

## 4 Infection control

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# Personal protection

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## Standard and transmission based precautions

- Standard precautions minimise risk of transmission of healthcare related infections. Use with all patients all the time
- Transmission based precautions are used as well as standard precautions when increased risk of transmission of some types of germs
- Using standard and transmission based precautions should be part of everyday practice for healthcare workers

## Standard precautions

- Hand hygiene, before and after every patient contact
- Use of personal protective equipment
- Safe use and disposal of sharps
- Routine environmental cleaning
- Reprocessing of reusable equipment and instruments
- Respiratory hygiene and cough etiquette
- Aseptic non-touch technique
- Waste management
- Correct handling of linen

## Transmission based precautions

- Used with patients suspected or confirmed to have infection that can be transmitted by
  - Contact, eg multi-resistant micro-organisms
  - Droplet, eg whooping cough, influenza
  - Airborne route, eg chickenpox, measles, pulmonary tuberculosis
- Precautions include continued use of standard precautions *AND*
  - Use of special masks for staff having contact with people known to have active pulmonary TB (P2 respirators or duck bill masks)
  - Patient dedicated equipment (for resistant micro-organisms)
  - If disease can be spread by airborne route — moving patient to separate area away from waiting room
  - Extra cleaning and disinfection of clinic/health service

Healthcare staff should be aware of their immune status for

- Hepatitis B, hepatitis A
- Measles
- Whooping cough (pertussis)
- Chickenpox (varicella)
- Tuberculosis

## Hand hygiene

### Attention

- Have liquid soap, antiseptic hand wash, alcohol-based hand rub or gel in clinic. Wall-mounted pump-action bottles are best
- Use small containers of hand rubs and gels for personal use outside clinic, eg in ambulance, when visiting people at home
- **Do not** use soap bars
- If hands visibly dirty — wash first with liquid soap and water

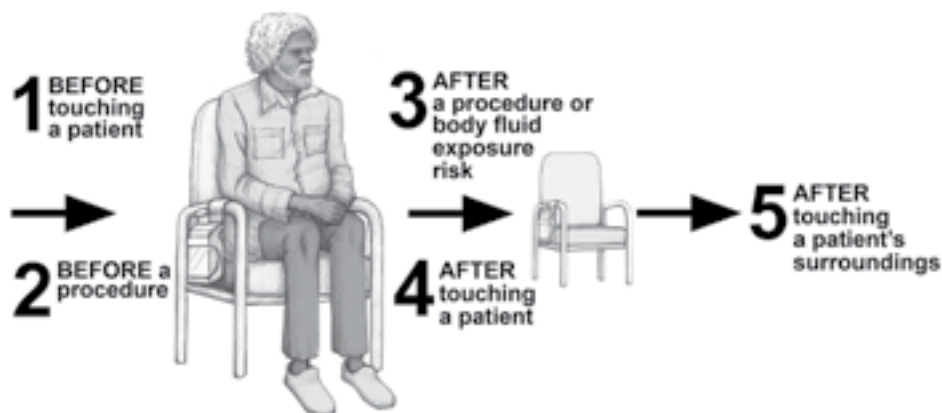
### When to do hand hygiene

#### Hand hygiene moments

- **Moment** — possible or real risk of germs passing from one surface to another (pathogen transmission) via the hands — F 4.1

#### 5 Moments for hand hygiene

- **Moment 1** — Before touching a patient
- **Moment 2** — Before a procedure
- **Moment 3** — After a procedure or body fluid exposure risk
- **Moment 4** — After touching a patient
- **Moment 5** — After touching a patient's surroundings



4.1

### What you need

- Hot and cold running water
- Hand cleaner
  - Liquid soap or antiseptic hand wash
  - *OR* Alcohol-based hand rub or gel
  - *OR* Surgical scrub, eg **povidone-iodine**
- Clean paper or single-use towel

## What you do

### Washing hands

- **Same procedure** is used for surgical scrub, washing and rubbing
- **Difference** is how long it takes (timing)
  - 3–5 minutes for surgical scrubbing (depending on product used)
  - 1 minute for washing
  - 30 seconds for rubbing
- Use **either** hand wash **or** hand rub, not both one after the other

