Policy Directive

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Waste Management Guidelines for Health Care Facilities - August 1998

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Functional Sub group Personnel/Workforce - Occupational Health & Safety
Population Health - Environmental
Population Health - Waste Management

Summary Requirement to assist health care facilities in responding to legislation, waste minimisation, licensing and the need for management and staff to work together to achieve improvements in waste management.

NOTE: The definition of 3.3 Clinical Waste - fourth dot point was amended in this electronic document on 15/8/2007 to the correct the Clinical Waste definition as amended by circular 99/13

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Applies to Area Health Services/Chief Executive Governed Statutory Health Corporation, Board Governed Statutory Health Corporations, Affiliated Health Organisations - Non Declared, Community Health Centres, Dental Schools and Clinics, Divisions of General Practice, NSW Ambulance Service, NSW Dept of Health, Private Hospitals and Day Procedure Centres, Private Nursing Homes, Public Health Units, Public Hospitals

Distributed to Public Health System, Community Health Centres, Dental Schools and Clinics, Divisions of General Practice, Health Professional Associations and Related Organisations, NSW Ambulance Service, NSW Department of Health, Public Health Units, Public Hospitals, Private Hospitals and Day Procedure Centres, Private Nursing Homes

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Waste Management Guidelines for Health Care Facilities - August 1998.

This circular contains an attachment *"Waste Management Guidelines for Health Care Facilities - August 1998."* The attached guidelines replace the "Guidelines for the Handling, Storage and Disposal of Clinical and Related Waste - September 1992." These new guidelines apply to all of NSW.

Waste management processes in NSW health care facilities have been assessed and analysed. As a result of this analysis and changes to legislation the revised guidelines have been produced. The definition of "contaminated waste" has been replaced with the term "clinical waste." Clinical waste is defined in Section 3 - Waste Stream Definitions.

The guidelines were developed in close consultation with Infection Control, Waste Management Industry, Environmental Health, Workcover and the EPA.

The guidelines will assist health care facilities in responding to new legislation. The emphasis of the guidelines is on waste minimisation, in line with the Government's 60 per cent reduction target by 2000. The guidelines outline the need for licensing by the EPA and recognise the need for management and staff to work together to achieve improvements in waste management.

The guidelines form part of a package that includes the guidelines, Generic Hospital Waste Plan and a training package. For any further information please contact the Environmental Health Officer from your Area Public Health Unit.

Michael Reid
Director-General

Distributed in accordance with circular list(s):

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NSW HEALTH

Waste Management Guidelines for Health Care Facilities

August 1998

Environmental Health Branch
NSWHealth

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For further information on these guidelines, please contact an Environmental Health Officer at your local Public Health Unit (See Back Cover).

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Executive Summary

These Guidelines replace the NSW Health - Guidelines for the Handling, Storage and Disposal of Clinical and Related Waste, 1992.

They represent the result of consultation with the Environmental Protection Authority (EPA), WorkCover Authority, Waste Industry and health workers.

These Guidelines are arranged to represent the flow of key strategies of waste management in Health Care Facilities. All Health Care Facilities must be committed to waste management principles. Waste management is implemented by the establishment of a waste management committee and the development and implementation of a Waste Management Plan. The Generic Waste Management Plan provides supplementary detail and forms a practical tool to implement the Guidelines.

After an explanation of the intention of the Guidelines and organisational necessities, the concepts of waste minimisation are presented. Revised definitions of the types of waste are organised into waste streams and presented based on legislated definitions of the Schedule 1 of the Protection of the Environment Operations Act 1997.

These Guidelines continue with the concepts of waste segregation into various waste streams, labelling and containment, handling, storage and transport, treatment / disposal, auditing, Occupational Health and Safety, training and legal requirements.

A Generators Licence may be required from the Environment Protection Authority for Health Care Facilities under the Waste Minimisation and Management Act 1995. (See section 2.6 and 2.7 for details).

Enquiries about these Guidelines may be directed to Environmental Health Officers of the Local Public Health Unit (see Back Cover).

Glossary & Abbreviations

ACHS	Australian Council on Health Care Standards
AHS	Area Health Service
EHC	Environmentally Hazardous Chemicals Act 1985
EPA	Environment Protection Authority
Guidelines	Waste Management Guidelines for Health Care Facilities 1998
HBV	Hepatitis B virus
HCF	Health Care Facilities
HCV	Hepatitis C virus
HIV	Human immunodeficiency virus
MGB	Mobile Garbage Bin
OH&S	Occupational Health and Safety
PPE	Personal Protective Equipment
Waste Act	Waste Minimisation and Management Act 1995
Waste Guidelines	Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes. EPA 1998.
Waste Regulation	Waste Minimisation and Management Regulation 1996
WMP	Waste Management Plan

1 Introduction

1.1 Application

These Guidelines are NSW Department of Health policy and apply to all NSW Public Health Care Facilities, including community health centres.

These Guidelines will assist managers and personnel of HCF to implement standards and comply with relevant legislation. Adoption and commitment by each HCF through the establishment of a Waste Management Committee and adoption of a Waste Management Plan will assist HCF to manage their waste streams correctly, efficiently and effectively.

1.2 About these Guidelines

These Guidelines provide a minimum standard for safe and efficient waste management. They represent the result of consultation with the Environmental Protection Authority (EPA), WorkCover, Waste Industry and health workers. HCF are responsible for their waste, from the point of generation to final disposal, ie “Cradle to Grave”. All waste types are considered in these Guidelines.

