

APPENDIX **M**

Wagga Wagga Health Service Cluster Waste Management Plan



WAGGA WAGGA HEALTH SERVICE CLUSTER

WASTE MANAGEMENT PLAN 2010 - 2011

Mission Statement

The Wagga Wagga Cluster is committed to maintaining a waste management system that is safe, efficient, cost effective and considers environmental issues.

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SECTION 1 - Introduction

This Waste Management Plan describes the current policies and procedures for Wagga Wagga Health Service Cluster. It provides goals & targets to ensure ongoing improvements in all aspects of waste management, including the generation, handling, storage and disposal of all forms of waste. Wagga Wagga Health Service Cluster is committed to minimising waste, in accordance with the NSW Government Waste Reduction and Purchasing Policy.

This plan is based on the NSW Health Department PD2005_132, "Waste Management Guidelines for Health Care Facilities - August 1998", PD 2007_036, Infection Control Policy, relevant legislation relating to Environmental Protection, and PD 2005_360 Occupational Health & Safety. As legislation and policies are constantly revised, this plan should be reviewed annually.

To be effective, this plan must be widely promoted throughout the hospital.

1.1 Aims

- # To protect public health and safety.
- # To provide a safe work environment
- # To minimise the environmental impact of waste generation treatment & disposal.
- # Reduce waste handling & disposal volumes/costs without compromising health care.

1.2 Objectives

- # To adopt and implement the Waste Management Plan throughout the hospital and community health services.
- # To monitor performance and review the Waste Management Plan at least annually.
- # Adopt a waste minimisation policy which incorporates realistic purchasing guidelines.
- # Develop concise waste segregation principles and promote practical guidelines for re-usable products.
- # Foster commitment from all staff and management to actively participate in waste avoidance, reduction, reuse and recycling programs.
- # Introduce a continuing waste management education program for all staff to increase awareness of Occupational Health & Safety issues and waste minimisation principles.
- # Adopt policies and procedures to minimise the environmental impact of waste treatment and disposal.

SECTION 2 – Definitions

Hospital Waste can be divided into seven broad categories which are defined in the NSW Health Department Waste Management Guidelines for Health Care Facilities (1998). Clinical, cytotoxic, pharmaceutical, chemical and radioactive wastes are classified as Hazardous wastes under Part 3, Schedule 1 of the Waste Regulation and section 3 of the Waste Guidelines.

2.1 Clinical waste

Clinical waste is waste which has the potential to cause sharps injury, infection or offence. Clinical waste includes the following types of waste:

- sharps;
- human tissue (excluding hair, teeth and nails);
- bulk body fluids and blood;
- visibly blood stained body fluids and visibly blood stained disposable material and equipment;
- laboratory specimens and cultures, animal tissues, carcasses or other waste arising from laboratory investigation or for medical or veterinary research, unless treated to standards approved by the Director-General of NSW Health.

2.2 Cytotoxic Waste

Cytotoxic waste means material contaminated with residues or preparations containing materials toxic to cells, principally through action on cell reproduction. This includes any residual cytotoxic drug, and any discarded material associated with the preparation or administration of cytotoxic drugs.

2.3 Pharmaceutical Waste

Consists of pharmaceuticals or other chemical substances specified in the Poisons List under the Poisons and Therapeutic Goods Act 1966. Pharmaceutical substances include expired or discarded pharmaceuticals, filters or other materials contaminated by pharmaceutical products.

2.4 Chemical Waste

Chemical waste is generated from the use of chemicals in medical applications, domestic services, maintenance, laboratories, during sterilisation processes and research. It includes mercury, cyanide, azide, formalin, and glutaraldehyde, which are subject to special disposal requirements. Chemical wastes included in the Dangerous Goods Regulations and Poisons and Therapeutic Goods Act are also included in this stream.

2.5 Radioactive Waste

Radioactive waste is material contaminated with radioactive substances which arises from medical or research use of radionuclides. It is produced, for example, during nuclear medicine, radio immunoassay and bacteriological procedures, and may be in a solid liquid or gaseous form and includes the body waste of patients under treatment. Reference should be made to the *Radiation Control Act 1990* and the Radiation Control Regulation 1993.

Radioactive waste, once lead shielded and allowed to decay to a safe level as set by the Regulatory authority, is no longer deemed to be radioactive waste. Certain radioactive wastes are classified as hazardous waste in the Waste Regulation.

2.6 Recyclable Products

Items which are composed of materials or components, capable of being remanufactured or reused. Items are considered recyclable if facilities are available to collect and reprocess them.

2.7 Organic Products

This includes wood, garden waste, food and vegetable scraps and natural fibrous material which are biodegradable.

2.8 Liquid Waste

Liquid wastes are defined in the Waste Regulation. These wastes include grease trap waste, used lubricating oil and waste normally discharged to the sewer.

2.9 General Waste

Any waste not included above, which is not capable of being composted, recycled, reprocessed or re-used. **This stream includes incontinence pads, sanitary waste and disposable nappies.**

SECTION 3 - Organisational Issues

Wagga Wagga Health Service serves Wagga and surrounding areas

The hospital has approximately 270 beds (actual bed numbers vary according to activity demands). These beds comprise the following -

28	Medical
58	Surgical
8	Intensive care
21	Obstetrics
4	Special Care Nursery
28	Rehab
16	Yathong Lodge
19	Paediatric
18	Psychiatric
6	Renal
10	Day Surgery
10	Other (Ambulatory Care) Day only
12	Other (Ambulatory Care) 23 hr Ward

Occupied Bed Days Wagga Wagga Base Hospital:	69,272 (2006)	67,567 (2005/06)
Occasions Of Service Wagga Wagga Community Health:	94,416 (2004)	
Total Staff: 641 FTE for Cluster		
The Manager of the Cluster: A/GM L West		

3.1 Employer's Legal responsibilities

Employers have a number of legal responsibilities, which include:

- # developing and maintaining a safe work environment and safe work practices
- # ensuring hospital activities do not breach environmental standards prescribed in the State and Federal legislation;
- # providing staff training and education for the safe handling of waste.