### 3–5 minute surgical scrub before aseptic technique

- Use hand-cleaning solution
- Turn on taps with your hands
- Point hands down towards sink, wet them before putting on surgical scrub/liquid soap — F 4.2
- Rub backwards and forwards 5 times on top of hands and lower wrists — F 4.3
- Rub palm to palm, with fingers interlaced — F 4.4
- Rub palm to palm with fingers between knuckles — F 4.5
- Rub thumb with palm in circular movement — F 4.6. Do both hands
- Rub in circular movement around each palm with fingers — F 4.7
- Rub in circular movement around each wrist — F 4.8
- Takes 3 or more minutes
- Rinse hands well
- Pat hands dry with clean paper towel
- Turn off taps using same paper towel, throw towel in bin



### 1 minute wash

- Use liquid soap or antiseptic hand wash
- Wet hands with warm water, use 1 squirt (about 3ml) of product
- Do above procedure for 1 minute

### 30 second rub

- Use alcohol-based hand rub or gel
- Put 1 squirt of product to dry hands (about 3ml)
- Rub over all parts of hands including fingers, thumbs and webbing
- Let it dry on your hands
- Takes 30 seconds

**Note:** Wash hands with liquid soap and water after using rub 5 times in a row.

### General hand care

- Take off rings, watches, jewellery before cleaning hands
- Clean under fingernails using nail cleaner under running water
- Keep fingernails trimmed (less than 7mm long)
  - Don't wear false nails or chipped nail polish. Give germs a place to hide
- Keep up fluid intake, use water-based hand moisturiser (compatible with hand wash or rub/gel) 3–4 times a day

## Gloves

### Attention

Gloves **do not** replace good hand hygiene. Do appropriate hand hygiene (*p96*) before and after wearing gloves — F 4.9.

### What you do

#### CLEAN (non-sterile) gloves

- **Direct** patient contact
  - With blood, mucous membranes, broken skin
  - IV cannula insertion and removal
  - Taking blood samples
  - Vaginal and pelvic examinations
  - Suctioning — oral, nasal, tracheal
  - Epidemic or emergency situations
- **Indirect** patient contact
  - Handling or cleaning instruments
  - Handling waste, eg vomit, urine, faeces
  - Cleaning up spills of body fluids, handling contaminated clothing/bedding



#### STERILE gloves

- Contact with body tissue that would normally be sterile
- Wound care — dressings, suturing chest drains
- Birth procedures

### Gloves must be changed

- Before and after different procedures on same person, to stop germs (micro-organisms) being carried from one site to another
- Before and after caring for patient
  - **Do not** wear same pair of gloves for care of more than one patient
- After touching contaminated site and before touching clean site
- If they are torn or have hole in them

### Surgical face masks and goggles (protective eye wear)

Must be worn when there may be splashing, splattering, sprays of blood or other body fluids or tissue.

- **Surgical face masks** — F 4.10 must
  - Be close fitting and fluid resistant
  - Be thrown away after use
- **Protective eye wear** — F 4.11 must
  - Be close fitting, with side pieces to protect corners of eyes
  - Cover eye glasses (spectacles)
  - Be cleaned with disinfectant after each use (*p106*)



4.10



4.11

# Clinical and related waste management in remote areas

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- No national definition of clinical waste in Australia, healthcare facilities must conform with local legislation and regulations
- In remote areas a balance needed between managing public health risks and minimising discharge of dioxins, furans, coplanar PCBs
- Until clinics have access to proven, environmentally safe options, incineration is still considered appropriate. Purpose-cut drums may be used when purpose-built incinerators not available

## On-site management of clinical waste

### Attention

- Clinical waste (blood and other body fluids) and non-clinical waste must have separate waste bag or container systems
- Always sort waste to help cut down need for burning and emissions
- Work with your local council to ensure appropriate management of general clinical waste in community waste designated area
- Store and transport to regional centre — blood bags, chemotherapy tubing, heavy metals such as mercury, eg broken thermometers. Never burn or send to dump
- Recycle paper, glass, plastic if possible