The NSW Government is committed to a 60% reduction in waste by the year 2000 and has enacted, as part of its waste reform package, the Waste Minimisation and Management Act 1995 (Waste Act), and the Waste Minimisation and Management Regulation 1996 (Waste Regulation). This legislation applies across NSW and is administered by the EPA. The legislation and environmental Guidelines of the EPA have been considered in detail during the drafting of these Guidelines.

Waste management and minimisation are important issues facing the NSW health industry due to:

- the risk of needle stick injuries and potential acquisition of hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV) and other blood borne diseases associated with inappropriate sharps management;
- the introduction of the NSW Government’s Waste Reduction and Purchasing Policy;
- associated increased costs; and
- community concern about environmental issues.

These Guidelines are to be introduced to every Area Health Service by means of a locally developed training program. NSW Health now has a basis to achieve continuous improvement in waste management.

1.3 Purpose of the Guidelines

The purpose of the Guidelines are to provide a framework of waste management strategies to assist in the day to day and long term management of waste by implementing the following essential strategies:

- waste management committees, plans and waste audits;
- waste minimisation, avoidance, segregation, recycling and re-use;
- waste labelling and containment;

- proper waste handling, storage and transport;
- correct waste treatment / disposal;

Uniform application of these Guidelines to all NSW Health facilities will help to reduce uncertainty when staff move between HCF. This assists with providing a safe working environment.

1.4 Aims

The aims of these Guidelines are to:
- protect public health and safety;
- provide a safer working environment;
- minimise waste generation and environmental impacts of waste treatment / disposal; and
- ensure compliance with legislative requirements.

1.5 Policy

These Guidelines provide a minimum standard for waste management that must be met by HCF. Following these Guidelines will assist in gaining accreditation from the Australian Council on Health Care Standards (ACHS). The Guidelines are consistent with the NSW Infection Control Policy “Circular 95/13" issued on 30 June 1995.

1.6 Infection Risk Associated with Waste

Infection Control measures are adopted to prevent cross infection between patients and staff. Changes in infection control and advances in technology have resulted in the increased use of disposable clinical products, which have in turn increased waste treatment/disposal volumes.

When clinical waste is appropriately handled and contained through good work practice and the use of protective apparel, the risk of infection is minimised. It is essential to correctly segregate waste to ensure that safe work systems protect all workers. The most significant risk associated with clinical waste is transmission of a blood borne virus from a needle stick injury.

The detrimental impacts on the environment of increased disposable items have included pollution and the depletion of non-renewable natural resources. The adoption of waste minimisation practices should reduce environmental degradation, without compromising infection control standards.

2 Waste Management

2.1 About this section

This section summarises the action necessary to implement a Waste Management Plan. Details of licences required by the EPA are outlined as are the reporting and record keeping requirements of the EPA and NSW Health.

2.2 Waste Management Policy

Each HCF must have a Waste Management Policy, outlining the accountabilities and responsibilities of managers, employees and staff. It is the responsibility of the HCF, to comply with legislation and Guidelines, to ensure proper classification, segregation, containment, treatment and disposal of waste.

2.3 Waste Management Committees

Each HCF must establish a "Waste Management Committee", which will have the main function of implementing Waste Management Policy.

HCF management should establish a workplace committee with representation from key areas/departments to assist in the implementation and monitoring of waste management. Waste management committees may be combined with an existing committee, for example the OH&S Committee. Where the committees are combined it must be ensured that specific personnel are appointed with waste management and infection control expertise.

At the Area Health Service (AHS) level, responsibility for implementation of waste management strategies and procedures should be delegated to a specific position or co-ordinating committee. AHS are to establish an area waste management committee.

2.4 Waste Management Plan (WMP)

Each Health Care Facility must implement a Waste Management Plan.

To implement an effective WMP, AHS should consider several issues, including the following:

- establish a Waste Management Committee at AHS level as well as at each HCF;
- coordinate major issues such as avoidance, reduction, reuse and recycling;
- conduct an audit to assist with performance improvement . Audit procedures in the WMP; and
- establish benchmarks to facilitate monitoring by the Department of Health, EPA, Area Health Service and HCF.

The following seven key issues are considered essential components of a WMP.

I. Introduction
- WMPs should specify goals and savings targets to be achieved within set time frames. It should provide details on how these objectives will be achieved.
- Incorporate waste reduction and purchasing plans as prescribed by the EPA.

II. Definitions of Waste
- HCF management should ensure that wastes are classified in accordance with these Guideline.

III. Organisational Issues
- employers legal responsibilities
- employees responsibilities
- licensing requirement
- waste management committees
- purchasing policies
- education and training.

IV. Waste Management Strategies
- Hospital waste audits
  - numerical profile
  - segregation audit
- Waste minimisation

V. Waste Handling, Containment and Transport
- waste handling by staff
- spill management
- containment and sharps containers
- tracking
- MGBs and trolleys
- holding areas
- transport

VI. Waste Disposal
- contracts with waste transporters and waste treatment / disposal sub-contractors must be documented and should be consistent with relevant Regulations.
- waste volumes / weights are to be recorded along with the details as outlined in Section 2.7

VII. OH&S (see section 9)
- provision of information, education and training and safe systems of work
- employee's responsibilities
- OH&S committee
- monitoring performance

- personal protective equipment
- Standard Operating Procedures

A Generic WMP was developed as a powerful management tool, which follows the philosophy of these Guidelines. It provides a practical framework to establish and document the hospital waste management committee objectives, hospital WMP and to supplement and support these Guidelines. A copy of the Generic WMP is available from the Public Health Unit, on disk. The Generic WMP can be simply adopted by the HCF as its own Plan provided the correct data is determined and inserted where required.

WMPs should be widely promoted within the HCF to all staff involved in waste management.

