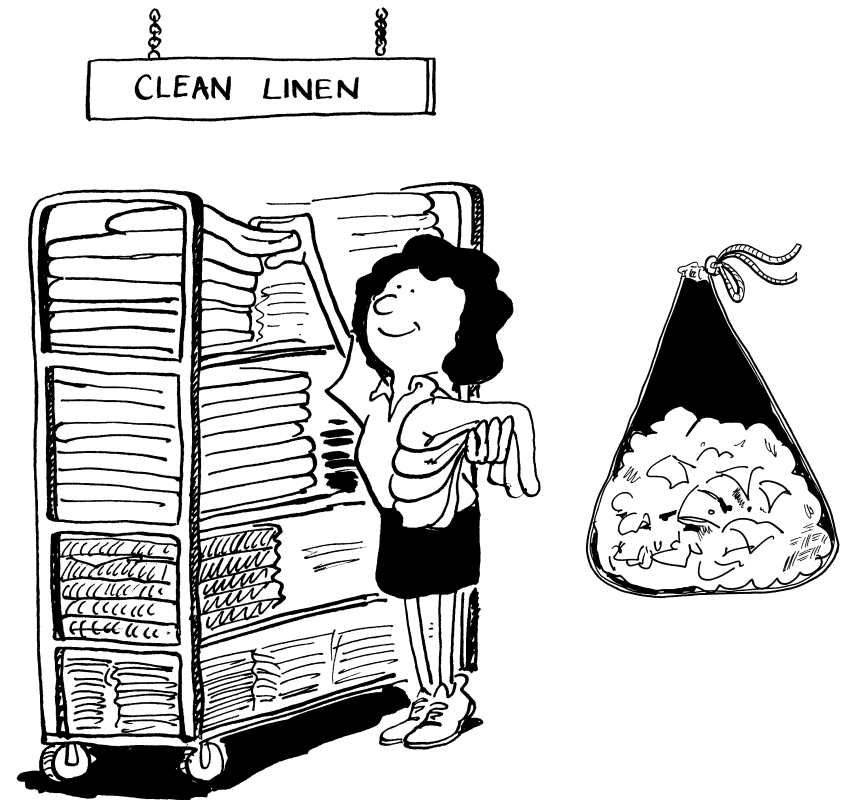
HAND HYGIENE

Hand hygiene remains the single most effective infection control measure for all health care workers.

Hand hygiene is using an alcohol based hand rub (ABHR) to remove and reduce the number of micro-organisms on the hands or using soap and water.

There are 5 moments hand hygiene must be carried out :

1. Before starting to clean an area.
2. After cleaning one area and before moving onto the next area in the same room - e.g. bedroom, hand hygiene, then bathroom.
3. After blood or body fluid contact.
4. After finishing cleaning each area.
5. After touching a patient/resident's immediate surroundings.



LINEN HANDLING

EXTRA CARE DURING AN OUTBREAK ...

- Pillows, curtains and doonas that have been contaminated by vomit and/or faeces should be steam cleaned.
- If this is not possible, consider discarding them.
- Wear appropriate PPE when handling soiled linen.
- Place soiled linen directly into linen skip at point of use — avoid carrying soiled linen to prevent contamination of uniform.
- Do not overfill linen bags.
- Ensure minimal handling of soiled linen to prevent aerosols.
- Do not sort in ward area, do not place on floor.
- Do not rinse gross soiling (faeces or vomit) in ward area.
- Linen heavily soiled with blood or body fluids should be placed in a leak proof plastic bag to prevent seepage or leakage during storage and transport.
- In most cases double bagging of “infectious linen” is not required. Use of water soluble bags is not recommended as these require hot water washes that may cause stains to set. Water soluble bags offer no benefit from an infection control perspective and needlessly add to costs.
- All soiled linen, including sheets, towels and blankets, should be laundered separately using the hottest washing machine cycle (AS/NZS 4146:2000).
- The laundry should be informed about the outbreak so they can take the necessary precautions.

HAND HYGIENE

EXTRA CARE DURING AN OUTBREAK ...