### What you do

- **Waste bags**
  - Put in pedal bins, keep close to where you are working. Take bin to waste wherever possible
  - Change often (no more than 90% full), tape or tie shut
- **Separating waste**
  - **Clinical waste** (contaminated) — bury in local rubbish dump. If dump does not bury waste and/or is not fenced — burn in incinerator or purpose-built drum. **Make sure it burns completely**
  - **Non-clinical waste** — recycle glass, plastic, paper, fibre waste if possible
- **Storing waste** to send to regional centre for disposal
  - Storage area needs to be lockable, clean, dry
  - Concrete floor, able to contain a spill, lined with extra absorbent material, eg shipping container

## On-site management of medical sharps and syringes

### Attention

- Person using a sharp instrument is responsible for its immediate disposal
- Only use Australian/New Zealand Standard approved sharps containers to store sharps and pharmaceutical waste. Must be puncture and leak proof, clearly labelled
- Use separate, clearly labelled container for cytotoxic waste
- Sharps containers must only be incinerated under licence. Can't be done in remote locations. Store and transport to regional centre
- **Do not** burn plastic syringes, **do not** try to bend/break needles

### What you do

- If possible — dispose of sharp where it is used — F 4.12
  - If not possible — use puncture-proof tray/dish to hold and carry sharps
- Put drawing-up needle straight into sharps container and use new, sterile needle for injection
- **Do not** recap or take needle off disposable syringes
- Close container when it reaches full mark — **never** overfill
  - Make sure lid shut tightly, use tape if needed
- Store full containers in safe, secure area while waiting for transport to depot



4.12

### Transporting sharps and clinical waste

- When carrying sharps containers and clinical waste bags in vehicles
  - Must be put inside another container, secured in non-passenger area
  - Carry spill kit in case of leaks or accidents

### Biohazard and needle stick injury

#### Attention

Contact nearest infection control unit/CDC/PHU for advice immediately.

#### What you do

##### Minor exposure

- Includes
  - Unbroken healthy skin exposed to bloodstained body fluid
  - Unbroken/broken skin or eyes exposed to non-bloodstained body fluid
  - Superficial or penetrating injury with sterile or unused clean sharp



- If on skin — wash immediately
- If splash to eye or mouth — irrigate well with water
- Follow advice from infection control unit/CDC/PHU

## Major exposure

- Includes
  - Superficial injury with/without bleeding involving bloodstained body fluid
  - Penetrating injury involving bloodstained body fluid
  - Splash with bloodstained body fluid to mucous membranes, eyes, broken skin
- Take immediate action, see Table 4.1
- Follow advice from infection control unit/CDC/PHU

**Table 4.1: Immediate action following major biohazard exposure**

Exposure	Action
Injury/contamination goes through skin, eg needle stick, scalpel blade	Wash well with water and liquid soap (or other available soap)
Contamination goes into eye, eg splash of blood	Thoroughly but gently irrigate eye with water (p144)
Contamination goes into mouth, eg splash of blood	Spit out and rinse thoroughly with water several times
Contamination goes onto skin, eg splash of blood	Wash area with soap and water, check skin for cuts, sores, abrasions

## Follow-up

- Fill out accident/injury form
- Test your and person's blood for blood borne viruses
  - Prophylaxis may be available for occupational exposure

Health workers need to know their hepatitis B immune status **at all times**.  
Hepatitis B immunisation mandatory for health staff in some states/territories

## Cleaning soiled and contaminated linen and blankets

### Attention

- Household washing machines and chlorine-based products **do not** decontaminate infectious laundry. Only use to wash linen/blankets not soiled by body fluids
- Remote clinics can deal with contaminated linen/blankets by
  - Sending to central collection point for processing
  - *OR* Burning, as for clinical waste (p99)

- On examination couches — use disposable paper covers over washable plastic covers, instead of linen. Wash down plastic covers as for contaminated surface (p110)

### What you do

- Put soiled and contaminated linen in separate bags on linen trolleys. Keep away from children
- In remote clinics, use large plastic bags that can be burnt, not standard material linen bags (can't be laundered properly)
- Store full bags in secure area until washed, burnt, or transported to depot

**Note:** Red alginate bags dissolve in water. Can be used to hold soiled linen then put straight into machine without emptying. Don't need to touch linen.

### Cleaning up biological spills using solidifier

Solidifier can absorb fluid up to 100 times its own weight.

