

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>

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>



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A LITTLE YELLOW INFECTION CONTROL BOOK

ESSENTIALS OF INFECTION PREVENTION

Supported Residential Services



**Grampians Region Infection Control Group
2018**

ABOUT THIS BOOKLET

The Essentials of Infection Prevention Booklet is designed to fill the need for simple, point-of-first-use infection prevention and control information.

Staff protection by the use of good infection prevention and control procedures is an important objective of the OH&S program of every agency.

Prevention of infection transmission to residents/clients is an equally important objective within the Resident/Client Duty of Care.

This book aims to provide common-sense infection prevention and control principles, as "best-practice" infection control facilities/equipment may not be present in supported residential services.

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MULTIPLE ANTIBIOTIC RESISTANT STAPHYLOCOCCUS AUREUS "MRSA"

Risk

Staphylococcus aureus (golden staph) is a pathogenic microbe associated with people—normally present on skin, hands, nose.

Over long periods of exposure to penicillin and other antibiotics resistant to these antibiotics has been built up in many microbial strains.

In the past, most of these resistant strains have developed in hospitals due to intensive antibiotic use (hospital-acquired MRSA).

Currently some strains have developed in the community without intensive exposure to antibiotics (community-acquired MRSA).

MRSA can be transmitted by contaminated hands and articles.

Risk Control

- Disinfect hands and articles between residents/clients
- Cover all skin breaks on hands with fresh waterproof dressings
- Wash any small, fresh skin breaks on residents/clients with soap and water, and cover with a sterile or clean dressing
- Responsible antibiotic use and disposal.

SHINGLES



Risk

Shingles is a local re-activation of the Chicken Pox virus affecting an area of skin. Only the blister **fluid** is infectious (non-infectious when the area is **fully** scabbed over).

Risk Control

- Use gloves for client contact and hand hygiene
- Also use gloves for handling clothing contaminated with blister fluid
- Launder contaminated clothing on **HOT WASH, LONG CYCLE, with 1/2 cup of** Napisan in load with the laundry detergent
- Only staff immune to Chicken Pox should provide care for client
- Immuno-compromised persons and children should not visit client while blisters are weeping.

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DEFINITIONS

Microbes are tiny living organisms.

The majority of microbes do not cause infections in humans, but are useful to provide fermentation processes, and breaking down of dead matter.

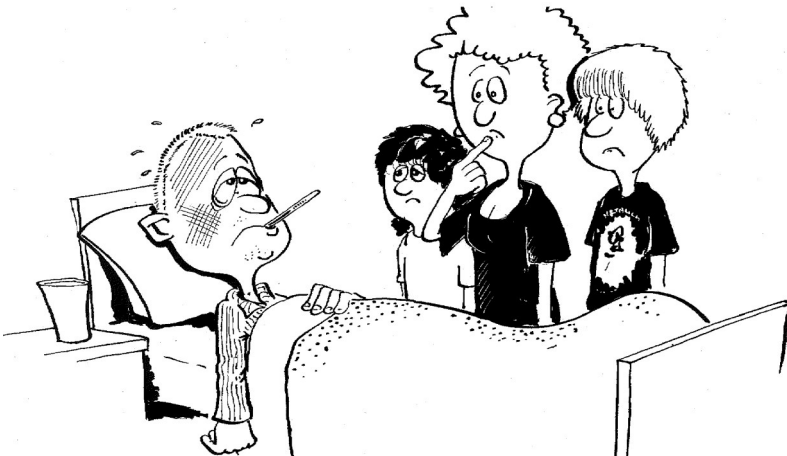
The main groups of microbes are :

- Bacteria
- Algae
- Protozoa
- Fungi
- Viruses

The majority of human infections are caused by bacteria or viruses.

Infection occurs when different levels of body defences are damaged due to trauma, deficiencies in immunity, or the offensive capabilities of some microbes.

Microbes which cause infections are called **pathogenic microbes** or **infectious agents**.