HCF management should consider waste management issues particularly design and layout of new HCF and when renovating. Issues to be considered include location and size of waste storage rooms; waste transport; and layout and design of loading docks to enable mechanised waste loading.
Regularly review and amend plan.

2.5 Legislative Compliance

All Area Health Services and HCF have a statutory obligation to comply with applicable legislation. The development of these Guidelines has considered relevant legislation. It is the responsibility of each facility to consult with other authorities and to be aware of their specific legislative requirements.

2.6 Licensing

2.6.1 Who Needs a Licence?

The following is a summary of the licence requirements under the Waste Regulation. The *Waste Regulation* provides for the licensing of:

- those who generate or store hazardous (clinical) waste - (*controlled waste activities*)
- waste facilities that treat, store or dispose of hazardous (clinical) waste - (*controlled waste activities*)
- transporters of hazardous waste - (*waste transporters*)

Dental, doctor surgeries, hospitals, pathology laboratories or preterm clinics are exempted if generating not more than 2 tonnes of hazardous waste per year, or storing less than 500kg of hazardous waste at any one time.

Where a licence is not required the Guidelines outlined in section 2.6.2 must be complied with.

A licence is required under the *Waste Regulation* for transporters of hazardous waste in loads of more than 200kg.

If in doubt, you should consult the EPA for advice on any licensing requirements.

2.6.2 Responsibilities under the Licensing Scheme

2.6.2.1 Waste Generators

The primary responsibility of the waste generator is to properly classify wastes, in accordance with these Guidelines. The secondary responsibility is to use a licensed transporter where the waste is hazardous (in loads of more than 200 kg), and to ensure their wastes are taken to suitable waste treatment or disposal facilities, which can lawfully receive such wastes.

2.6.2.2 Non-licensed hazardous waste generating or storage activities

The Waste Regulation requires activities that generate or store hazardous waste, that are not required to be licensed, to comply with certain environment protection requirements including:-

- the waste must be stored in an environmentally safe way and must not come into contact with any incompatible waste;
- the EPA or other body must be provided with information on request, on the generation, storage, treatment or disposal of the hazardous waste, this information must be kept for a period of at least 3 years;
- records must be kept for a period of at least 3 years from the date of transportation:- the quantity and type of waste; the name and licence number of the transporter; the date of transportation; and the name and location of the waste facility that receives the waste,
- waste must be transported by a person who holds a licence under the Waste Act (if the person needs to be licensed), and they must be advised of type of waste transported;
- hazardous waste must be transported only to a controlled waste facility, or to a waste facility that can otherwise lawfully receive the waste; and
- the HCF must advise the EPA or other approved body about any suspected breach of the Act or Regulation, in relation to the transportation of hazardous waste from the premises.

The maximum penalty is $20,000 for a corporation and $10,000 for an individual.

2.7 Record Keeping

Record keeping requirements are included in the conditions attached to the EPA licences for controlled waste activities, controlled waste facilities and waste transporters. All licensed hazardous and industrial waste generating and storage activities, and hazardous and industrial waste transporters will be required, via licence conditions, to record details of waste movements, and periodically provide reports to the EPA.

The Waste Regulation sets out record-keeping requirements for nominated non-licensed waste facilities, waste activities and transporters (see clause 15,16,and 17 of the Waste Regulation). The Waste Guidelines also detail record keeping requirements for classified wastes (see section 4.5.2 and 4.5.3 of the Waste Guidelines).

Both licensed and non-licensed waste activities, waste transporters and waste facilities need to maintain records of waste movements. Licensed HCF are required to report periodically to the EPA. The provision of waste reporting assists the EPA to ascertain the effectiveness of waste reduction programs, and to provide waste data for national and international reporting obligations.

2.7.1 Non-licensed hazardous waste generating and storage activities

(i) The EPA or other body, must be provided with information as may be required from time to time in relation to the generation, storage, treatment or disposal of waste. HCF must retain such information for a period of at least 3 years.

(ii) The following records must be kept, for a period of at least 3 years from the date of transportation, in relation to any hazardous waste that is transported for treatment or disposal from the HCF: the amount of hazardous waste transported; name licence number of transporter; the date of transportation; and the name and location of the waste facility that receives the waste.

2.7.2 Non-licensed transporters

(i) The EPA or other body, must be provided with such information as may be required from time to time in relation to the transportation of waste by the person. HCF must retain such information for a period of at least 3 years from the time that it is provided.

(ii) The following records must be kept, for a period of at least 3 years from the date of transportation, in relation to any hazardous waste that is transported by the person: the amount and type of waste that is to be transported; the date of transportation; and the name and location of the waste facility to which the waste is transported.

2.8 Liquid Trade Waste Agreements

Each HCF should contact their local sewerage authority to determine requirements for the discharge of liquid waste to the sewerage reticulation system. A “liquid trade waste agreement” may be required for the regular removal of grease trap waste.

Sewage must be managed in a sanitary manner. It is essential that HCF be connected to a sewerage system, which manages the sewage in a responsible manner. Sewage and treated effluent even if disinfected, must always be considered to be a potential health risk

and depending on the quantities generated and local circumstances, may be managed in the following ways:

(i) Connection to a reticulated sewerage system is the most preferred option. The HCF must comply with the requirement of the sewage authority.

(ii) Installation and operation of a sewage treatment plant with utilisation of effluent in a dedicated land application system. Such a system needs to be designed by a consultant engineer, (the Department of Public Works and Services may be of assistance). Treatment plants may need to be licensed by the EPA or local council.