#### What you need

- Solidifier, eg *Green-Z*
- Paper towel

#### What you do

- If splashing likely — put on gloves and protective eye wear
- Sprinkle solidifier on spilled blood, urine, vomit, other potentially hazardous waste
- Wait a few seconds for solidifier to change spilled fluid into small grains (granules) of gel
- Scoop up gel using paper towel, put in clinical waste bag

### Cleaning up mercury from glass thermometers



This is a guide only. Contact CDC/PHU for more information.

#### Attention

- **Mercury is a dangerous, toxic substance.** Must be handled and thrown away (disposed of) correctly
- **Do not** touch with your hands
- **Do not** put in ordinary bin or sharps container
- Keep children well away

## What you need

- Mercury disposal kit with
  - Plastic snap-lock bag
  - Disposable gloves, mask
  - Small bottle of sulphur powder (from pharmacy)
  - Small flat-bristle paintbrush
  - Cardboard scoop
- Small biohazard bin — or send used kit to collection depot

## What you do

- Put on gloves and mask
- Cover mercury with sulphur powder
- Brush mercury and powder onto scoop
- Put in sulphur bottle, screw lid on tightly
- Put broken glass (only) into sharps bin
- Put all other contaminated material, sulphur bottle, your gloves into snap-lock bag and seal
- Put bag into biohazard bin in clinic or collection depot

# Cleaning, disinfecting and sterilising reusable medical equipment

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## Cleaning

- Uses neutral detergent solution to remove foreign material (eg dirt, organic material), lessen number of germs (micro-organisms) on surface
  - Always do before disinfecting and sterilising

## Disinfecting

- Uses chemicals or heat and water (thermal) to make non-sporing germs inactive
  - Not a sterilising process

## Sterilising

- Destroys all germs on surface of instrument or device, prevents disease transmission through use of item
  - Procedure must be validated under controlled conditions. Keep test records
- Presence of micro-organisms on item described in terms of probability. Can be very low number but will never be zero

## Sorting instruments for sterilising and disinfecting

Instruments and equipment are grouped for cleaning based on how they are used. See Table 4.2 (p105)

## Cleaning instruments

Clean instruments used on unbroken skin, and those that need to be disinfected and sterilised.

## Attention

- **If instrument can't be cleaned — it can't be disinfected or sterilised**
  - Disinfectant or sterilising agent won't be able to make contact on dirty parts of instrument
- Clean new instruments **before use**
- If instruments can be taken apart — disassemble before cleaning, disinfecting, sterilising
- Clean instruments and trays straight after procedure. If not possible — cover instruments in warm water (never hot water as it sets contaminants) to make cleaning easier later
- If instrument has sharp tips — protect tips from damage during cleaning, clean carefully to prevent injury

**Table 4.2: Grouping instruments for sterilising and disinfecting**

Level of risk	Used for (application)	Process	Storage	Example
<b>Critical</b>	Entry or penetration into sterile tissue, cavity or blood stream	<b>Sterilisation by</b> <ul style="list-style-type: none"> <li>• Steam under pressure</li> <li>• Low temp chemical sterilising agent</li> <li>• Liquid chemical sterilising agent</li> <li>• Ethylene oxide</li> </ul>	<ul style="list-style-type: none"> <li>• Keep sterile and dry</li> <li>• Package must be undamaged (intact)</li> <li>• Keep away from environmental contamination</li> <li>• Use straight away after unpacking</li> </ul>	<ul style="list-style-type: none"> <li>• All instruments and accessories used in invasive surgery</li> <li>• Implants and probes used in sterile body cavities</li> </ul>
<b>Semi-critical</b>	Contact with unbroken mucosa or broken skin	<b>Heat tolerant instruments</b> <ul style="list-style-type: none"> <li>• Steam sterilising</li> <li>• Thermal disinfecting</li> </ul> <b>Heat sensitive instruments</b> <ul style="list-style-type: none"> <li>• Low temp automated chemical sterilising systems</li> <li>• High level chemical disinfecting</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent environmental contamination</li> </ul>	<ul style="list-style-type: none"> <li>• Breathing circuits</li> <li>• Baby bottles</li> <li>• Flexible endoscopes</li> <li>• Ultrasound probes</li> </ul>
<b>Non-critical</b>	Contact with unbroken skin	<ul style="list-style-type: none"> <li>• Clean regularly with detergent and water</li> <li>• Decontaminate with low grade disinfectant after cleaning with detergent</li> </ul>	<ul style="list-style-type: none"> <li>• Store in clean, dry place</li> </ul>	<ul style="list-style-type: none"> <li>• Stethoscopes</li> <li>• BP cuffs and equipment</li> <li>• Thermometers</li> <li>• O<sub>2</sub> sats monitors</li> </ul>