Occupational Exposure

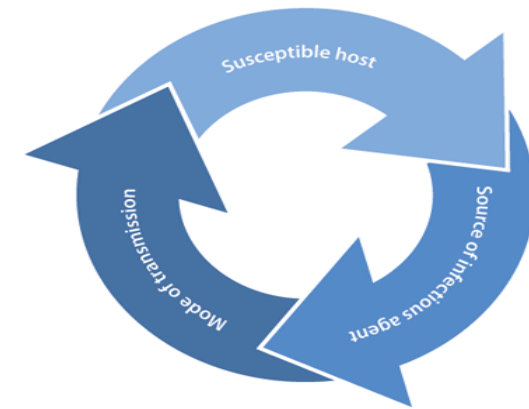
Sharps injuries or splashes with body fluids to mouth, nose, eyes or broken skin require:

- Immediate washing of the area with soap/hand wash solution and water
- Eye splashes should be rinsed well with water or saline
- Report exposure to Supervisor
- Attend Hospital Emergency Department or GP Clinic as directed by Supervisor, based on the degree of exposure risk
- Complete and lodge Accident Report
- Undertake blood tests and counselling organised by Medical Practitioner.

Your worst nightmare!



Three Requirements for Infection Transmission



1. Susceptible host

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

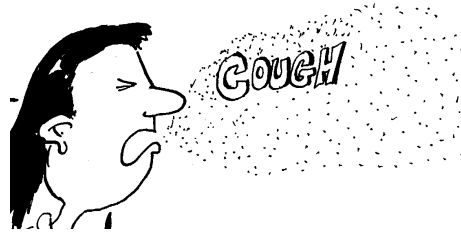
2. Source of infectious agent

- 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

RESPIRATORY SPREAD



Risk

Most airborne microbes sprayed out from sneezes or coughs only travel up to a metre. Persons in this range may be impacted in their nose, mouth, or eyes. Exposures on any of these surfaces can result in transmission of respiratory pathogens such as influenza virus, or other respiratory viruses. In addition, the hands of people coughing and sneezing are contaminated with virus particles, which can be spread by hand to hand contact, and by contamination of surfaces touched, such as door knobs, bench tops.

Risk Control

- "Cough Etiquette" prevents airborne spray and hand contamination
- Persons with respiratory infections should keep adequate distance from uninfected persons (> 1 metre) Infected persons should wear a surgical mask if necessary to diminish this safe distance
- Wearing of protective equipment, particularly mask and eye protection for carers
- Protective immunisation against Seasonal Influenza for both residents/clients and carers
- Thorough cleaning of "touch surfaces" in households where residents/clients have respiratory infections.

SPILLS OF BLOOD OR VOMIT

(For spills of blood or vomit — spills of urine and faeces are not generally considered infectious).

Risk

Spill materials represent an infection transmission risk if not adequately treated.

Risk Control

- A family member may be asked to clean the area
- Assess the volume of spill to be removed, if a large spill contact your Coordinator for a vomit/blood Spill Kit
- Cordon area off from residents/clients
- Don protective apparel—gloves, eye protection, gown, surgical mask, booties
- Soak up spill with toilet paper (not paper towel)
- Flush spill materials and toilet paper down toilet
- Clean area of spill using neutral detergent/hot water
- Dry the area washed
- Place all used cleaning materials, and disposable protective apparel into plastic waste bag, tie and place in garbage bin
- Wash hands.



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

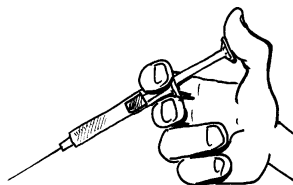


Clean your hands afterwards



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BLOOD/BODY FLUIDS



Risk

Blood-borne viral particles can be transmitted by exposure to most body fluids, but particularly exposure to an infected person's blood.

Transmission may occur due to penetration of the skin by sharp objects—syringe and needle, broken glass contaminated by blood, razor blade, glucometer lancet, shared toothbrush.

Viral particles can be absorbed by eye contact with viral particles during blood-stained coughing and vomiting.

Contact of infected blood with broken skin could also lead to infection.

