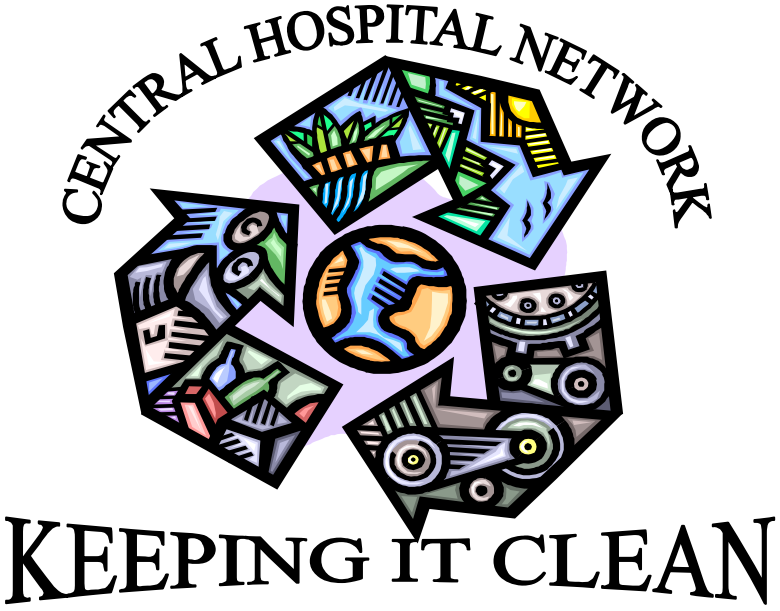
Health
South Eastern Sydney
Local Health Network

ENVIRONMENTAL MANAGEMENT PLAN

St George/Sutherland Hospitals

And Health Services



Mission Statement

St George/Sutherland Hospitals and Health Service is committed to maintaining an environmental management system that is safe, efficient which will help the environment **for future generations**

TABLE OF CONTENTS

SECTION 4 – Handling and Storage

SECTION 5 – The Collection Process

SECTION 6 – Waste Management Strategies

SECTION 1 - Introduction

Hospital waste consists of a wide variety of materials which can be physically, chemically and/or biologically hazardous. The Waste Management Plan outlines the operational procedures for the day to day handling of wastes in the workplace, and provides a minimum standard for waste management.

The Management Plan should be read and used in conjunction with Area Policy PD 079 Waste Management.

To be effective, the plan must be widely promoted throughout the Hospitals.

1.1 Aims

The aims of the Waste Management Plan for the storage, handling and transportation of hospital waste are:

- protect public health and safety
- provide a safe working environment by minimising the risk to employees, as well as patients and visitors
- minimise waste generation and environmental impacts of waste treatment and disposal; and
- ensure compliance with legislative requirements

1.2 Responsibilities

It is the responsibility of all employees to ensure proper segregation and disposal of waste, and to abide by the Waste Management Guidelines.

The Department Head is responsible for ensuring that all staff is appropriately trained in waste management, and for monitoring the safe handling procedures relating to waste for all staff, patients, residents and visitors in their department.

SECTION 2 – Waste Stream Definitions

Hospital Waste can be divided into nine broad categories, which are defined in the NSW Health Department's 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 infection. Sources include medical, nursing, dental, veterinary, pharmaceutical and similar activities of occupational groups engaged in theatres, investigation, teaching or research. Clinical waste includes:-

2.1.1 Sharps: any object capable of inflicting penetrating injury, whether or not, it has been contaminated with blood and/or body substances. This includes needles, needle/syringe combinations and any other sharp objects or instruments designed to perform procedures used for any purpose, whether or not removed from their protective packaging,

2.1.2 Body fluids, blood & blood products: including any vessel, bag and tubing containing body fluids, blood or blood products.

2.1.3 Dressings and disposable linen: heavily soiled with blood/body fluid.

2.1.4 Microbiological and pathological waste: including discarded laboratory specimens, cultures and materials that have contact with same, and biological reagents.

2.1.5 Tissue: human tissue, organs, body parts, human foetuses, placentas and autopsy and animal tissue.

2.1.6 Other material: which may be determined by the Infection Control Officer/Committee to present a significant risk of infection.

2.2 Cytotoxic Waste

Cytotoxic waste has been defined as any waste with residual Cytotoxic drug following patient therapy or the material associated with the reconstitution or administration of Cytotoxic drugs such as sharps, syringes, intravenous giving sets, ampoules, vials and disposable gowns, caps, gloves and swabs. The body waste of patients under treatment should be considered Cytotoxic up to 24 hours after treatment has ceased.

2.3 Pharmaceutical Waste

Pharmaceutical waste may arise from:

- pharmaceuticals which have passed their recommended shelf life;
- discarded pharmaceuticals due to off-specification batches;
- pharmaceuticals returned by patients or discarded by the public;
- pharmaceuticals which are no longer required by the establishment;
- waste generated during the manufacture of pharmaceuticals; filters from laminar flow cabinets; or
- packaging contaminated by pharmaceutical products.