(iii) In remote areas where sewerage is not available, some HCF may use an on site sewerage management facility. Advice regarding the design and performance of the septic tank and disposal system may be sought from the local authority and the AHS Public Health Unit, Environmental Health Section.

2.9 Pollution

Water pollution occurs when any matter (solid, liquid or gas) enters, or is in such a position where it has the potential to enter a waterway or drain designed to carry rainwater, flood water or unpolluted water. The EPA has powers under environmental legislation to control any discharges of waste into a waterway or open waters. HCF should ensure that wastes and stormwater are managed in a responsible manner, without illegal discharge that is in contravention of regulatory requirements.

Air pollution, a licence is required from the EPA to operate waste incinerators. Contact the EPA for advice on the licencing and emission control requirements in relation to the operation of an incinerator. A licence might also be needed for other types of clinical waste treatment plants. A licence under the Waste Regulation may also be required.

No burning of waste should occur, other than in a licensed incinerator. Open burning is not permitted.

2.10 Hazardous Chemicals and Dangerous Goods

The handling of hazardous chemicals and dangerous goods are subject to control under the OH&S (Hazardous Substances) Regulation 1996 and the Dangerous Goods Act 1975.

The Environmentally Hazardous Chemicals Act 1985 (EHC Act) and the Waste Regulation, control the management and / or disposal of wastes containing hazardous substances such as chemical waste and declared chemical waste. Scheduled chemical wastes are subject to control by means of the Scheduled Chemical Wastes Chemical Control Order under the Act.

A HCF may require a licence under the EHC Act if the facility is involved in the manufacture, distribution or the management and disposal of scheduled chemical wastes. A licence under the Waste Regulation is required if the facility generates sufficient quantities of hazardous chemical wastes. For information contact the EPA on (02) 9795-5000, or contact your local EPA office.

3 Waste Stream Definition

3.1 About this section

This section gives an overview of the waste streams usually present in HCF. The definitions and explanations provided relate to the minimum standards to be applied.

3.2 Waste Streams

The main waste streams are Clinical Waste, Chemical Waste, Radioactive Waste, Cytotoxic Wastes, Recyclables, Organic Waste, Liquid Waste and General waste. Clinical, cytotoxic, pharmaceutical, chemical and radioactive wastes are classified as Hazardous wastes in the Waste Regulation (see Part 3, Schedule 1 Waste Regulation and section 3 Waste Guidelines).

3.3 Clinical Waste

Clinical waste is waste which has the potential to cause sharps injury, infection or offence. When packaged and disposed of appropriately there is virtually no public health significance. Clinical waste contains 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 by a method approved by the Director General, NSW Department of Health.

Sharps: Any object capable of inflicting a penetrating injury, which may or may not be contaminated with blood and or body substances. This includes needles and any other sharp objects or instruments designed to perform penetrating procedures.

3.4 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.

3.5 Pharmaceutical Waste

Consists of pharmaceuticals or other chemical substances specified as regulated goods in the Poisons and Therapeutic Goods Act 1966. This includes any substance that is specified in a Schedule of the Poisons List under that Act, as well as any therapeutic good which is unscheduled. Pharmaceutical waste includes expired or discarded pharmaceuticals and filters or other materials contaminated by pharmaceutical products.

3.6 Chemical Waste

Chemical wastes included in the Dangerous Goods Regulations and Poisons and Therapeutic Goods Act are also included in this stream. It includes mercury, cyanide, azide, formalin, and glutaraldehyde, which are subject to special disposal requirements.

3.7 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 be included in 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. Some radioactive wastes are classified as hazardous waste in the Waste Regulation.

3.8 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.

3.9 Organic Products

This includes wood, garden, food, vegetable and natural fibrous material waste and biosolids, which are capable of composting or could be used to enhance lawns and or gardens.

3.10 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.

3.11 General Waste

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

4 Waste Minimisation

4.1 About this section

This section explains the opportunities for waste minimisation in HCF. Effective waste minimisation strategies include waste avoidance, reduction, re-use and recycling. Waste minimisation has the potential to reduce hazards to human health and the environment, reduce costs, conserve resources and protect the environment.

4.2 Avoidance

HCF should review housekeeping and purchasing policies to avoid excessive waste, without compromising work standards or environmental outcomes.

Simple product modifications to minimise waste streams include requesting the manufacturer and supplier and/or Central Sterile Supply Departments to remove unnecessary materials supplied in sterile procedure packs, eg dressing, venipuncture and lumbar puncture sets.

This may include requesting the manufacturer and supplier to reduce unnecessary packaging or replace polystyrene foam with recyclable or biodegradable fillers.

4.3 Reduction

Reduction can also be achieved through product substitutions, product modifications and procedural changes.

4.3.1 Product Substitution

Products should be assessed prior to purchase in terms of their potential to generate problematic waste, result in toxic emissions, or be detrimental to the operation and maintenance of treatment facilities.

Product assessment can be achieved through:

- evaluating product Material Safety Data Sheets;
- liaisons with manufacturers and suppliers to determine the composition of the product and potential waste output;
- seeking technical waste disposal advice from consultants or relevant authorities such as the EPA; and
- considering percentage of recycled materials used or recyclable components.

Product selection and purchase criteria should incorporate controls to ensure that less toxic / hazardous products are selected, without compromising product performance. Products such as polyvinyl chloride (PVC) plastic compounds should be progressively replaced by products made from ethylene vinyl acetate copolymers. Organic pigments should replace heavy metals pigments, commonly used for colouring waste bags and sharps containers.

Product substitution can often lead to cost effective solutions. The types of substitutes to be considered include biodegradable cleaning compounds and safer chemicals.