Refer to the legislation list in Appendix1.

3.2 Employees Responsibilities

Employees also have responsibilities, which include:

- # Complying with safety instructions and use safe work practices for their own protection and for the protection other staff and the public
- # Actively supporting environmental initiatives introduced by the Waste Management Committee.
- # Be aware and comply with the requirements for the handling of chemical substances according to Material Safety Data Sheets (MSDS).
- # Attend and actively participate in waste management training.

Refer to Legislation list in Appendix 1.

3.3 Licensing Requirements

Wagga Wagga Cluster generates more than 2 tonnes of clinical (Hazardous) waste per year	<u>YES</u>
Wagga Wagga Cluster stores more than 500kg of clinical (Hazardous) waste at any one time	<u>YES</u>
Wagga Wagga Cluster transports more than 40 kg clinical (Hazardous) waste	<u>NO</u>
Wagga Wagga Cluster is licensed as a treatment facility	<u>NO</u>
Wagga Wagga Cluster requires a license	<u>YES</u>

A copy of the License is held by Wagga Wagga Cluster License No. 6677 Renewal date: 05/4/2008.
Senior Environmental health Officer at Public Health unit facilitates this process.

3.4 Waste Management Committee

3.4.1 Terms of Reference

To be reviewed annually.

The Committee may co-opt any other relevant personnel to address specific issues.

Nominated Waste Management Chairperson **Business and Support Manager**

Nominated Waste Management Coordinator **Infection Control CNC**

Meeting Frequency **Monthly**

Table 1: Waste Management Committee Members

Position	Name	Contact Number	Responsibility
Secretary	Executive Administration Officer	6614	Minute keeping. Administration Support.
Infection Control	Infection Control CNC	6231	Advise on infection control issues. Liaison with the Infection Control Committee.
Community Health Representative	J. McLennan	6411	Advise on Community Health related matters
Purchasing officer	As required		Report on product usage/ wastage & other supply issues.
Engineer/ Maintenance	Asset Management Manager WWHSC	6644	Advise on structural and maintenance issues relating to the storage, treatment & disposal of waste. Monitor water and energy usage.
Domestic services	Manager Hotel Services	6295	Supervision of cleaning staff . Maintain daily records of waste generation.
Waste Collector		Page 7823	Support monitoring of waste and provide front line information to the membership
Executive Representatives	Business and Support Manager Community Health Manager	6651 6479	Executive representation Financial and administrative support
Clinical Representatives	Barry Horsley (ORS) Kate Jensen (Path) Sharon Townsend (Ward3)	6665 6605 6367	Advise on clinical matters
Environmental Health Officer	As required Tony Burns Senior Environmental Health Officer	69235755	Liaison with Council. Advise on disposal issues and services external to the hospital. Independent Audits of the hospital.

3.4.2 Objectives of the Waste Management Plan

1. All waste is disposed into the correct waste streams

- *Improve waste segregation practices (increase compliance by 10% in the first year (Tables 5, 6 & 7)*
- *Conduct a waste audit and prepare a comprehensive report of current waste generation, segregation, handling, storage and disposal practices and costs*
- *Liaise with council, private waste contractors and Area Health Services with regard to the transport and disposal of waste external to the hospital.*
- *Seek a commitment from Management to comply with all relevant Legislation (Appendix 2)*
- *Conduct ongoing audits of waste (refer Section 4.1). Ensure information is relayed to staff*

2. Waste volumes are reduced; Waste minimization and recycling is increased

- *Promote waste management principles throughout cluster (Department Heads and department meetings, signs, posters, notice boards, bulletins, competitions etc*
- *Implement a waste avoidance & minimisation program incorporating the Waste Reduction & Purchasing Policy [WRAOO – refer to Table 3]*
- *Implement a Recycling program and increase recycling by at least 10 % in the first year (Table 4)*

3. Waste management practices optimize staff safety

- *Develop OH&S strategies for injury prevention, and for reporting, treating and follow up of injuries associated with waste handling*
- *Develop spill management strategies for all waste categories*
- *Provide appropriate Personal Protective equipment and offer staff vaccinations*
- *Conduct a Waste Management Numerical Profile Audit annually and review the Waste management Plan*
- *Implement an ongoing waste management training program which caters for all staff including management.*
- *Consult with Management on waste handling & storage issues relating to the design and layout of buildings, renovations & extensions*

3.5 Purchasing Policy

All purchasing for the WWBH&CS will be based on the premise of waste avoidance and minimisation and will comply with the GSAHS purchasing policy.

Refer to Area Purchasing Policy.

Table 3: Product Evaluation

Date: 02/05/2007

Product	In Contract Y/N	Cost Centre/ Department	Quantity / Year	Cost / Year	Recycled %	% Capable of using recycled or recyclable components	Recyclable	Disposable	Reusable Alternative Available	
							Market Available? Y/N	Bio- degradable %	Y/N	Cost \$*
Photocopy paper		All				0	Y	100%	NA	NA
Office communication paper		All				100	Y	100%	NA	NA
Office stationary		All				0	Y	100%	NA	NA
Computer paper		All				0	Y	100%	NA	NA
Photocopiers		All				0	-	-	-	-
Printers		All				0	-	-	-	-
Facsimile		All				0	-	-	-	-
Toner Cartridges		All				0	Y	0	NA	NA

3.6 Education and Training

Wagga Wagga Cluster is developing an education package covering the knowledge and application of the core principals for waste management.