Risk Control

Adherence to Sharps policy

Assessment of risk prior to any situation involving potential contact with body fluids—select and correctly apply appropriate personal protective equipment (PPE):

- Appropriate disposable gloves always (wash hands upon removal)
- Cover clothing with disposable apron/gown if splashing or airborne spray likely
- If airborne spray or splashing is likely use eye protection and a surgical mask
- Remove PPE in correct sequence to avoid eye/mouth/nose contamination—gloves first—wash hands—eye wear—gown—mask—wash hands
- Dispose of PPE carefully
- Immunisation against Hepatitis B
- Implement Occupational Exposure policy if injured when body fluids are involved.

FOOD HYGIENE

Risk

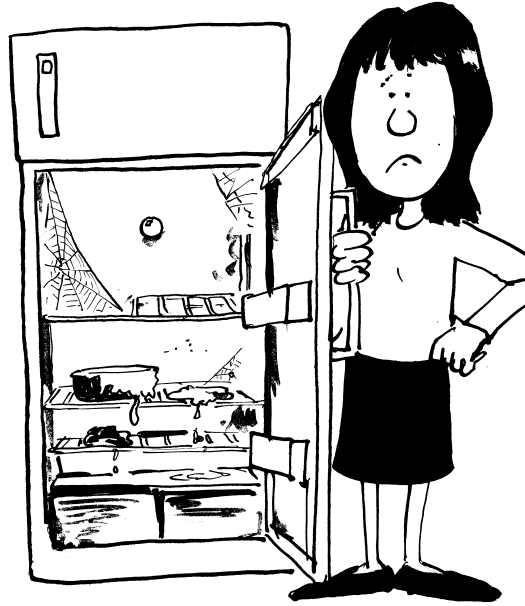
Microbial growth/toxin production in food can cause serious outbreaks of food poisoning.

Risk Control

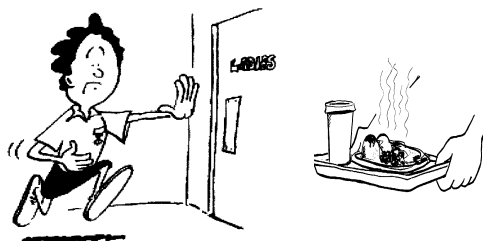
- Hand washing/disposable glove use in food preparation/serving
- Regular cleaning of food preparation/serving area and food storage units
- Prepared food stored in refrigerators dated and covered with glad wrap
- Maintenance of temperatures which inhibit microbial growth **to point of food consumption.**
 - Hot food > 60°C
 - Cold food < 5°C
(Includes salads and pre-made sandwiches)

Refrigerator Rules

- Clean fridge regularly
- Discard out of date /spoiled food
- Place covered, raw food on lower shelves
- Cover all foods placed in fridge with plastic wrap and date
- Never refreeze thawed food.



FAECAL-ORAL / FOOD-BORNE



Risk

Viruses present in the faeces of persons suffering from gastro infection, or in the pre-symptom stage of the illness, can be spread by unwashed hands to food leading to gastro infection. The unwashed hands of infected persons can deposit the virus on “touch surfaces” such as toilet and room doors, cutlery, bench surfaces; from which they are picked up on un-infected hands—to mouth— further cases of Gastro are caused.

Hepatitis A is also spread by faecal—oral transmission.

Risk Control

- Good hand hygiene practices for carers
- Education of residents/clients re. hand hygiene practices
- Food preparation and storage area cleaning
- Refrigeration at $<5^{\circ}\text{C}$ for perishables and sandwiches awaiting consumption
- Hot food maintained at $>60^{\circ}\text{C}$ to point of consumption
- Meals-on-wheels meals promptly heated-eaten
- Ensure meals-on-wheels delivered food has current date
- Carer not to attend resident/clients with gastro
- Carers with gastro not to provide resident/clients care for 48 hours after last diarrhoeal episode (or until medical clearance).

STAFF IMMUNISATION

Risk

Carers may come into contact with residents/clients who have infectious diseases which are not yet showing symptoms.

Many of these infections are vaccine-preventable.

Risk Control

Your agency will provide free immunisations to cover the common infectious diseases.

We need your assistance to do this!

An Immunisation History questionnaire completed at Induction will show what immunisations/immunisation updates you require to be protected.