Ultrasonic cleaners **do not** disinfect or sterilise instruments but are good for cleaning most reusable instruments before sterilisation.

Clinical Procedures Manual for remote and rural practice, 3rd ed (2014), updated 30-Sept-2014.  
 Note: Online versions of the manuals are the most up-to-date.

## What you need

- Work area set aside for cleaning
- Heavy-duty household gloves
- Detergent (not household)
- Cleaning brushes/soft nylon-bristle brush. Keep separate for this purpose, wash and disinfect after use, store dry
- Lint-free cloth for drying (not paper towel)

## What you do

### Manual cleaning

- Put on personal protection, including heavy-duty gloves
- Take apart or fully open instruments. Undo all latches and clips
- Rinse under warm running water to remove dirt
- Put a few at a time in sink of warm water and detergent
- Keep below water surface to stop splashes and vapours
- Scrub with brush then rinse in warm to hot running water
- Dry instruments with lint-free cloth. **Do not** air dry
- Individually inspect each instrument — need to be visibly clean before disinfecting or sterilising
- Check all parts are there, but don't put back together if disinfecting or sterilising

### Instruments for off-site sterilisation

- Clean, then transport in clean, closed, puncture-proof container

## Disinfecting instruments

- Disinfect instruments used on broken (non-intact) skin and unbroken (intact) mucosa
- Disinfect using heat or chemicals

## Attention

- Disinfecting with heat is more efficient and costs less
  - Use chemicals when instruments can't be disinfected with heat
- All instruments that can be fully immersed in water can be disinfected in chemical disinfectant
- Instruments must not be stored in disinfectant
- Must keep signed and dated records for disinfecting

## What you need

### Chemical

- TGA-approved instrument disinfectant *OR* alcohol based disinfecting solution
  - 70% w/w ethyl alcohol
  - 80% v/v ethyl alcohol
  - 60% v/v isopropyl alcohol
- Distilled water for rinsing if possible

### What you do

- Fully cover (immerse) instruments in disinfectant
- Leave for time specified by manufacturer (no longer than 1 hour)
- Remove from disinfectant, rinse. Use distilled water if possible
- Dry with lint-free cloth
- Throw away disinfectant straight after using

## Sterilising instruments and equipment

Staff doing sterilisation must have done/be doing training in sterilisation procedures according to Australian/New Zealand Standard AS4187 or 4815.

### Attention

- Must have certified and serviced steriliser. Follow manufacturer's instructions to ensure right amount of water, timing, temperature, pressure settings used
- Must keep signed and dated records for sterilising, maintenance
- If process-recorder printer not fitted or not working — must check and record time, pressure, temperature of every cycle
- Instruments must be completely clean for temperatures and times to be accurate
- If sterilisation cycle fails — check settings and loading of instruments. Make sure steriliser not overloaded — see *Loading steriliser (p108)*
- If you think sterilisation has not worked and/or non-sterile instruments have been used — contact your local infection control unit or PHU for advice
- Use an instrument tray. Instruments will last longer

### Packing materials

- Use correct type and method of packaging for your steriliser, eg **do not** use packaged instruments in sterilisers that don't have drying cycle
- All laminate/paper packaging is single-use only. **Do not** re-label or re-sterilise
- **Do not** use nylon packaging in steam steriliser
- If sterilised package damaged or contaminated (compromised) — do procedure again, starting with cleaning of instrument

## What you need

- Steriliser
- Packages — best made from laminate/paper material
- Trays — metal or plastic with holes so steam can reach all areas
- Permanent marker for labeling (not water-based)
- Clean tongs
- Steriliser indicator tape
- Steriliser monitoring books

## What you do

- Clean and dry instruments (*p105*)

## Package instruments/equipment

- Put instruments on tray then into package so contents can be clearly seen through laminate side
- **Do not** bundle instruments or overfill packaging
- Protect tips of sharp instruments to keep them sharp and stop damage to packaging
- Package bowls (hollowware) separately with opening facing paper side to allow air to escape
- Tray can be used as sterile surface during procedure after one side of package removed

Always sterilise instruments as soon as possible after packaging. If not possible — keep packages away from sterile instruments and store in separate, clearly labelled cupboard or covered container.