The person responsible for coordinating and running training activities is the CNC Infection Control. Orientation courses for new employees and refresher courses are to be run whenever there is a change in process, and / or at least annually.

A register of course attendances is held by: CNC Infection Control

Wagga Wagga Health Service Cluster is compiling an education plan for this facility that includes sessions to:

- # Senior management
- # Current Employees
- # New Employees (orientation)

The following topics are to be covered by all staff:

- # Safe work practices
- # Staff awareness of policies at orientation
- # Legislation & licensing
- # Provision and safe use of PPE
- # Infection Control and Hygiene procedures
- # Waste stream definitions
- # Costs and benefits of waste minimisation
- # Reduce/reuse/recycle
- # First aid / needlestick injury
- # Spill management
- # Manual handling
- # Environmental impacts of waste disposal

A Waste Management Educational CD ROM is being distributed to all departments to enable staff to view WM education as time allows whilst on duty.

A publicity campaign has been designed to reinforce the principals of the waste management plan. Options being considered by the Waste Management Committee are:

- # posters
- # brochures
- # notice boards
- # with pay slips
- # newsletters
- # waste awareness days
- # email message
- # Department Managers meetings
- # Department meetings

References:

South West Sydney Area Health Services, 1994, *SEE: Better Waste Management*
Medical Safework Video, The safe handling of biomedical waste, A safety training module.

SECTION 4- Waste Management Strategies

4.1 Waste Minimisation

4.1.1 Waste Avoidance

Avoidance initiatives introduced last year: Minimising waste – materials management
New Avoidance initiatives proposed this year: Daniels Sharps containers

4.1.2 Reuse Strategy

Wagga Wagga Base Hospital does not re-use single use items that have penetrated the skin
Reuse initiatives introduced last year:

- clean theatre wraps reused for plaster & fracture clinics in ED and Ambulatory Care
- office paper reused for printing, scrap paper
- computer printouts given to staff for children to draw on
- cardboard boxes returned to materials management for reuse

New Reuse initiatives proposed this year:

- child care craft supplies
- catering containers for staff
- shredded paper mulch for gardens & chicken sheds
-

Methods of cleaning/disinfection/sterilisation:

- steam sterilisation & thermal disinfection for theatre items
- ultrasonic cleaning and manual cleaning

4.1.3 Waste Reduction

Waste reduction initiative introduced last year:

➤

New Waste Reduction initiatives proposed this year:

- cooking oil
- consultation with staff re waste management

4.1.4 Recycling

Recycling initiatives introduced last year:

- cardboard boxes
- milk cartons
- paper/shredding
- cafeteria rubbish – cans, bottles
- toner cartridges
- telephone directory
- mercury amalgams
- silver – x-ray

New Recycling initiatives proposed this year:

- pharmacy drug containers
- kitchen/catering containers
- plastic wrap
- theatre wraps
- oil containers - engineering
- cleaning agent bottles

- coffee shop items
- Recycling of batteries

4.2 Audits

Auditing is an essential management tool for measuring the level of compliance with the Waste Management Guidelines. Audits can also identify opportunities for water and energy conservation. The audit comprises four components:

			Proposed	Conducted
1.	Numerical profile	mini audit	Date	
2.	Segregation audit		Date	as per Patient first initiative
3.	Energy audit		Date [...../...../.....]	[...../...../.....]
4.	Water audit		Date [...../...../.....]	[...../...../.....]

4.2.1 Waste Management Numerical Profile Audit

The Wagga Wagga Cluster will utilise the O H S & R numerical profile audit to measure compliance with waste management guidelines.

4.2.2 Segregation Audit

Guidelines for conducting a segregation audit

Both clinical waste and general waste should be inspected to accurately determine the level of segregation. Other categories of waste and recyclable materials can also be audited (except hazardous, cytotoxic and radioactive waste).

4.2.2.1 Requirements

The Audit should be carried out in a well ventilated, well-lit area with smooth, impervious floors. A stainless steel table or suitable platform such as a mortuary table with elevated sides to retain liquids should be used to sort waste. Hand washing facilities should be available.

Staff performing the audit should wear adequate personal protective equipment AND should be adequately vaccinated (including Hepatitis B). A note taker will be required to record and take photographs if necessary. Photographs or video recordings can be valuable in illustrating and highlighting problem areas.

Ensure that the origin of the waste is clearly identified by name (ie theatre, Ward name) or by numbering, colour coding, or bar coding. The date collected should also be clearly marked on the containers.

4.2.2.2 Equipment

- # Scales suitable for weighing all waste.
- # A supply of suitable containers to receive waste and recyclables once segregated.
- # Knife or scalpel for opening bags.
- # Long handled tongs or tweezers for removing items of waste.
- # Supply of sodium hypochlorite bleach (4%) with mop and bucket.
- # Thick rubber gauntlet gloves, mask, apron, face shield and waterproof boots.

Thick plastic sheeting to line table surface.

4.2.2.3 Procedure

If waste volumes are small, it may be possible to inspect all bags/containers, however where this is not practical, a minimum of 10% of all bags should be selected at random for inspection. If one days waste is to be inspected, ensure that additional waste from previous days are not included (eg. Monday may include weekends waste) and note whether the day selected is representative.

First record the weight of each bag/container on the audit form (attached). Carefully open the bag and place each item into the appropriate category (Clinical, General or Recyclable - refer to the attached guide to the classification of waste). Re-weigh each category and record the results on the audit form. Total each column and calculate the percentage of Clinical waste, general waste and recyclable material.