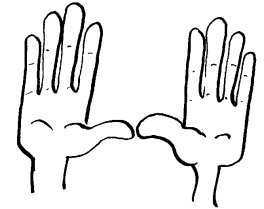
Immunisations usually offered:

- Seasonal influenza (annually)
- Tetanus/Diphtheria (if gap and at age 50)
- Pertussis (booster)
- Chicken pox (serology if negative history)
- Hepatitis B (serology if uncertain history)
- Measles/Mumps/Rubella (booster >1966).

**Immunisation -
Your extra protective umbrella**



PERSON TO PERSON (DIRECT CONTACT)



Risk

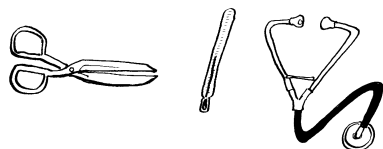
Everyone's hands carry a variety of microbes; viruses from their nose and bowel, bacteria from their skin and bowel.

These microbes can be easily transmitted by hand contact with other people's skin, and by depositing on articles/surfaces they touch (contaminated article transmission).

Risk control

- Keeping hands free from gross contamination with body fluids/excreta by use of disposable gloves, followed by hand hygiene after glove removal
- Hand hygiene after significant resident/clients contact, and always between residents/clients
- Ensuring resident/clients and own cuts and scratches are cleansed with soap and water and a sterile/clean dressing applied.

CONTAMINATED ARTICLE



Risk

Any item used on one resident/client and then used on another resident/client without cleaning/decontamination can transmit microbes from one resident/client to another.

Of particular concern are microbes which are resistant to multiple antibiotics which may be present in some resident/clients, and transmitted to other vulnerable residents/clients.

Even such an innocent article as a contaminated roll of adhesive tape used between resident/client may carry antibiotic resistant microbes.

Risk Control

- Careful hand hygiene between residents/clients
- Disposable supplies should be used where possible
- Equipment used on one resident/client should not be used on another resident/client without meticulous cleaning with hot water and detergent and drying
- Hard surfaced equipment can be wiped with an alcohol wipe if not visibly soiled
- Supplies (which cannot be cleaned) should never

CARER HEALTH AND HYGIENE

Risk Control

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 prevention and 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.

Infections

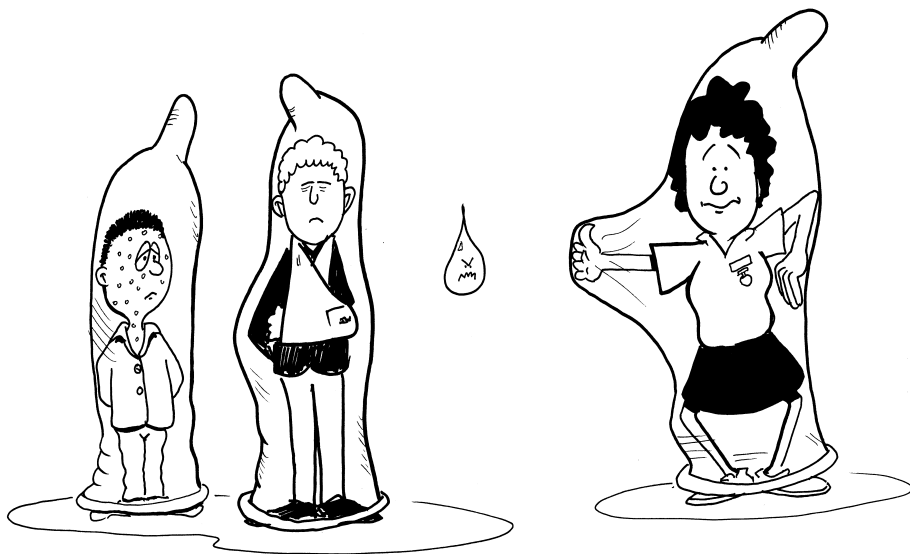
If you are suffering from respiratory, eye or diarrhoeal infections see your general practitioner, as these can be spread by your hands (and respiratory also by coughing).



What potentially contaminated articles do you carry between residents/clients?



Complete protection is possible—but not practical.