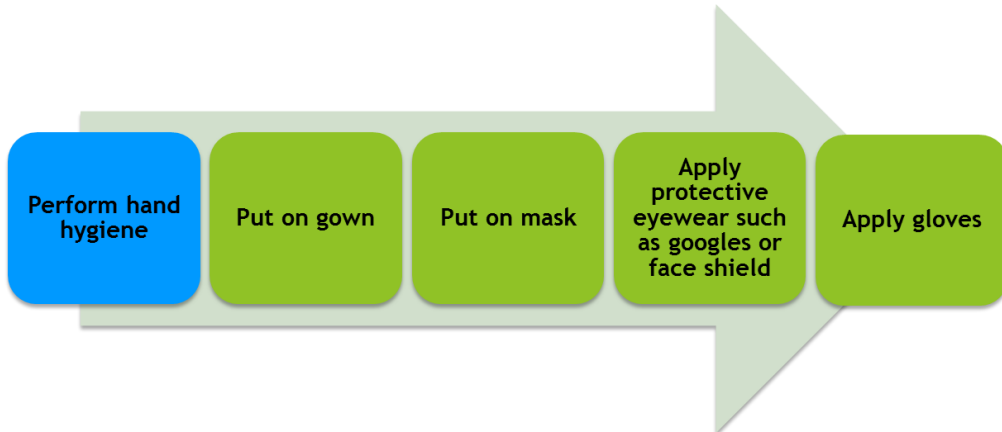
- Health care organisations generally use alcohol-based hand rub (ABHR) products to decontaminate hands.
- These products are able to kill bacteria on the hands but they are far less effective against some infectious agents (bugs) such as some viruses and bacterial spores.
- While washing with soap and running water does not kill viruses or bacterial spores, it can physically wash them off the skin and down the drain, which reduces the numbers of viruses/spores on the hands to a safer level.
- In an outbreak situation using gloves whenever appropriate will help reduce contamination of hands to a minimum.
- Thorough hand washing with soap and water during outbreaks is the most effective way to reduce the risk of infecting yourself and others both at work and at home.
- If there are no handwashing facilities use ABHR until you are able to wash with soap and water.



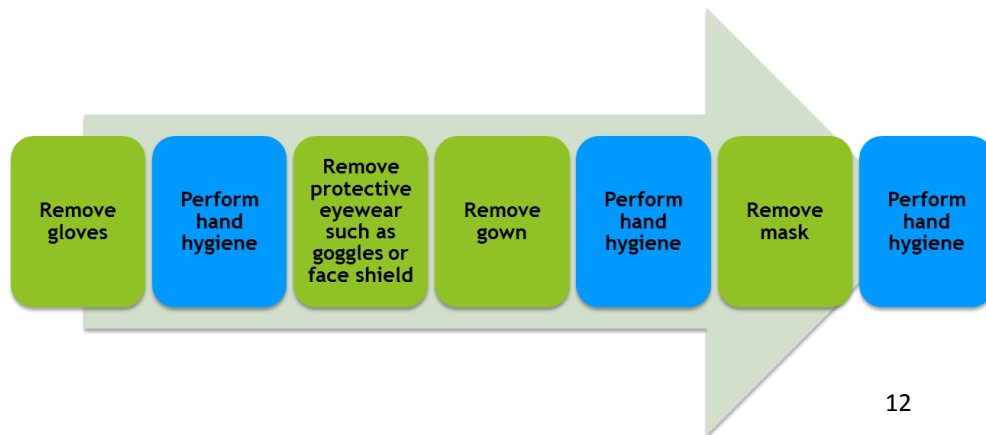
PERSONAL PROTECTIVE EQUIPMENT (PPE)

There is a proper way you put on and take off PPE to protect yourself, others, and prevent contamination of the environment. On the next page is how to put on and take off your PPE.

PUTTING ON PPE



TAKING OFF PPE



HANDLING CLINICAL WASTE

- Discard at point of generation.
- No decanting/ double handling.
- No compacting by hand.
- No handing waste from one person to another for disposal.
- No carrying bags or containers close to the body.
- No over filling of waste bags or containers.
- Close bags or containers securely when full.
- Lock containers if required for public safety.
- Transport containers/bags to storage areas using mobile trolleys or bins.