Note: If recyclable items are identified in the clinical waste, they should not be removed for recycling if visibly contaminated with blood or body fluids.

Wagga Wagga Cluster Segregation Audit Plan

The Waste Committee will audit the following departments:

Theatre
Ward 1
Ward 2
Ward 5/ LW
Ward 3 – Medical
Emergency

Audits are to be conducted every three months in line with PFI.

Table 5: Waste Classifications for Waste Segregation Audit

Note:- This list is not all inclusive. The table acknowledges the existence of disposable items, but does not endorse their use.

Clinical	Domestic	Recyclable
Bandages & dressings contaminated with blood	Food scraps AND disposable food containers	Glass
Blood stained gloves	Gloves (NOT stained with blood)	Paper
Blood stained disposable surgical hardware	Disposable food utensils	Aluminium (cans, foil etc)
Used needles & syringes	Flowers (if not compostable)	Cardboard
Used drainage & suction containers (full/empty)	Plastic bottles (non-recyclable)	Steel cans
Theatre gowns soiled with blood	Disused office supplies	Milk cartons
Bulk blood & body fluids (not capable of safe disposal to the sewer)	Personal items	PET (polyethylene Tetrachloride) Plastic bottles
Treated Pathology waste (used culture plates/tubes etc)	Un-used medical supplies	HDPE (High Density Poly-Ethylene) Plastic bottles * [2]
Blood stained disposable bed liners	Bed liners (not visibly blood stained)	Cooking oils & fats
Blood stained disposable napkins/ incontinence pads	Disposable napkins (NOT visibly blood stained)	Polypropylene bottles *[5]
	Oxygen masks & tubing (clean)	X-ray film
	Bed pan covers (clean)	
	Sterile wraps	
	Dressing / Treatment trays	
	Paper tissues & hand towel	
	Wrappings	
	Drained IV bags & tubing	

Key: □*□ denotes recycling symbol.

Table 6: Waste Audit Form

GENERAL /CLINICAL WASTE (circle appropriate type)

Date:...../...../19.....

Waste Origin Eg. Path lab, Maternity	Total Weight (kg)	Clinical		General		Recyclable		Comments (a) Clinical (b) General (c) Recyclable
		Weight	%	Weight	%	Weight	%	
								a)
								b)
								c)
								a)
								b)
								c)
								a)
								b)
								c)
								a)
								b)
								c)
								a)
								b)
								c)
								a)
								b)
								c)
TOTAL								

AUDITOR:.....RECORDER:.....

Table 7: Data Analysis from Waste Audit

B

Waste	Daily Volume (kg)	Estimated Annual Volume (kg)	Average Volume/ Bed Day	Average Volume/ Staff	Cost/kg
Clinical					
General					
Recyclable					

4.2.3 Energy Audit

Engineering to provide information on ways to decrease energy use.
Obtain baseline data .

[The Australian Healthcare Association and The Greenhouse Challenge have produced a Healthcare Workbook titled "Managing Energy for Profits" which sets targets for reducing greenhouse gas emissions. Further details on how to conduct energy audits and become more energy efficient can be obtained from the Australian Healthcare Association at PO Box 54, Deakin West , ACT, 2600 or {www.aha.asn.au}, Phone 02 6285 1488 or Fax 02 6282 2395]

4.2.4 Water Audit

The Riverina Water will be contacted to obtain information on methods to decrease water use.
Obtain baseline data.

SECTION 5 - Waste Handling, Containment and Transport

Wagga Wagga Cluster has an adequately trained team responsible for the handling, internal transport, spill management and disposal of clinical and related wastes.

5.1 Review

The Waste Management Committee review of the collection process including manual handling and transportation is due on .31../.07../2008. This review will be co-ordinated by the Wagga Wagga Hotel Services Manager.

The review to include the following areas:

- # transport via least sensitive routes;
- # collection process and frequency;
- # handling;
- # placement of mobile garbage bins, bags and containers;
- # location of waste storage area;
- # Contractor collection points.

5.2 Waste Handling

Sharps are handled in accordance with the Infection Control Policy Directive 2005_247.

Manual handling is in accordance with the National Code of Practice for Manual Handling

Hand washing and hand care is in accordance with the Infection Control Policy Directive 2007_036

Management of Needlestick Injuries is in accordance with Departmental Circular 98/11.

YES NO

YES NO

YES NO

YES NO

Table 8: Clinical Waste

Date:/...../.....

Department (eg. Theatre)	Location (eg. Panroom)	Container Type (eg. Bag, MGB)	Collection Frequency/Time	Collection by Whom	Storage location

Sharps Containers

Wagga Wagga Cluster provides purpose designed sharps containers to ensure a safe system of work. An annual audit is conducted by the supplier to determine the appropriateness in terms of size and location based on the risks associated with each invasive procedure. This is in line with the Area Health Service contract.

Sharps container/s used: Daniels Sharps

Size/s: range of sizes used in all clinical areas. Majority of containers are 22.7 litre nestable. Additional sizes are used as required. Containers also in public toilets

The containers are collected by (if contractor) [insert details]

The containers are disinfected by (if reusable): no reusable containers

Containers are not overfilled **YES**

Containers comply with Australian Standards **YES**

Kept out of children's reach (ie minimum 1.4m above floor) **YES**

Labeled with hospital, date & ward **NO**

Sealed before removal **YES**

Table 9: Sharps Containers

Date:/...../.....

Department (eg. Theatre)	Location (eg. Panroom)	Collection Frequency/Time	Collection by Whom	Storage location

Table 10: General Waste

Date:/...../.....