2.4 Chemical Waste

Chemical waste is generated from the use of chemicals in medical, veterinary and laboratory procedures, during sterilisation processes and research. It will include mercury, cyanide, azide, formalin, glutaraldehyde etc. which are subject to special disposal requirements.

The handling of hazardous chemicals and dangerous goods are subject to control under the OH&S (Hazardous Substances) Regulation.

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

Includes items composed of materials or components that are 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.

SECTION 3 – Labelling and Containment

3.1 Clinical Waste

- Yellow bag labelled "Clinical Waste" and marked with an international biohazard symbol
- Yellow single use sharps container
- Yellow Mobile Garbage Bin (MGB)

3.2 Cytotoxic Waste

- Purple bags labelled “Cytotoxic Waste” and marked with an international biohazard symbol
- Purple single use sharps container
- Purple mobile garbage bin (MGB)

3.3 Pharmaceutical Waste

- Purple mobile garbage bin (MGB)

3.4 Chemical Waste

- Original container with Material Safety Data Sheet

3.5 Radioactive Waste

- Scarlet bag labelled “Radioactive Waste” and marked with an international biohazard symbol

3.6 Recyclable Waste

3.6.1 Paper and Light Cardboard

- Bins or boxes suitably marked for paper recycling (blue bags
- Blue mobile recycling bins

3.6.2 Cardboard

- Flattened and stacked

3.6.3 Confidential Paper

- Blue bin with yellow lid

3.6.4 Commingled Recycling

- Bin suitably marked for commingled recycling
- Green with yellow lid

3.7 General Waste

- Bin lined with white or opaque bags
- Green Mobile Garbage Bins (MGB)

SECTION 4 – Handling and Storage

4.1 Clinical Waste

- Yellow bag – not more than three quarters full and transferred into a Yellow MGB
- Yellow single use sharps container – sealed when three quarters full and transferred into a Yellow MGB
- Yellow re-usable sharps containers – collected by the Waste Officer when "gauge" records full and replaced with another container
- Yellow MGB transported to the Clinical Waste Storage area
- The Clinical Waste Storage area is kept clean, secure and has suitable signage
- Adequate PPE, cleaning and disinfecting equipment must be available in case of an accidental spill
- Clinical waste is removed from the facility by a licensed contractor

4.2 Cytotoxic Waste

- Purple Bag – not more than three quarters full and transferred into a Purple cytotoxic bin a Cytotoxic Spill Kit must be available in all areas generating Cytotoxic Waste
- Purple single use sharps container – sealed when three quarters full and transferred into a Purple cytotoxic bin
- Purple cytotoxic bin transported to the Clinical Waste Storage area by domestic staff , a Cytotoxic Spill Kit will be carried during transportation of Cytotoxic Waste
- A Cytotoxic Spill Kit is available in the Waste Storage area
- Cytotoxic waste is removed from the facility by a licensed contractor for high temperature incineration
- This waste must be in a covered container ie bag holder with a lid or sealed bat at all times

4.3 Pharmaceutical Waste

- Purple MGB kept at all times in secure locations
- Pharmaceutical waste is removed from the facility by a licensed contractor for high temperature incineration

4.4 Chemical Waste

- Check if the substance can be recycled (Check the Material safety Data Sheet – MSDS)
- If not possible contact the supplier to return the product for disposal
- If the identified substance cannot be returned, forward a copy of the MSDS to your Waste Management Representative who will arrange collection and disposal

- If the substance is unknown contact your Waste Management Representative who will arrange collection and disposal. **Note: It is expensive to dispose of unknown substances; every effort should be made to avoid this situation by good housekeeping practices**
- Chemical waste is removed from the facility by a licensed contractor

4.5 Radioactive Waste

- Only licensed employees or contactors handle or collect radioactive waste
- All Radioactive waste must be stored with appropriate shielding and sealed in a yellow clinical waste bag and sealed inside a Scarlet radioactive bag. Once radioactivity has decayed to a negligible level it is disposed of as per clinical wastes
- Radioactive sharps are stored in appropriate sharps containers and quarantined as above in a secure shielded radioactive waste storeroom until decayed to a level suitable for disposal via the clinical waste stream
- All stored radioactive waste must be marked as radioactive, labelled with dose level, time of storage and isotopes involved
- A logbook of all radioactive waste in storage must be maintained

4.6 Recyclable Waste

4.6.1 Paper and Light Cardboard

- Clean paper and light cardboard that cannot be reused is collected in bins or boxes, suitably marked for Paper recycling, and emptied into a blue MGB or directly into a designated front lift bin
- The blue MGB will be transported to the waste storage area for collection by the Recycling contractor when it is more than three quarters full

4.6.2 Cardboard Recycling

- Cardboard boxes and packaging is flattened by the person emptying it, and stacked to facilitate collection. SGH – boxes are minced in the cardboard compactor.
- When collected, cardboard is transported to the waste storage area and placed in the baler–-TSH.