Adequate protection is based on degree of risk.



SHARPS MANAGEMENT

Risk

Sharps are any objects which can puncture the skin and which may be contaminated with blood or body fluids.

Upon penetration of tissue they have the potential to transmit blood borne viruses.

Risk Control

- Sharps must be carefully placed in a designated sharps container by the person generating the sharp, and disposed of by that person, e.g.: District Nurse administering insulin to patient at home.

If a Carer finds a sharp the following procedure is followed:

- Acquire a suitable container (e.g. Sharps container)
- Do **not** attempt to recap the needle. **Avoid any contact with the needle end**
- Bring the container to the syringe
- Using disposable gloves and tongs pick up the syringe by the barrel end and place in Sharps container
- Do **not** carry open Sharps container anywhere with a needle/syringe in it
- Do **not** attempt to force more needles/syringes into an already full container
- Lock down Sharps container
- Deliver Sharps container to City Environmental Health Services for disposal.

If unable to follow the above and remove the sharp safely contact your local council for advice.

Disposing of your Sharps Safely

Sharps are syringes and all needles.



When sharps have been used, these must be put into a sharps container. This is a sharps container.



Put all syringes and needles into the sharps container until it is full up to this line. Then make sure you screw the lid on tightly. The container is now safe and ready for disposal. Remember to get another container when you dispose of the full one!

They come in many different shapes and sizes. Most of them are the same yellow colour and have the word "sharps" written on them. Check to see if you can get one free from your local council. You can also buy one from a pharmacy or Diabetes Australia.



Sharps and sharps containers can NOT go into your household rubbish or recycling bins. Ask your local council where you should take your sharps container for disposal when it is full.

STANDARD PRECAUTIONS

Standard precautions are a set of protective measures designed to prevent contact with body fluids of any other person.

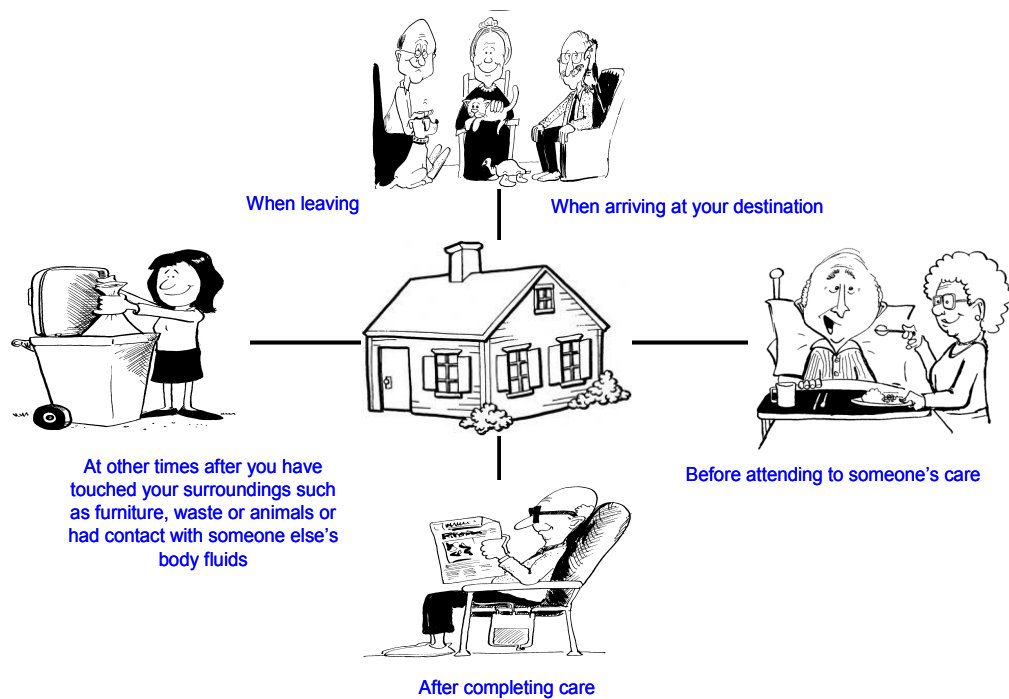
This approach is based on the possibility that any person may be infected with a blood-borne infection, which may be transmitted to other persons.