Department (eg. Theatre)	Location (eg. Panroom)	Collection Frequency/Time	Collection by Whom	Storage location

5.3 Waste Bags

Bags are not overfilled	YES NO
Bags are held away from the body when being handled	YES NO
Bags are sealed at the point of generation/collection	YES NO
The bag closures used are: Cable ties	
The waste collection times are: twice daily am and pm	
Waste bags are free of heavy metals (inorganic dyes)	YES NO

5.4 Waste Trolleys & Mobile Garbage Bins (MGBs)

Are the trolleys used exclusively for waste transport?	YES NO
Are trolleys lidded, leakproof and made of rigid material?	YES NO
Trolleys are not overfilled	YES NO
Do MGBs have lockable lids	YES NO
Are the trolleys and MGBs colour coded and labelled in accordance with Appendix 4	
Cleaning frequency: weekly	

The following procedures are followed when cleaning trolleys and MGBs:

- # Thoroughly scrub trolleys and MGBs with pH neutral detergent
- # Trolleys and MGBs should be left to dry
- # Cleaned trolleys and bins are to be stored separately from soiled containers
- # Wear appropriate personal protective equipment
- # Waste water must not be discharged to storm water or other system systems designed to carry unpolluted water.

5.5 Tracking

All waste bags, MGBs and sharps containers are labeled with the hospital, ward and date

The labeling method used: Bar coding

The person responsible for tracking is: Stericorp

5.6 Holding Areas

Clinical waste is stored in an enclosed structure with lockable door and smooth impervious floor. YES NO

Approximate duration of storage: up to one week

"First in first out" policy YES NO

Water supply available YES NO

Suitable drainage provided (specify eg. sewer, septic tank) [insert details here]

Permanent natural ventilation provided YES NO

Adequate lighting provided YES NO

Are spill kits located in the holding area YES NO

Where are the spill kits located:: [insert locations here]

Who holds the keys for the holding area: Hotel Services

If an enclosed structure is not available, where is the location of holding area Not applicable

Holding Area not accessible to the public: YES NO

Is the holding are enclosed by a fence or other barrier YES NO

Radioactive wastes with short half-lives are stored on the premises until radioactivity is undetected.

Separate radiation storage room N/A YES NO

Radioactive storage bin provided N/A YES NO

Is a collection tank provided for liquid waste N/A YES NO

5.7 Personal Protective Equipment (PPE)

The following protective barriers are available or accessible:

eye shields	YES NO	specify:	
gloves	YES NO	specify:	
gowns	YES NO	specify:	do we require this
masks	YES NO	specify:	
aprons	YES NO	specify:	
footwear	YES NO	specify:	

The PPE worn when handling waste the following types of waste are:

General:

Clinical:

Cytotoxic: Please refer to safe work

Radioactive: practices

Sharps:

5.8 Spill Management

5.8.1 Spill Kits

The person responsible for maintaining the kits is Ward manger where kit held

Commercially available kits supplied ? YES NO

What is the name of the Company: Material management

Spill kits for clinical waste are maintained in the following areas: Every ward

Spill kits for cytotoxic waste are maintained in the following areas: ward 3 – medical ward, Emergency, OT, Children's ward,

Spills kits for mercury spills are maintained in the following areas: Emergency, maternity, children's ward.

A recommended equipment list for spill's kits is located in Appendix 3.

5.8.2 Management of blood or body substance spills

Spot Cleaning

- Put on disposable gloves
- Wipe up spot immediately with a damp cloth, alcohol, or paper towel may be used.
- Discard contaminated materials in Clinical waste bag.
- Wash hands thoroughly.

Other spills

- Collect appropriate spill kit from designated location
- Wear disposable gloves, eyewear, mask and apron
- Remove the bulk of the blood and body substances with absorbent material
- Use pan and scraper to scoop up absorbent materials and unabsorbed blood or body substances
- Discard Clinical materials in Clinical waste bag for disposal
- Wash hands thoroughly
- Mop the area with a detergent solution
- Wipe the site with disposable towels soaked in a solution of 1% (10,000 ppm) available chlorine.
- Clean and disinfect pan, scraper, mop and bucket
- Re-usable eyewear and apron should be cleaned and disinfected after use
- Replace any used items and return the spill kit to the designated location

If a spill occurs on a carpeted area, mop up as much of the spill as possible using disposable towels then clean with a detergent. Arrange for the carpet to be shampooed as soon as possible. (Circular 95/13).

5.8.3 Cytotoxic Spills

- Collect cytotoxic spill kit from designated location
- Put out a sign to notify of potential hazard.
- Wear appropriate PPE as outlined in WorkCover guidelines.
- Double glove with latex inner and heavy duty outer gloves
- Lay absorbent towels or mats over the spill
- Scrape up any broken glass and absorbent materials and place in cytotoxic waste bag
- Mop the area with warm water and detergent
- Remove shoe covers, outer gloves, disposable overalls, mask and goggles and place in waste bag/container
- Seal waste bag and place in cytotoxic waste bin or have it collected in the usual manner.
- Replace any used items and return the spill kit to the designated location

5.8.4 Formaldehyde Spills

- Shut off all sources of ignition
- Ventilate area as much as possible
- Collect Clinical waste spills kit from designated area
- Wear goggles or face shield for spills or leaks where concentrations of formaldehyde in air are great enough to cause eye irritation.
- For higher concentrations wear an approved supplied air helmet or self contained breathing apparatus with full face piece.
- If leak or spill is small, dilute with plenty of water and run to waste
- For large spills, absorb in a suitable material (dry sand, earth, vermiculite) and dispose as approved by local Council
- Mop or wipe over spill area with warm water and detergent
- Replace any used items and return the spill kit to the designated location