4.6.3 Confidential Paper Recycling

- Any papers containing sensitive information is disposed of in a locked MGB (colours vary from site to site)
- The red MGB is transported to the waste storage area for collection by the Recycling contractor when it is more than three quarters full

- SGH – Confidential papers can be collected at the local level in grey plastic bags. They are to be placed directly into the locked bins

4.6.4 Co-mingled Recycling

- Aluminium and steel cans, glass drink bottles and jars, plastic drink bottles and containers and Liquid Paperboard (Milk and Juice Cartons) are emptied into an orange MGB or directly into a designated bin
- The orange MGB is transported to the waste storage area for collection by the Recycling contractor when it is more than three quarters full

4.6.5 Ink and Toner Cartridge Recycling

- -NEW SUGGESTION: All items are sent to the Waste Centre, where they are gathered for collection by the appropriate contractor.

4.6.6 Batteries

- Batteries are collected via the Waste collection process in each ward/department for collection by the Waste Contractor

4.6.7 Fluorescent Tubes

- Fluorescent tubes are collected via the Maintenance Services and delivered to the Waste Centre for appropriate disposal by the Contractor

4.7 General Waste

- General waste is collected in bins lined with white or opaque bags. When emptying, the bag should be tied off and placed either into a green MGB or where not available stacked to facilitate collection
- The green MGB or the bags are transported to the waste storage area. Note: bins should not be over filled; lids should be closed during transport
- At the collection point, general waste will either be:-
    - Left for collection by the Waste contractor
    - Emptied into a Compactor

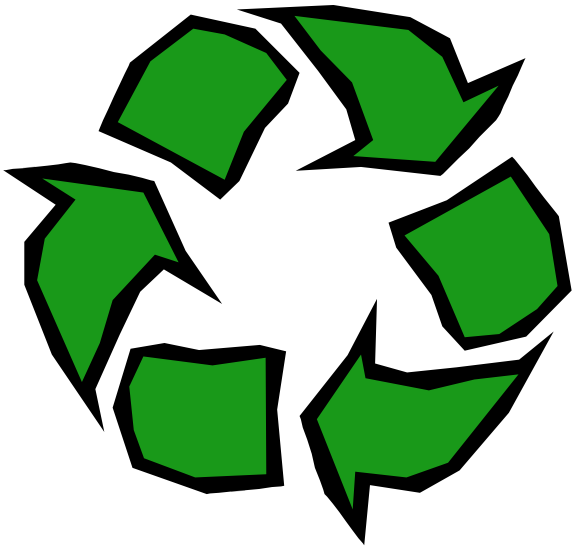
SECTION 5 – The Collection Process

5.1 Segregation

- Correct segregation commences at the point of generation and includes every person in the facility. Accurate waste segregation is imperative to protect personnel from injury by preventing hazardous waste from entering inappropriate waste streams
- Effective segregation practices are essential to prevent dumping of unnecessary waste into waste categories that have costly disposal requirements
- Effective segregation shall be achieved through:-
  - Providing education and training programs to all personnel who generate waste
  - The identification of material composition through the use of Material Safety Data Sheets
  - Having well established and identified colour coding, labelling and containment
  - Incorporating quick and efficient waste disposal methods into patient care procedures
  - Ensuring that all waste can be properly segregated at the earliest possible stage

5.2 Recycling and Reuse

- By using the Waste Management hierarchy we are able to minimize the volume of waste in more costly waste disposal streams
- Waste Management hierarchy:



REDUCE

REUSE

RECYCLE

5.3 Internal Transport

- Waste is transported in MGB's
- Every effort is made to reduce Operator contact during waste collection and to discourage double handling

5.4 External Transport

- The removal and disposal of waste from each facility is undertaken by external contractors in accordance with relevant regulations
- The fostering of ongoing partnership arrangements with waste contractors to facilitate the operation and viability of the contract for all parties

SECTION 6 – Waste Management Strategies

6.1 Waste Minimisation

Waste minimization shall be achieved through:

6.1.1 Product Substitution

Products will be assessed by the Materials Resource Department, Department Heads prior to purchase, in terms of their potential to generate waste which may require costly waste disposal

Product assessment will be achieved through:

- Evaluation of Material Safety Data Sheets
- Liaising with manufacturers and suppliers to determine the composition of the product and potential waste, including the packaging material on delivery
- Seeking technical waste disposal advice
- Selection and purchase criteria incorporate controls to ensure that less toxic/hazardous and waste generation is considered.