## Label and seal package

- Label packages just before sterilising, include date and **identifying code**. Must also be recorded in monitoring book, for tracing steriliser faults
- Seal laminate/paper packages using steriliser indicator tape, or heat-sealing unit. **Do not** use staples, string, adhesive tape, elastic bands
- If package not self-sealing — fold over 2–3 times, seal with indicator tape across width of package, overlapping on each side
- Make sure no air is trapped inside, will pop seal during sterilisation

## Loading steriliser

- When loading you need to think about
  - Air being removed from chamber — don't block air vents
  - Steam being able to reach and soak (saturate) all surfaces
  - Condensation being able to drain away



- Instruments mustn't stick out of tray, touch walls of chamber
- Put **unpacked instruments** on tray in single layer. **Do not** overfill
- **Packaged instruments** are
  - Put side-by-side on their edge, paper surface facing laminate surface
  - *OR* Laid flat on tray in single layer with paper side facing down
- Lay bowls (hollowware) on their side so air and condensation can drain
- Hang linen vertically. **Do not** load bowls or packages above

### Unloading steriliser

- **With drying cycle**
  - **Do not** open during drying cycle
  - Unload using tongs as soon as it is finished
  - Check load dry, indicators changed to correct colour, seals intact
  - Record time, temperature, pressure, then sign off
  - Put instruments on non-solid surface to cool down. **Do not** use fans to speed up cooling
- **Without drying cycle**
  - Instruments to be used straight away — remove using sterile gloves (aseptic technique)
  - Instruments for storage — dry with single-use lint-free cloth. Must be re-sterilised before use

**Note:** If packaging wet, instruments dropped, seals broken, indicators not changing colour — not sterile. Must be re-cleaned, re-packaged, re-sterilised.

### Storing sterile instruments

- Instruments sterilised in clinic and commercially sterile instruments are stored in same way
- **Do not** store in ultraviolet cabinets or cardboard boxes
- Store in washable plastic containers with close-fitting lids, or in cupboards with close-fitting doors and smooth washable surfaces
  - Should be dust free and only for sterile instruments. Clean and dry cupboards weekly without disturbing instruments
- Sterile stock may be contaminated by
  - Moisture, condensation, insects, vermin
  - Temperature extremes, over exposure to sunlight or ultraviolet light
  - Puncture by sharp objects, damage caused by incorrect handling and transportation

## Cleaning large medical equipment, furniture, fittings

### Attention

- **Do not** use disinfectants for routine cleaning. Overuse can create resistant germs (micro-organisms)
  - Only use disinfectant if contact with blood or other body substances (contamination). Use detergent for washing off perspiration
  - Detergent and warm water can be used if contaminated spills are cleaned up straight away
- Keep lids and caps on lotions, creams etc. Bugs and dust will contaminate

### What you need

- Paper towel, lint-free cloth, absorbent towel — throw away after use
- Detergent in warm (not hot) water
- Alcohol wipes
- If contamination — use hospital-grade disinfectant or bleach

#### Disinfectant

- Alcohol content at least 70% (*p107*)
- Make up as needed. **Do not** store. Can become contaminated and be source of infection

**Bleach (sodium hypochlorite)** — household-grade bleach with concentration of 40,000 parts per million or 4% available chlorine

- For 1:4 dilution — add 1 cup (250ml) of bleach to 3 cups (750ml) of warm water. Make as needed, deteriorates quickly
- Store bulk containers in cool dark place
- If splashing occurs — rinse affected area straight away
- Rinse off from surfaces and dry — corrosive