Possible entry sites for body-fluid borne viruses:

- Inoculation into tissue by needle-stick with used sharp
- Contact with broken skin
- Contact with conjunctiva (eye)
- Contact with mucous membrane of mouth or nose.

Risk Assessment and Control:

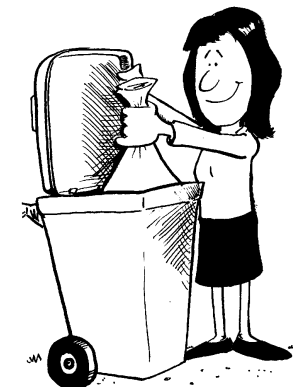
- Calculate risk of contact with body fluids
 - Wear level of protection necessary, based on risk of exposure
 - Hand washing after inadvertent contact with body fluids
 - Careful disposal of sharps.



or



WASTE MANAGEMENT



Risk

Ordinary household waste which is not contaminated with blood is not considered infectious.

Risk Control

- Bulk faeces and blood must be disposed of into the toilet/sewer, followed by several flushes
- Used incontinence pads or nappies can be disposed of into council garbage collection bin (bagged in plastic bag), after removing bulk faeces into a toilet.

HOUSE HYGIENE



Risk

A clean household environment is desirable for client and carer piece of mind. However, some household dust presents no infection risk to client or carer unless the client is immuno-compromised due to disease or anti-cancer medications.

Risk Control

- Most hard surfaces can be adequately cleaned with hot water and detergent
- Drying of the cleaned surface is important for bench surfaces
- All surfaces touched often must be cleaned regularly (e.g. door knobs).

HAND CARE

Risk

Carer 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 Control

- Routine hand washing between client contacts (or application of alcohol rub)
- Hand washing following contact with body fluids, soiled linen, after glove removal, prior to clean procedures
- Use of disposable gloves to prevent gross level contamination in body fluid contact situations.

Routine (Hygienic) Hand Wash:

- 15 seconds with neutral hand wash
- Cover all hand surfaces
- Rinse and dry well
- Turn off domestic tap with paper towel.

Application of Alcohol Hand Rub:

- Alcoholic hand rub may be used when hands are not readily soiled, and is much more convenient when hand wash facilities in the home are deficient, also kinder on your hands
- Apply sufficient AHR to rub hands together for 15 seconds.

Keep Hands in Good Condition:

- Apply appropriate water-based moisturiser often.

GLOVE USE



Risk

Contact with body fluids and excreta can grossly contaminate hands.

Risk Control

- Disposable gloves should be used when contact with body fluids is anticipated, and for cleaning
- The most suitable glove type should be selected for the task:
 - **routine cleaning** — reusable, rubber gloves (**never** to be shared between bathroom and kitchen functions), (reusable gloves must be carer-specific)
 - **clinical use** — disposable, single-use gloves latex, powder-less for normal use or nitrile (latex free) gloves for staff with latex allergy.
- Gloves frequently have minute holes so hands must be washed after glove removal, or rubbed with alcohol hand rub. Also, hands may be contaminated during glove removal
- Gloves can carry microbes from one client site to another, e.g.; cleaning up incontinence to putting in eye drops; so must be changed between sites on same client, if required at second site.

CLIENT LAUNDRY



Risk

Soiled linen may have significant microbes, particularly if soiled with body fluids.

Risk Control

- Always wear gloves, and wash hands after handling soiled linen
- Cold wash cycle is satisfactory for processing household linen, providing no family members have infections. If infection present use Hot or Warm wash, longest cycle, and add 1/2 cup of Napisan to load with the laundry powder
- Linen which is heavily soiled with faeces/urine should be gently rinsed clean with cold water (wear eye protection and plastic apron in addition to disposable gloves), soaked in clean water with 1/2 cup of Napisan for at least 30 minutes, then laundered as normal
- Handle clean linen with clean hands
- Ensure laundered linen is completely dry.

Napisan is an example of nappy-soaker agents which contain an oxygen bleach which has disinfectant properties.