Management of spills, sharps and waste
Spills Management

- A spill is the loss of any body fluid (includes blood, mucus, sputum, vomit, breast milk, semen, urine and faeces) out of the body and into an area where cross infection could occur.

- Standard and additional precautions should be applied as necessary.

- To ensure procedure is followed for all spills, a spills kit must be used.
Spills Kit includes

- Non-sterile gloves (a barrier)
- An apron (a barrier and protector of clothing)
- Goggles (barrier)
- Plastic bag for contaminated waste (preferably colour coded – yellow for hazardous)
- Kitty litter or other absorbent material
- Scrapers (2 pieces of cardboard that can be discarded)
- Detergent
- Hazard sign to quarantine the area if necessary
- Paper towels
Procedure using Spills Kit

- Wipe up and remove any solid matter or excess material
- If spill is on a hard surface, clean with a mildly alkaline detergent and dry the area thoroughly.
- Dispose of all materials used
- If the spill is on a carpeted area – do not use liquid on the spill as this will spread the spill and potentially the contamination.
- Use ‘kitty litter’ (absorbent granules) to take up as much liquid and moisture as possible.
- Scrape up using cardboard pieces and dispose of into yellow hazard bag.
- Clean the carpet with a damp cloth or as recommended for the carpet.
- Quarantine the area until the carpet is dry
- A general cleaning detergent (mildly alkaline) is satisfactory for treating most spills but a disinfectant may be used after cleaning if required.
Sharps Management

A sharp is defined as anything that can penetrate the skin

- The use of sharp devices exposes healthcare workers to the risk of injury and potential exposure to blood borne infectious agents, including hepatitis B virus, hepatitis C virus and human immunodeficiency virus (HIV) (CDC 2001; Do et al 2003).

- Sharps injuries can occur in any healthcare setting, including non-hospital settings such as in office-based practices.
Examples of sharps associated with sharps injuries in healthcare settings

Examples of hollowbore sharps

- Disposable needles/ syringes
- Steel-winged (butterfly) needles
- Intravenous catheter stylets
- Multi-sample blood collection needles
- Arterial blood collection syringe needles
- Aspiration needles
- Injector pen needles
Non- hollowbore sharps

- Glass vials
- Dental probes
- Scalpel blades
- Suture needles
- Retractors
- Skin or bone hooks
- Sharp electrosurgical tips
Any person who has used a disposable sharp instrument or equipment must be responsible for its safe management and immediate disposal after use.

- These containers should be clearly labelled, puncture and leak proof, and conform to AS4031 or AS/NZ 4261. The containers should be located at the point of use or, if this is not possible, as close as practical to the use area. Reusable sharps requiring transport to a reprocessing area must be placed in a puncture-resistant lidded container.

- Sharps containers must be appropriately placed so that they are out of reach of children. They should also be placed in a secure position or mounted on the wall to prevent tipping.
Sharps disposal

The person who has used the single-use sharp must be responsible for its immediate safe disposal. Used disposable sharps must be discarded into an approved sharps container at the point-of-use. These must not be filled above the mark that indicates the bin is three-quarters full.
Prevention of sharps injuries can include

- Self-retracting lancets (single-use)
- Wall mounted sharps containers
- Vacuum blood tubes
- Education and training for staff

Make sure to NEVER

- Re-sheath a needle
- Pass sharps directly to another (use a kidney dish)
- Handle scalpel blades
- Overfill a sharps container
What to do for a sharps injury

- Wash the area thoroughly under running water
- Encouraging the wound to bleed freely
- Pat dry
- Apply a sterile dressing (bandaid) & apply pressure if still oozing/bleeding
- Report the incident
- Identify the patient that the needle or sharp was used on (if possible)
- Have a blood test for base line results
- Depending on circumstances immunoglobulin or counselling and further blood test may be required.

Please view ‘Sharps injury management’ in the Resource section
Layout and Design - Clean to Dirty Principle

- Within the health care facility there will be specific demarcation areas. These areas are used for the safe storage of linen, sterile equipment, PPE and are in an area outside of any possible contamination.

- For example, packaged sterile instruments should not be kept near a sink or wet area as any wetting of the package would render them unsterile. Any damage to packaging should be reported to senior staff and isolated for re-processing.
Temperature and light sensitive medications and vaccines should be stored appropriately. The correct temperature for the storage of most vaccines is between 2°C and 8°C – “strive for 5” is the most desirable. Storage at the correct temperature is vital to maintain its potency.
Sterilization

There are three main types of sterilization:

- Steam
- Chemical
- Radiation (microwave / UV)

Most sterilization is carried out using steam. Steam penetration at the required temperature for the required time is very efficient at killing micro-organisms and their spores. Generally sterilization temperatures must reach 134°C for at least 3 minutes.

Not all instruments can withstand steam penetration process and so are re-processed using special chemicals. Examples include colonoscopes and endoscopes. Special care should be taken when handling these chemicals.
View the resource document ‘Clean & dirty zones layout’
Note the zoning of the clean and dirty areas to maintain infection control.
Note the ‘flow’ from dirty to clean for waste management, processing, sterilising and storage
Waste Management – Clinical waste

Clinical waste has the potential to cause a sharps injury, cross infection or public offence.

Clinical Waste is defined as:

- Discarded sharps / including container
- Human tissue (excludes teeth, hair, nails, urine and faeces)
- Material containing free flowing blood e.g. blood soaked dressings / full blood tubes
- **Related waste such as cytotoxic agents and pharmaceuticals or radioactive material **

Cytotoxic waste is the by-product of cytotoxic drug therapy administered to patients (such as chemotherapy). Cytotoxic waste typically includes all drug administrative equipment (e.g. needles, syringes, drip sets etc) as well as all gowns and body fluids/waste from patients undergoing such treatment.
Storage on site

After collection in yellow bags/bin, clinical waste should be stored in a central area which:

- has a non-absorbent floor and an impervious surface that can contain any spillage from waste containers
- is vermin-proof
- is used only for storage of waste
- is kept locked, with access only to authorised people
- is signposted with appropriate biohazard symbols
- has an adequate spills kit
- is adequately cleaned
- is refrigerated for clinical waste.
Clinical waste collection

- Yellow and Black colour coding denotes Clinical Waste.
- All clinical waste should be collected into yellow bins / bags with bio hazard labels attached.
- Trolleys with drip trays (to prevent spills) should only be used for this purpose, never over-filled and cleaned daily.
- All clinical waste should be collected by a licensed waste disposal company - contractors accredited by the Environment Protection Authority (EPA) in trucks which have appropriate transport permits and biohazard signage.
- These companies provide lockable yellow clinical waste bins for collection of clinical waste.
- Labels should make it clear what type of material is stored inside (eg infectious, cytotoxic).
Waste Management – General waste

- Office waste (non-confidential)
- Kitchen waste
- Items with small amounts of body or blood substances e.g. band aids
- Tongue depressors
- Teeth, hair, nails, urine and faeces
- Disposable vaginal speculum
Confidential Waste – defined as:

- Anything that identifies the patient
Please complete the activities for this topic