4.3.2 Product Changes

HCF management should liaise and work with manufacturers / suppliers to change or modify products to incorporate both product performance and waste disposal. Where substitution cannot be achieved due to a limited range of products, management should approach manufacturers / suppliers to determine whether it is possible to change the product. There are many examples of product changes which set precedents eg change from solvent based products to water based; lead based paints to less hazardous alternatives. Manufacturers / suppliers have readily accepted these types of product changes without significant economic costs.

It is in the manufacturers and supplier's interest to meet industry needs as it places them at a significant commercial advantage compared to their competitors.

4.3.3 Procedural Changes

Simple changes to patient care procedures can be made to minimise the wastes generated, eg:

- where it is not necessary to use dressing packs for minor procedures eg removal of sutures, practitioners should use alternative equipment so the minimum amount of materials are used;
- when preparing for dressings, clean and sterile procedures, practitioners should critically assess materials required. When "setting up" unwanted extra materials should be removed for re-sterilisation or re-use. This should occur prior to commencing the procedure, therefore minimise the potential of contamination;
- small, colour coded containers should be accessible at the site of the procedure so that recyclable materials can be segregated;
- review frequency of waste collection, size and location of containers and bags.

4.4 Re-Use

Re-useable items should be preferred to disposable items whenever it is clinically appropriate, environmentally sound, practical and cost effective to do so. Do not discard items that may be feasibly reused, **not including patient care items**, or items that are contaminated with blood and/or body fluids.

Choose items which may be reused such as washable nappies, pill cups, denture mugs, crockery, cutlery, reusable kidney dishes and encourage staff to bring in their own coffee/tea mugs.

The cleaning and reprocessing of all reusable items must be considered.

4.5 Recycling

A large number of recyclable items are generated by HCF and should be separated for recycling. By separating recyclables quantities of Waste to landfill are reduced by up to 60%. HCF implementing recycling may see immediate cost reductions and increasing benefits in the future. As disposal volumes decrease, cost savings should increase.

Contact your local council or recycler to determine what items are recyclable in your area. A list of recyclers is included in the EPA Recycling Directory. A copy of the directory may be obtained from the EPA hotline 131 555. Section 7 provides further information on recycling.

4.6 Cost Effectiveness

Measure the cost and volumes (weight) of each waste stream using an audit process standardised against an activity level, for example occupied bed days, number of admissions/separations or kilograms per patient day.

Operating and waste treatment / disposal costs should be reviewed periodically to evaluate any fluctuations. Area Health Services should collect this data on an annual basis to allow comparisons between HCF and to establish benchmarks.

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5 Waste Segregation

5.1 About this Section

This section explains the significance of waste segregation which should follow immediately after waste is generated. Effective segregation will reduce costs, promote recycling and protect the health and safety of all.

5.2 What is Segregation?

Waste segregation is the practice of classifying waste and placing it into the appropriate waste container immediately after the waste is generated.

5.3 Importance of Waste Segregation

HCF should accurately segregate waste to protect personnel from injury and infection by preventing hazardous waste entering inappropriate waste streams and divert problematic waste from incorrect waste streams.

Correct segregation is necessary to ensure that materials which are reusable or recyclable are not discarded. Correct segregation and containment of all wastes are required in order to comply with the provisions of the Waste Regulation. The mixing of wastes is not permitted. If mixing occurs, wastes containing more than 200g of hazardous waste are to be classified as hazardous.

5.4 Segregation Practice Achievement

Effective segregation can be best achieved through:

- providing education and training programs to all personnel who generate waste, (see section 10);
- identification of material composition (Material Safety Data Sheet);
- establishing identifiable colour coding, and labelling;
- provide suitable containers in appropriate and suitable locations;
- incorporating quick and efficient waste disposal methods into patient care procedures. This may require the redesign or reorganisation of procedure trolleys and working environments; and
- ensuring all waste can be easily, safely and properly segregated at the point of generation.

6 Handling, Labelling, Containment, Transport and Storage

6.1 About this section

This section explains the importance of streamlining the process of waste collection, handling and transport to ensure compliance with OH&S and environmental control requirements. Correct segregation and containment of all wastes is required under the Waste Act.

6.2 Organisation

Each HCF must form a core team of waste handlers. Waste handlers must be trained and equipped to undertake the handling, internal transport, spill management, blood and body fluid exposure management and storage requirements of the HCF.

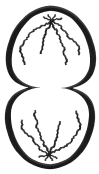
6.3 Internal Transport

All HCF should conduct a review to optimise the waste collection process, reduce handling and transportation, and to promote safe work practices. Transportation routes should avoid where possible food preparation and heavily used areas.

Chutes: Chutes MUST NOT be installed or used for the transport of wastes.

6.4 Waste Labelling

All waste containers are to be colour coded and identified in accordance with this table.

Type of Waste	**Colour of Bags, Containers**	**Colour of Letters**	**Symbols**
Cytotoxic Waste	Lilac	Violet	
Clinical Waste	Vivid Yellow	Black	
Radioactive	Scarlet Red	Black	
General Waste	Semi opaque white	None	None

6.5 Tracking

All bag/containers of waste must be marked to identify the HCF, unit (eg Ward 20B) and date of collection. Tracking helps to rapidly identify the source of waste, facilitates segregation, provides feedback, assists in providing data for education purposes, and facilitates auditing. Tracking may also be used to allocate costs for waste to each individual unit.

Tracking may be as simple as a cardboard luggage label attached by string, sticky labels or as sophisticated as a self adhesive bar code.