5.8.5 Glutaraldehyde Spills

- Ventilate area as much as possible
- Collect Glutaraldehyde spill kit from designated area
- Wear goggles or face shield
- Dilute with plenty of water and run to waste
- Mop or wipe over spill area with warm water and detergent
- Replace any used items and return the spill kit to the designated location

5.8.6 Mercury Spills

- Ventilate area of spill
- Collect mercury spills kit from designated area
- Wear impervious disposable gloves
- Pick up droplets using a pasteur pipette, eye dropper or suction bottle

- Store the waste in an unbreakable lidded container, preferably under a solution of sodium thiosulphate (photographic fixer).
- Decontaminate the area by sprinkling sulphur powder over the spill area. The volume of powder used should be at least twice the volume of the spill.
- Mix well by a brush, where possible
- Allow about half an hour for the formation of mercuric sulphide
- Sweep up the sulphur using the dustpan and brush, avoid generating dust
- Dispose of the dust in an impervious sealed container
- Seal and discard all cleaning equipment
- Replace any used items and return the spill kit to the designated location

For spills on carpeted area, follow the first five steps described above. For decontamination, the carpet has to be removed. Once the carpet is removed the decontamination procedures can be followed.

5.8.7 Cidex OPA Spills

Procedure

- Remove unnecessary people from the spill area
- Place Caution Fluid Spill sign on the floor
- Fit Personal Protective Equipment – Gown, overshoes, mask, safety goggles and gloves
- Sprinkle Neutraliser Powder evenly over entire spill area
- Remove Absorb Pillows from Plastic Bag
- Place Absorb pillow on spill area, start at outer edge of spill, apply light pressure and sweep in to absorb all liquid
- Place used Absorb Pillows into black garbage bag
- Wipe any excess residue from floor with Neutraliser Wipes
- Place contaminated wipes into black garbage bag
- Place all Personal Protective Equipment into black garbage bag and seal the bag
- Wash hands
- Follow your facility's waste disposal practices and all state and local regulations
- Mop floor with a neutral detergent and water or notify Environmental Services for general floor cleaning – once floor has been mopped and is dry Caution sign can be removed
- Order replacement Spill Kit from GSAHS Procurement and Supply

5.9 Transport

Transportation complies with the EPA's *Special conditions applicable to the transportation of trade waste being contaminated wastes generated in hospitals, health institutions and medical laboratories*.

All of Generic Hospital's Transporters and Contractors are outlined in Table 11 .

5.9.1 Community Health

Clinical Waste is not transported in the drivers compartment:	YES NO
Waste Containers:	YES NO
Rigid and leakproof	YES NO
Secure fitting lids	YES NO
Securely mounted in the vehicle	YES NO
Cleaned regularly	YES NO
Clearly labelled	YES NO
Vehicles are always locked when unattended	YES NO
Vehicles carry a suitable spill kit	YES NO

Table 11: Transporters and Contractors

..... Date:...../...../19.....

Waste Type	Name of Contractor and/or Transporter	Address	Contact Phone	Trade Waste License No	Destination
Clinical					
General					
Sharps					
Cytotoxic					
Grease Trap					
Hazardous					
Pharmaceutical					

SECTION 6 - Waste Treatment and Disposal

Wagga Wagga Cluster is responsible for its waste from generation to final disposal (□ cradle to grave"). For this reason, documentation is kept on the date of disposal, the amount of waste disposed, where the waste is disposed and the contractors and transporters.

Table 12: Chemicals, Pesticides & Pharmaceuticals

Date:...../...../19.....

Chemical, Pesticide Pharmaceutical	Use	MSDS Available Yes/No	Storage Location	Disposal Method (ie. sewer, landfill, incinerator etc)	Quantity & Frequency	Trade Waste License & Contractor receipt

Table 13: Radioactive Waste

Date:...../...../19.....

Radioactive Material	Half Life	Storage Location	Storage Duration	Disposal Method	
				Where	How and By Whom

6.1 Radioactive Waste Disposal – not applicable

The safe handling and disposal of radioactive materials is regulated by the NSW Radiation Control Act, 1990, and the Radiation Control Regulation, 1993. The current guideline being used by Generic Hospital is the NH&MRC *Code of practice for the disposal of radioactive wastes by the user*.

Is the facility licensed by the Environment Protection Authority YES NO

License Number: [insert number here]

Radiation Safety Officer: [insert name here]

Are any radioactive gases discharged? YES NO

Who maintains the system? [insert name here]

Are detailed records of disposal kept - covering the type of radionuclides, estimated activity, physical nature of material, date disposed and method of disposal YES NO

6.2 Disposal of Clinical Waste in Isolated Rural Areas - not applicable

Is the landfill licensed by the EPA to receive clinical waste YES NO

Is the waste covered immediately YES NO

Does the public have access to this part of the waste facility YES NO

Is the hospital given any written acknowledgment of receipt YES NO

Does the hospital keep records of amount and date of disposal YES NO

Do hospital staff supervise the disposal YES NO

6.3 Disposal of Products of Conception and Non-viable Foetuses

Less than 20 weeks gestation or less than 400gms

How are products of conception disposed: From OT – clinical waste, From maternity via funeral director or pathology

Are parents permitted to take these products home YES NO

If yes, how are these products disinfected: Not applicable

How are these products packaged: Not applicable

Does the cemetery provide memorial services burial of these products: YES NO

Do any Funeral Directors participate in the provision of a memorial service YES NO

If yes, which ones: For details and further enquiries please consult maternity services

Greater than 20 weeks gestation or greater than 400gms

How are products of conception disposed: funeral director/ pathology

Are parents permitted to take these products home YES NO

If yes, how are these products disinfected: Not applicable

How are these products packaged: Not applicable

Does the cemetery provide memorial services burial of these products: YES NO

Do any Funeral Directors participate in the provision of a memorial service YES NO

If yes, which ones: For details and further enquiries please consult maternity services

6.4 Radiography Wastewater – not applicable

A silver recovery unit is installed: YES NO

If YES the Silver recovery unit is serviced by: {insert name}

If NO used fixer and developer is removed by: {insert name}

Waste is managed in accordance with the PURE Code of Practice (Appendix 1) YES NO

Trade waste agreement with sewage authority {provide details}

Table 14: Treatment and Disposal

..... Date: ...// ...