6.1.2 Product Changes

- The Materials Resource Department, Department Heads and Product Evaluation Committee's liaise with manufacturers and suppliers to change or modify products to incorporate both performance and waste disposal needs
- Where substitution cannot be achieved due to limited availability or range of products, Management approach the manufacturer and supplier to determine whether it is possible to change the products composition to minimise problematic waste being generated

6.1.3 Procedural Changes

- Work practices are reviewed to ensure that waste is minimized

6.1.4 Waste Segregation

- Accurate waste segregation is imperative to protect personnel from injury by preventing hazardous waste entering inappropriate waste streams
- Effective segregation practices are essential to prevent dumping of unnecessary waste into waste categories which have costly disposal requirements
- Effective segregation shall be achieved through:

    - Providing education and training programs to all personnel who generate waste
    - The identification of material composition (Material Safety data Sheet)
    - Use and promotion of readily identifiable colour coding, labelling and containment
    - Incorporating quick and efficient waste disposal methods into procedures
    - Ensuring waste can be properly segregated at the earliest possible stage, preferably at the point of creation

6.1.5 Recycling and Reuse

- Product recycling and reuse can minimise the volume of costly and environmentally unfriendly waste disposal streams

    - Where the above products are contaminated with blood, body substances or hazardous chemicals they should not be considered for recycling or reuse unless full decontamination processes are used so that personnel exposure is eliminated, otherwise these products must not be removed from the appropriate clinical and related waste stream

- When recycling waste paper, care must be exercised to ensure the security of confidential information.

    - Confidential papers are to be shredded before being placed in the recycling stream
    - Where shredding is not an option then locked confidential waste bins are to be used

6.2 Performance Indicators

6.2.1 Weight/cost of waste disposal

- General Waste
- Cardboard
- Paper
- Confidential Waste
- Commingled
- Green Waste
- Liquid Waste
- Clinical

6.2.2 Waste Audits

- To be done quarterly (at least 3 per year) general and recyclable
- Data to be send to relevant departments and Environmental committee
- Benchmark with other hospitals
- Review in Environmental meetings

6.2.3 IIMS Reports

- To monitor if any injuries associated with waste and waste handling to improve practises

6.3 Education and training

Provided to minimise the risk of injury associated with waste handling and to facilitate efficient waste management and should be provided to:

- All new employees at Orientation
- With the introduction of technology, equipment or system changes

6. 4 Programmes

General staff program will include:

- Waste Streams
- Labelling and Containment
- Segregation
- Waste Management Hierarchy
- Waste Minimisation

Domestic Services staff will also include:

- Safe Work Practices
- Personal Protective Equipment
- Manual Handling and other Risks
- Available Vaccination Programmes
- Universal Precautions

6.5 Spill Management for TSH

- In the event of a spill, the Domestic Services Team Leader is notified and will attend the area to supervise the clean up
- Spills will be managed according to the appropriate Policy/Procedure
- Cytotoxic and Mercury Spill Kits are located in:
  - All areas administering Cytotoxic drugs
  - Pharmacy Departments
  - Domestic Services Store
  - Clinical Waste Storage areas

- Chemical Spill Kits are located in:
  - Domestic Services Store
  - Bulk Chemical Storage area

6.6 Spill Management for SGH

- In the event of a spill, the Domestic Services Team Leader is notify and will attend the area to supervise clean up
- Spill kits are located in the Security Department

6.7 WRAPP

- Each Entity to develop WRAPP plan by following PD2011_066

  http://www.health.nsw.gov.au/policies/pd/2011/pdf/PD2011_066.pdf

6.8 Contact Numbers

- TSH – Domestic Services
  Phone: 95407308 / 95407307
  Page 634 / 129

- SGH – Environmental Manager
  Phone: 91133039'
  Page 174 / 726

  Domestic Services Manager
  Phone: 91133407 / 91133408

  After Hours Contact
  Page 155 (up to 11.30pm)

  Night Shift
  (Page 128 (11.30pm – 6.00am)

Reference:

PD-079-WasteManagement.pdf

PD2005_132.pdf

http://www.environment.nsw.gov.au/resources/waste/091216classifywaste.pdf

http://www.health.nsw.gov.au/policies/pd/2007/pdf/PD2007_036.pdf

PD-082-DangerousGoods-Hazardoussubstances.pdf

http://www.legislation.nsw.gov.au/sessionalview/sessional/SRTITLE/Protection%20of%20the%20Environment%20Operations%20Act%201997%20-%20Protection%20of%20the%20Environment%20Operations%20Amendment%20(Scheduled%20Activities%20and%20Waste)%20Regulation%202008%20(2008-109)%20[GG%20No%2044%20of%2024.4.2008,%20p%202794].pdf

PD-179-Blood&BodySubstanceSpills.pdf

Infection_Control/PD-192-SharpsManagement.pdf

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