6.6 Handling Waste Bags

Sharps must never be placed in waste bags. Waste must be contained in colour coded and labelled plastic bags / MGB as explained in section 6.4. General waste should be contained in white or opaque bags and labelled. Waste bags must not be over filled (approx 2/3 of capacity). The volume of a waste bags should not exceed 55 litres. Excess air should be excluded without compaction, prior to closure using a bag tie at the point of waste generation.

Waste collection times should be routine. All bags should be held away from the body by the closed top of the bag, and placed directly into a mobile garbage bin or trolley. Where waste bags are sealed and stored pending collection, they should be in a secure place with restricted access.

6.7 Mobile Garbage Bins (MGBs) and Trolleys

MGBs and trolleys should be used when transporting waste to decrease spills, minimise collector contact with waste and minimise manual handling. Loads contained in MGBs and trolleys should be less than 55kgs. All bins must be colour coded and marked in accordance with section 6.4.

Trolleys and MGBs must be dedicated singularly for collecting waste and must be made of rigid material, lidded, lockable (if used for storage), leak proof and washable. Dedicated MGBs and trolleys should be labelled according to the type of wastes contained, cleaned regularly and must never be overfilled. Waste collection rounds should be performed as often as necessary to minimise housekeeping hazards.

When cleaning trolleys and MGBs:

- Rinse with cold water then wash with warm water and a neutral detergent.
- Trolleys and MGBs should then be drained to sewer and left to dry.
- Clean trolleys and bins should be stored separately to soiled containers.
- Appropriate personal protective equipment should be worn when cleaning MGBs.
- Waste water may only be diverted to the sewer.

6.8 Storage Areas

An EPA licence may be required to store Hazardous Wastes (See section 2.6). Storage areas are to be free from odour and must discourage the harbourage of vermin. HCF must provide an enclosed structure such as a shed, garage, cage, fenced area or separate loading bay to store waste.
The holding area should be located away from food and clean storage areas, it must not be accessible to the public, have a lockable door and rigid impervious flooring. Clean up facilities, spills kits, appropriate drainage and bunding should be provided. Where wastes are stored in bins the bin must be locked.

A specific area, with adequate drainage, for washing equipment should be designated.

6.9 Spill Management

HCF should manage waste spills as they occur in the facility. In the case of gross spills, containment is the principal role. Procedures must specify spill management procedures and the conditions when emergency services such as the Fire Brigade Hazmat section become involved.

It is essential that personnel involved in spill management receive education and training in emergency procedures and handling requirements.

Spill kits should be readily available throughout the hospital with their location known by all staff. Spill kits that have been used should be disposed of with the type of waste that has been cleaned up, eg used cytotoxic spill kits should be disposed of with cytotoxic waste.

6.9.1 Clinical waste spill kit

Clinical waste spill kit should contain at least:

- broom, a pan and scraper, mop and mop bucket
- a large (10 litre) reusable plastic container or bucket with fitted lid, containing;
- 2 clinical waste bags for the disposal of clinical waste;
- disinfectant containing (1%) 10,000 ppm available chlorine or equivalent;
- rubber gloves suitable for cleaning
- detergent, sponges / disposable cloths
- personal protective equipment including eye protection, an apron or long sleeve impervious gown, a face mask, heavy duty gloves.
- incident report form
- waste spill sign.

6.9.2 Cytotoxic spill kit

Cytotoxic spill kit should contain at least:

- mop and mop bucket, a pan and scraper.
- a large (10 litre) reusable plastic container or bucket with fitted lid, containing;
- 2 cytotoxic waste bags for the disposal of cytotoxic waste
- 2 hooded overalls, shoe covers, long heavy duty gloves, latex gloves, a face mask and eye protection

- absorbent towelling / absorbent spill mat
- incident report form
- waste spill sign

6.9.3 Mercury spill kit

Mercury spill kit should contain at least:

- 2 unbreakable lidded containers
- spill sign
- pasteur pipette, eye dropper
- sodium thiosulphate
- face mask
- dust pan and brush
- sulfur powder
- incident report form

6.10 External Transport

Before transferring waste off-site or interstate for treatment and disposal, specific reference should be made to the *Australian Code for the Transport of Dangerous Goods by Road and Rail,* the Waste Regulation (see section 2.6), *National Manifest and Classification System* and the "*National Guidelines for the Management of Wastes.*"

Refer to section 11.4 for transportation of waste by community nurses.

6.11 Specific Waste Streams

6.11.1 Clinical Waste

Bulk body fluids, blood, suctioned fluids, excretions, and secretions may be carefully poured down a drain connected to a sewer, unless vacuum sealed.

For further details on microbiological and pathological waste handling refer ANZ Standard 2243.3: 1995 - Safety in Microbiology Laboratories. Part 3 – Microbiology, Part 4 - Degrees of Hazard.

Sharps

All sharps containers should be assessed for compliance with the current NSW Health Infection Control Policy and the relevant Australian Standard. No one container is suitable for the safe disposal of sharps in all situations. A range of sharps containers will need to be supplied to various departments depending on equipment and procedures performed.

6.11.2 Cytotoxic Waste

Reference should be made to "Guidelines for the Handling of Cytotoxic Drugs and Related Waste in Health Care Establishments" published by WorkCover Authority for handling requirements.

6.11.3 Pharmaceutical Waste

Pharmaceutical waste awaiting disposal should be stored in the same manner as pharmaceuticals in use. Pharmaceutical waste should be placed in non-reactive containers and should not be discharged to the sewer or any process where they may find their way into the environment.

Storage requirements for pharmaceuticals in HCF are provided in the NSW Health Department documents:- Circular 97/10, Guidelines for the Handling of Medication in Community Based Health Services and Residential Facilities, and Circular 95/37, Guidelines for the Handling of Medication in NSW Public Hospitals.