Guide to Healthcare Waste Signage

Recycle



Reuse



Rubbish



Clinical



Cytotoxic



Radioactive



CLEANING DURING AN OUTBREAK

- Always speak with nursing staff before entering the room to make sure you are taking the correct precautions.
- Increase the frequency of cleaning and disinfection of patient/resident care areas, frequently touched surfaces and high traffic clinical areas to at least 2 times per day — see page 15.
- Put on appropriate PPE (disposable gloves and gown) during cleaning and disinfecting procedures — wear a mask if using steam cleaner or if instructed to by nursing staff or infection control.
- Use disposable cleaning cloths and equipment where possible.
- Use appropriate disinfectant as directed — see pages 16 and 17.
- Clean the rooms of well patients/residents first, leaving rooms of isolated persons last.
- Clean and disinfect shared equipment between patients — single use products should be used wherever possible.
- Vacuuming carpets and polishing floors should be avoided during the outbreak to reduce risk of recirculation of the infectious agent (bug).
- Toilet lids should be closed before flushing to prevent faecal and/or vomit contaminated airborne droplets being generated.
- Once the area has been cleaned remove PPE with care to prevent contamination of yourself, your clothes or the environment around you — see page 11 and 12.



Sustainability
Victoria

Department of
Environment, Land, Air and
Water Services

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

BODY FLUID ACCIDENTS IN COMMUNAL AREAS

- Ensure that when a faecal accident has occurred all surrounding surfaces are cleaned using hot water and detergent followed by disinfection using 1000ppm of available chlorine applied for 10 minutes then rinsed with cold water and dried. This is a **THREE STEP CLEAN** –see page 16
- Ensure that when vomiting has occurred all surrounding surfaces are cleaned using a **THREE STEP CLEAN**
- All people should be immediately removed from the area for at least one hour when someone has vomited in a communal area (when a person vomits a fine mist of virus particles is introduced into the air and can easily infect others and contaminate surfaces)
- For cleaning of faecal accidents and vomit ensure that disposable brushes, mops and cloths are used and discarded after use.

CARPET CLEANING—IMPORTANT ...

All areas of carpet contaminated by vomit and/or faeces should be steam cleaned, as high temperature and moisture are required to kill viruses. Clean all surface soiling thoroughly with a detergent based product. Check if hot or cold water is suitable for the particular type of carpet you are cleaning. Then use a vapour steam cleaner that boils the water until it turns to steam, rather than carpet cleaners as these use lower temperature hot water to wet the carpet (they are often called 'steam cleaners' but do not actually use steam). True steam cleaners release steam under pressure, which ensures that the temperature is above 100°C, and the carpet dries quickly.



CLEANING EQUIPMENT

Wherever possible use disposable cleaning equipment.

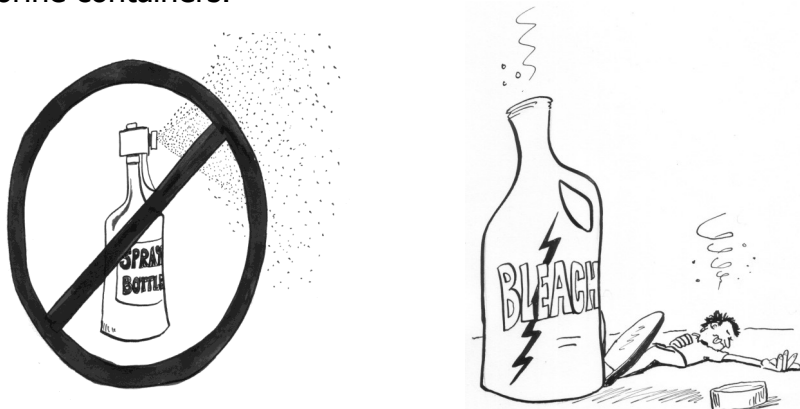
If using reusable equipment—Cleaning cloths and mop heads used in the outbreak area should not be used elsewhere and after use should be subjected to the normal laundry procedure.