Waste Type	Treatment		Disposal		Trade Waste Agreement/License No.
	Method	Contractor	Method	Contractor	
General Waste					
Clinical Waste					
Sharps					
Pathology Waste					

Table 15: Waste Management - Annual Report

Date:...../...../19.....

Waste	Quantity/Annum (litres or kgs)	Handling Costs (Container cleaning, replacement etc)	Transport Costs	Treatment Costs	Disposal Costs	Total Cost
General Waste						
Clinical Waste						
Sharps						
Radioactive						
Cytotoxic						
Chemical Waste						

Any problems experienced?

SECTION 7: Occupational Health and Safety

The Hospital's copy of the Occupational Health and Safety Act 1983 & Regulations is available at: [insert details here] (describe location)

Copies of the provisions of sections 23, 24, 25, 26 & 31 of the Occupational Health & Safety Act are displayed in the following locations: [insert locations here]

An Accident/Incident Register is kept in [insert details here] (describe location), and is maintained by [insert details here]

All waste handling injuries and incidents are investigated by [insert details here] (Name & Position) immediately they are reported. Preventive action will be initiated as soon as practical and a report submitted to the Occupational Health and Safety Committee.

Waste handlers are represented on the Occupational Health and Safety Committee by
[insert details here] (name)
[insert details here] (position)

All staff who handle waste and recyclable materials:

- # Receive accredited training in basic infection control, personal hygiene, safe handling techniques, correct use of Personal Protective Equipment, spill management procedures and the requirements of the Occupational Health and Safety Act 1983
- # Are issued with appropriate Person Protective Equipment and compelled to wear it while handling waste.
- # Are issued with a comprehensive statement of duties and standard operating procedures manual.
- # Have access to equipment and facilities which minimise manual handling and promote personal hygiene.
- # Have access to and are familiar with Material Safety Data Sheets (MSDS) for all chemicals used.
- # Are aware of the requirements of the Infection Control Policy (95/13)
- # Are offered appropriate vaccination as summarised in Table 16.

Table 16: Waste Handling Staff Immunisation:

Date:...../...../19.....

(Please add or delete any immunisation relevant to your hospital)

Name	Employee's Title	Training Completed	Immunisation Up to Date
		YES NO	Hep B Y / N Tetanus Y / N Hep A Y / N Other
		YES NO	Hep B Y / N Tetanus Y / N Hep A Y / N Other
		YES NO	Hep B Y / N Tetanus Y / N Hep A Y / N Other
		YES NO	Hep B Y / N Tetanus Y / N Hep A Y / N Other
		YES NO	Hep B Y / N Tetanus Y / N Hep A Y / N Other
		YES NO	Hep B Y / N Tetanus Y / N Hep A Y / N Other

SECTION 8: Bibliography & Acknowledgments

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Appendix 1: Legislation

Health care establishments need to observe all public and occupational requirements. Compliance with standards set for the ambient environment as well as for effluent and emission limits, (NHMRC; 1995).

The following list of legislation may be applicable to most Hospitals.

Protection of the Environment Operations Act 1997

Dangerous Goods Act 1975

Dental Technicians Registration Act 1975 & Regulations

Environmentally Hazardous Chemicals Act 1985

Environmental Offences and Penalties Act 1989.

Local Government Act 1993 & Regulations

Medical Practices Act 1992 & Regulations

Nurses Act 1991 & Regulations

NSW Occupational Health and Safety Act 1983, Regulations and Associated Legislation

Public Health Act 1991

Radiation Control Act 1990

Water Board Act 1987

Waste Minimisation and Management Act 1995

Guidelines:-

- # NHMRC, 1995 (draft), National Guidelines for the management of Clinical and related wastes.
- # Sedgwick, 1995, Minimum Standards and Guidelines for Waste Management, NSW Health Department
- # EPA, 1991, Special conditions applicable to the Transportation of Trade Waste being Contaminated Wastes generated in Hospitals, Health Institutions and Medical Laboratories.
- # EPA, 1991, Special Conditions Applicable to the Storage of Trade Wastes being Contaminated Wastes Generated in Hospitals, Health Institutions and Medical Laboratories.
- # NHMRC, 1985, Code of Practice for the Disposal of Radioactive Wastes by the User, Australian Government Publishing Service, Canberra.
- # NHMRC, 1996, Infection Control In the Health Care Setting, Australian Government Publishing Service, Canberra.
- # Photographic Uniform Regulations for the Environment (PURE), 1997, Code of Practice for Liquid Waste Management & Disposal (Photographic, Graphic Art and X-Rays).