6.11.4 Chemical Waste

Reference should be made initially to the products Material Safety Data Sheet (which is obtained from the manufacturer and supplier) for handling precautions, instructions and required PPE. Information for handling procedures and transport of specific types and categories of chemicals can be sought from officers of local authorities such as the WorkCover Authority and EPA.

6.11.5 Radioactive Waste

Radioactive substances should be handled in a safe manner to ensure that all personnel have minimal exposure to radiation. A Radiation Safety Officer must be responsible for the safe handling, storage and transport of radioactive waste. There must be a specifically identified area for the storage of radioactive waste, which should be suitably packaged and labelled.

The handling, storage and disposal of radioactive materials must comply with requirements of the “Radiation Control Act 1990". Where such requirements do not exist, observe the principles in the National Health and Medical Research Council (NH&MRC) "*Code of Practice for the Disposal of Radioactive Wastes by the User", (1985).*

6.11.6 Organic Products

Any competent waste contractor may handle these wastes. All HCF personnel who are in contact with these wastes should observe relevant health and safety procedures.

6.11.7 Liquid Waste

Liquid waste that is unsuitable for discharge into a sewer or waterways must be contained to prevent leakage and stored in a bunded area. Liquid waste may be legally discharged into a sewer or waterways only in accordance with the sewerage authority requirements and licences issued by the EPA respectively, (see section 2.8).

6.11.8 General Waste

Any competent waste contractor may handle general waste that is assessed and/or classified as inert or solid waste according to the Waste Guidelines.

7 Waste Treatment / Disposal / Utilisation

7.1 About this section

This section outlines the treatment / disposal / utilisation options for waste streams generated in HCF. Disposal methods must conform to EPA and NSW Health requirements. All waste facilities must comply with the regulatory control requirements imposed by the EPA under the Waste Regulation and other relevant environmental legislation.

7.2 Responsibility

The HCF has the responsibility to ensure that its wastes are transported and treated appropriately before disposal. The HCF must determine mechanisms that facilitate monitoring of contracts with waste transporters.

7.3 Clinical Waste

All clinical waste once treated by a process acceptable to NSW Health may be reclassified in accordance with the Waste Guidelines before recycling or disposal.

Microbiological and pathological wastes should be autoclaved before leaving the laboratory. For further clarification refer to Australian and New Zealand Standard 2243.3:1995 - Safety in Microbiology Laboratories. Part 3 - Microbiology and Part 4 - Degrees of Hazard. Autoclave tape and bag indicators must be used to show autoclaving has been completed.

For special precautions regarding disposal of waste related to cases of viral haemorrhagic fever (eg, Ebola or Lassa fever), refer to NSW Contingency plan for cases of possible viral haemorrhagic fevers 1995.

Bulk body fluids, blood, suctioned fluids, excretions, and secretions may be carefully poured down a drain connected to a sewer, unless vacuum sealed.

As technology changes HCF management should evaluate treatment alternatives for their safety, effectiveness and environmental soundness. Waste treatments that are currently available for use in NSW include:

- autoclaving (steam sterilisation);
- microwaving;
- mechanical-chemical disinfection; and
- incineration.

7.4 Cytotoxic Waste

Cytotoxic waste needs to be destroyed by incineration. It may be incinerated at a licensed controlled waste facility. No alternative is acceptable.

7.5 Pharmaceutical Waste

Pharmaceutical waste must be incinerated at a licensed controlled waste facility. Certain pharmaceuticals may only be destroyed by authorised persons under the Poisons and Therapeutic Goods Act 1966 (refer to NSW Health documents as referenced in 6.4.1.)

Pharmaceutical waste must not be disposed through a sewerage system.

7.6 Chemical Waste

Non-Liquid chemical waste containing hazardous chemicals, including empty containers, must be assessed and classified in accordance with the Waste Guidelines to facilitate the correct management and disposal of the waste. Non-Liquid chemical waste that is assessed as inert, solid or industrial waste by the Waste Guidelines may be disposed of to appropriately licensed landfill.

Reclamation and recycling of hazardous chemical wastes, especially solvents, should be considered whenever feasible. The EPA and local authorities must be consulted for advice on reclamation, recycling and disposal.

Dispose of liquid chemical waste that meets the sewerage authority's discharge standards and requirements to the sewer. Treat all liquid waste that is assessed and classified as hazardous waste under the Waste Regulation so that the treated waste is suitable for discharge into a sewer or waterways or open waters.

Amalgam waste must not be incinerated. For the handling and storage of mercury related dental waste, refer to the 1988 NH&MRC's publication "Recommendations on Dental Mercury Hygiene." It is recommended that mercury wastes be returned to metal or precious metal recyclers for reclamation. If necessary the EPA should be contacted for specific requirements for disposal of mercury.

7.7 Radioactive Waste

Radioactive waste must be monitored by the hospital radiation safety officer, or delegate, before it is disposed. All procedures should be in accordance with the relevant EPA Guidelines and/or the requirements of local authorities. In particular, approval by the EPA is required for disposal of category 1 or category 2 radioactive waste. Category 3 solid radioactive waste may be disposed of to any landfill facilities licenced as Solid Waste Class 1 of Class 2 Landfill under the Waste Regulation.

Disposal of radioactive substances that are classified as hazardous waste by the Waste Regulation requires EPA approval beforehand. Dumping these wastes into the environment is prohibited.

Non-liquid wastes containing radioactive substances that are classified as industrial waste by the Waste Regulation may be disposed of to landfills licensed to accept industrial waste.