Cleaning equipment, such as the mop bucket, mop handle and bowls that are not disposable should be cleaned and decontaminated by thermal or chemical disinfection or cleaned with a solution of 500 ppm sodium hypochlorite, left for 10 minutes, rinsed with warm water and then left to dry.



SAFE USE OF SODIUM HYPOCHLORITE (CHLORINE)

- Use a TGA listed or registered product with label claims for the infectious agent (bug) you are dealing with in the outbreak.
- Always dilute chlorine according to directions—never use undiluted.
- Never use in a spray bottle.
- Do not use hot water to dilute chlorine.
- Do not mix with any other chemicals.
- You must make up a new batch of chlorine each time you disinfect—loses effectiveness quickly once diluted.
- Chlorine solution loses concentration during storage, always check use-by date before using.
- You should wear gloves when handling and preparing chlorine solutions.
- Sodium hypochlorite's are corrosive to metals other than stainless steel at concentrations of 1000 ppm.
- It is safer to add chlorine to water rather than water to chlorine.
- Read and follow safety and handling instructions on all chlorine containers.



FREQUENTLY TOUCHED SURFACES

All objects/surfaces that come in contact with patients/residents should be considered potentially contaminated.

Frequently touched or high touch surfaces are those surfaces that are more frequently touched by patients/residents and staff and are more likely to be contaminated with microorganisms increasing the risk of infection.

Cleaning and disinfecting frequently touched surfaces is essential to containing an outbreak.

During an outbreak these surfaces must be cleaned then disinfected at least twice daily.

EXAMPLES OF FREQUENTLY TOUCHED SURFACES ARE:

Bed frames	Bed rails
Bed controls	Bedside lockers
Nurse call buttons	TV remotes
Light switches	Patient chairs
Door handles	IV pole and pumps
Telephones	Bedrails
Chairs	Toilet, commode
Computer keyboard	Bedside equipment
Over bed table	Taps

OUTBREAK CLEANING METHODS

THREE-STEP CLEAN

A "3-step" cleaning process means that the surfaces requiring decontamination are cleaned using warm water and detergent first, then disinfected using the application of 1000 ppm of available chlorine, left for 10 minutes, then the chlorine is rinsed off with cold water and dried.

STEP 1 = CLEAN

STEP 2 = DISINFECT

STEP 3 = RINSE/DRY

ONE-STEP CLEAN

A "1-step" cleaning process uses a combined detergent/disinfectant (chlorine) product used according to the manufacturer's instructions to achieve 1000 ppm to clean and disinfect in one process or step.

IMPORTANT MESSAGES FOR A 1-STEP CLEAN



A 2-in-1 combined cleaning and disinfecting allows for a 1-step cleaning and disinfection process as opposed to the 3-step (clean, disinfect, then rinse/dry). There are a number of 2-in-1 detergent and disinfectant products available that are simple and effective to use.

It is important to check the 1-step cleaning product information sheet to confirm it is effective against the infectious agent (bug) you are dealing with, and it is important to ensure the manufacturers' instructions are followed for correct dilution and use including contact time (a specified time for the surface to dry before it is touched again).

If care facilities use an alternative method for cleaning and disinfection, the method must be validated to be equivalent to the above steps (e.g. microfibre, wipes and steam).

SODIUM HYPOCHLORITE (CHLORINE) CONCENTRATIONS GUIDE ONLY

Concentrated chlorine with 4% available chlorine					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					5000 ppm	
Clostridium difficile (<u>minimum</u> 1000 ppm)					1000 ppm	
Viral gastroenteritis/ Pandemic flu					1000 ppm	
Resistant organisms (refer to specific guideline)					500—1000 ppm	
Food preparation area					200 ppm	

Note: Chlorine comes in liquid, powder (bulk or sachets), and tablet form. The above table does not show dilutions for tablets. Please refer to manufactures instructions.

* All forms of chlorine come in different strengths – check strength before diluting to desired concentration.

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

The effectiveness of chemical disinfectants can be directly affected by:

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