### What you do

- **To dust** — use damp paper towel to wipe over surfaces
- **To clean surfaces** — wipe with detergent in warm water, dry with paper towel
- **To clean contaminated surfaces** — wipe with detergent in warm water, wipe over with disinfectant or bleach according to manufacturer's instructions, rinse with clean water, dry with paper towel
- **To clean small instruments**, eg stethoscope diaphragms — use alcohol-soaked swabs (does not sterilise or disinfect)

# Preparation for pandemic infections in remote communities

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- Pandemics can happen very quickly
  - Involve highly contagious diseases, eg influenza, severe acute respiratory syndrome (SARS), Hendra virus
  - Spread very quickly between people, cause serious illness and death
- Remote communities likely to be seriously affected due to high levels of existing lung disease and chronic illness

## Attention

- Being prepared will reduce impact of pandemic infection — community must be involved in planning process
- Local clinic responses can
  - Slow down or stop spread of pandemic in community
  - Minimise amount of disease in community

## What you need

- Keep basic stock of
  - P2 rated face masks
  - Impermeable surgical gowns
  - Gloves and goggles
  - Alcohol hand gel
  - 10% bleach for cleaning surfaces
  - Tissues
  - Thermometers
- Once outbreak confirmed — extra stocks of antibiotics, antivirals, IV fluids, paracetamol

**Note:** Respiratory antibiotics may be needed for people with flu symptoms who develop presumed secondary bacterial pneumonia.

## What you do — preparation

- Clinic staff
  - Be aware of local, state/territory, national pandemic plans
  - Know communication plan for receiving and sending information during pandemic (*p113*)
  - Make sure community knows enough about potential impact of the disease for them be involved in planning process
  - Take into account importance of family and culture, limitations of local resources and infrastructure

- Health staff and volunteers
  - Find out which members of the community are likely to help as volunteers
  - As school will usually be closed, school staff may be a good source
  - Organise training programs for putting on, removing, disposing of personal protective equipment (PPE) and allocate roles
  - Need to be immunised with pneumococcal and annual flu vaccines
- Think especially about
  - Community needs and information sharing before, during, after pandemic
  - Staff, equipment and transport. How to quickly increase healthcare worker numbers, speed up delivery schedules, use alternate means of transport
  - Immunisation coverage in community for influenza and pneumococcal disease
  - Hygiene — develop and maintain good hygiene standards on daily basis so easy to implement during pandemic. Includes hand washing/hygiene (p95), use of masks (p98), correct cough etiquette, separate waiting areas for coughing patients etc
- Practise local pandemic plan regularly as part of local disaster plans. Especially
  - Clinic layout during pandemic — reception, triage, waiting areas, clinical areas, isolation rooms etc
  - How usual day-to-day function of clinic will continue
  - Infection control standard and transmission based precautions (p94), PPE, isolation, quarantine

### What you do — in outbreak

- Contact CDC/PHU urgently, call in volunteers, identify coordinator and communications officer
- Go over personal protection and hand-washing techniques
- Travel to and from community will likely be restricted to emergencies only
- Set up
  - Outdoor under-cover waiting area for patient triage
  - Field hospital
  - Area to use as a morgue
- Patients with pandemic flu symptoms should be
  - In field hospital **not the clinic** — separate from everyone else
  - Given standard surgical masks to reduce airborne transmission
  - Asked to cough and sneeze into tissue and put in personal bin, wash hands afterwards
- Draw up roster for 24-hour cover of field hospital by health staff and volunteers

- Make sure staff, volunteers and carers looking after patients
  - Wear gowns, gloves, goggles as well as masks
  - Know correct procedures for putting on and removing personal protective equipment
- Keep number of carers in field hospital to a minimum, eg one parent/carer for a sick child
- Plan for deceased bodies. Keep in refrigerated container or transfer to a morgue as advised
  - Need vehicle and driver to transfer deceased to morgue

### Communications

Pandemics are unpredictable in progression, severity, who they affect, where they travel to.

- Find out where to get public health advice for planning and coordinating response, eg CDU/PHU
- Central response coordinators will want to know what is happening in primary care clinics, eg case numbers, severity
- Communicate with community regularly
- Know what is happening in nearby communities

Note: Online versions of the manuals are the most up-to-date.