Australian Standards:-

- X AS/NZS 3816:1998. Management of clinical and related wastes.
- X AS/NZS 4261 - 1994. Reusable sharps containers for collection of sharp items used in human, and animal medical applications.
- X AS 4031 - 1992. Non-reusable containers for the collection of sharp medical items used in health care areas.
- X AS 1251-1 1982. Polyethylene (polythene) Garbage Bags - Low Density. Withdrawn

NSW Health Department Circulars:-

- X 95/49 30 June 1995 Guidelines and Competencies for the handling of cytotoxic drugs and related waste in NSW Health Care Establishments.
- X 95/49 30 June 1995 Guidelines for handling cytotoxic drugs and related waste in health care establishments.
- X 95/13 30 June 1995 NSW Health Infection Control Policy 88/192 21 September 1988. Guide to Incineration. Contaminated Waste Incinerator Specification Guidelines.
- X 98/11 2 February 1998. Management if health care workers potentially exposed to HIV, hepatitis B and hepatitis C.

Appendix 2: Needle Stick and Blood or Body Fluid Exposure

This is an example of a needlestick policy. If you have your own policy, please insert it here]

Staff Instructions - Needlestick injury and Blood or Body fluid exposure

Immediate Action

a) Penetrating injury/needlestick injury

- # Induce bleeding by gently squeezing
- # Wash promptly and thoroughly with soap and water

b) Mucosal Splash

- # Rinse copiously with water
- # If eyes are Clinical rinse while open with tap water or saline
- # If blood gets in the mouth, spit out and rinse with water and spit out again. Repeat several times.

Report incident to Supervisor or out of hours Nursing Supervisor. Please complete incident form and WorkCover notification form. Return form to your Supervisor immediately. (WorkCover notification form has to be posted to WorkCover within 7 days)

Report to Accident/Emergency

It is important to report to Accident/Emergency in the first instance so that the RMO can make an assessment of exposure. This then determines whether you need to be prescribed the drug AZT Zidovudine.

For initial and/or subsequent blood screening you have the option of attending

- # Accident/Emergency Department
- # A Sexual Health Clinic
- # General Practitioner.

When you are assessed by the RMO on duty, he/she will carry out the following:

- # First Aid treatment if required
- # Assess the significance of blood/body fluid exposure
- # Assess your Hepatitis B vaccination status
- # Counsel you regarding a number of issues concerning Hepatitis B/C, HIV
- # Obtain your consent for blood tests
- # Extract blood for, Hepatitis B antibodies (titre levels), Hepatitis C antibodies, HIV.

Hepatitis B vaccination/immunoglobulin

If you have not been vaccinated against Hepatitis B, the RMO will give an injection of Hepatitis B vaccine, and possibly Hepatitis B immunoglobulin. Hepatitis B follow up vaccination should be carried out by the Staff Immuniser. Results should be collected from Accident/Emergency within 24 hours. If your Hep B results show insufficient antibodies, Hep B immunoglobulin must be administered within 72 hours. If sufficient antibodies are present a Hep B vaccination booster will only be required. A Tetanus injection will be required if not received within the last 5-10 years.

HIV/Hep C results must be collected (in person) from the RMO within 7 days. Results must not be given over the phone.

Follow-up blood tests (after 1st initial blood test)

You will need further blood tests for

- # Hepatitis B 3 months after injury (titre levels)
- # Hepatitis C 3 months after injury, then 6 months
- # HIV 3 months after injury, then 6 months

Counselling Services Available

Generic Hospital, contact the Infection Control Sister OR Needle Stick Hotline 1800 804 823

Appendix 3: Spill's Kits

[Some of these kits are commercially available or can be made up by your hospital]

Clinical Waste Spill kit could contain:

- # broom
- # mop and mop bucket
- # a large (10 litre) reusable plastic container or bucket with fitted lid, containing;
- # 2 plastic general waste garbage bags for the disposal of any general waste;
- # 2 Clinical waste bags for the disposal of Clinical waste;
- # a pan and scraper;
- # 5 granular disinfectant sachets containing 10,000 ppm available chlorine or equivalent;
- # disposable rubber gloves suitable for cleaning
- # detergent
- # disposable cloths and sponges
- # disposable overalls
- # heavy duty gloves suitable for handling Clinical waste
- # eye protection
- # a plastic apron
- # a mask (for protection against inhalation of powder from disinfectants, or aerosols generated from the spills).
- # incident report form
- # waste spill sign

The Cytotoxic spill kit consists of:

- # mop and mop bucket
- # a large (10 litre) reusable plastic container or bucket with fitted lid, containing;
- # 2 cytotoxic waste bags for the disposal of cytotoxic waste
- # 2 pairs of disposable hooded overalls
- # shoe covers
- # long heavy duty gloves
- # latex gloves
- # a mask (for protection against inhalation of powder from disinfectants, or aerosols generated from the spills).
- # splash goggles
- # absorbent toweling / absorbent spill mat
- # incident report reform
- # waste spill sign
- # 5 granular disinfectant sachets containing 10,000 ppm available chlorine or equivalent;
- # a pan and scraper.

The Mercury spill's kit consists of:

- # 2 unbreakable lidded containers
- # spill sign
- # pasteur pipette
- # eye dropper
- # sodium thiosulphate
- # mask (for protection against inhalation of powder or aerosols generated from the spill)
- # dust pan and brush
- # sulphur powder
- # incident form

Appendix 4: Colour Coding

Prescribed Colour and Symbols for waste bags and containers

Type of waste	Colour of bags / Containers	Colour of Letters	Symbols
Clinical	Yellow	Black	
Cytotoxic	Lilac	Violet	
Radioactive	Scarlet	Black	
General Waste	opaque white	no colour	no symbol

Recommended Government Colour Coding for Recycling

NSW Government Colour Coded Recycling System for Workplaces & Public Places	
Aluminium Cans	Yellow
Brown Glass	Brown
White Glass	White
Green Glass	Light Green
Mixed Glass	Red
Compostables	Maroon
Good Quality Paper	Blue
Newspapers, magazines	Green
Plastics (PETE)	Orange