Radioactive waste, when lead shielded and allowed to decay to a safe level as set by the EPA, is no longer deemed to be radioactive waste.

7.8 Organic Products

Recycle organic waste where possible. These wastes should not be disposed of.

7.9 Liquid Waste

Liquid waste must be managed and disposed of in accordance with the Waste Regulation, a Pollution Control licence and / or other relevant Regulatory requirements or a sewerage authority requirements as applicable.

It is illegal to discharge liquid waste that is assessed as hazardous or Group A waste under the Waste Regulation into a sewer or waterway. Such wastes must be managed and disposed of in accordance with the Waste Regulation and/or other relevant regulatory requirements as applicable. Generally, these wastes need to be treated to required discharge standards prior to disposal.

Where on-site sewerage management facilities are used no wastes such as non biodegradable chemicals, disinfectants, expired pharmaceuticals and other trade wastes may be placed into the system.

Solid food scraps should not be disposed through a grinder to the sewerage system but should be drained and disposed though the solid waste stream or compost/green waste service.

7.10 General Waste

General waste that is classified as inert or solid waste, and cannot be recycled, reprocessed or re-used may be disposed of to landfills licensed to accept waste classified as inert or solid waste respectively. Certain landfills, especially the smaller scale ones, are exempted from licensing (see clause 5 of the Waste Regulation).

7.11 Plastics

Plastics that can not be recycled should be disposed to landfill with general waste where possible. The incineration of or open burning (pits or domestic incinerators) of some plastics produce hazardous air emissions. For example, the combustion of chlorinated plastics such as polyvinyl chlorides (PVC) produces hydrogen chloride, while the combustion of nitrogen containing plastics, such as urea formaldehyde plastic, produce oxides of nitrogen which are air pollutants.

7.12 Recycling

Appendix 1 outlines recyclable items which are generated in a health care facility and how to manage them. The appendix assists in determining appropriate recycling protocols.

8 Auditing / Numerical Profile

8.1 About this section

Regular audits will confirm continuous improvement in waste management. This section explains the use of auditing as a management tool.

8.2 Auditing

Auditing is the process of quantifying performance. The auditing tools which are currently available are the *NSW Health Waste Management Numerical Profile* and *Segregation Audit*.

Auditing is essential to establish HCF, Area and State benchmarks and to then gauge performance against those benchmarks. Area Health Services should conduct annual audits of HCF to ensure uniformity of application of the auditing process and then compare the data between HCF with similar services on an occupied bed day basis. NSW Health will collect the Area Health Service data to perform comparisons between Area Health Services.

Auditing may be conducted by waste management committee members, trained OH&S auditors or environmental health officers form the Area Health Service public health unit.

8.3 NSW Health Waste Management Numerical Profile

NSW Health Waste Management Numerical Profile is divided into six sections:

- management;
- policy;
- occupational, public health and safety;
- waste minimisation;
- handling, containment and transportation; and
- education.

Each section has a series of questions with a multiple choice of answers. The answers to each question are given a score. The scores are then added to give a profile of each section. The higher the score, the better the performance of each HCF.

8.4 Segregation Audits

A segregation audit is performed by cutting open waste bags and checking the contents for correct segregation. Measurements of weights are taken and compared to previous audits to gauge performance.

Segregation Audits determine the accuracy of waste segregation at ward level and provides feedback to the Waste Management Committee and wards on performance. It is also useful to determine if savings can be made by reducing incorrectly segregated waste.

Segregation auditing is explained in Section 4 of the Generic WMP.

9 Occupational Health and Safety

9.1 About this section

Each HCF is responsible under the OH&S Act, 1983 to provide a safe, healthy workplace, and safe systems of work for all. The management of waste presents a number of potential hazards to employees requiring the appropriate measure of risk identification, risk assessment, and risk control. Employees have an obligation to follow instructions regarding safe work practices. This section explains their responsibilities and obligations.

9.2 Employer Responsibilities

HCF management is responsible under the OH&S Act 1983 for providing appropriate information, education, training and ensuring that safe systems of work are developed and maintained. For example, information should be provided on hepatitis B vaccination and a register of vaccinated personnel maintained. Approved work practices should be documented and promoted. Multilingual translations are to be provided to personnel as required.

Standard Operating procedures should:

- specify the WMP, waste segregation procedures and approved waste handling procedures;
- detail appropriate training required for waste generators, and handlers;
- specify personal protective equipment required for waste handling tasks;
- detail spill management strategies and designate trained personnel for spill management on-site;
- identify first aid resources and needle stick injury treatment protocol; and
- specify how to operate the information, education, training and safe working systems.

9.3 Employee's Responsibilities

Employees are to comply with HCF policies, procedures and instructions given for the protection of their own health and safety and the health and safety of others. This includes the correct use of safety and protective equipment.

9.4 OH&S Committee

The workplace OH&S Committee have responsibilities under the OH&S Act 1983 to review:

- the provision and installation of facilities and protective equipment;
- work practices;
- incidents and accidents;
- provision and status of information, education and training;
- relevant records; and
- Material Safety Data sheets.

An effective management tool is to provide a link between the OH&S committee and the waste Management committee to report on all items which effect both committees.

9.5 Monitoring Performance

Incident and accident reporting and recording is an essential management information system for identifying causative factors to waste handling injuries. It is also an effective tool for determining the effectiveness of the WMP in reducing the incidence and severity of these injuries.

Reporting of incidents and accidents is a requirements under the OH&S (First Aid) Regulations 1989. Incident and accident reporting and recording should facilitate costing of associated financial loss and enable management to make injury prevention investment decisions based upon accurate data.

OH&S numerical profile audits may be combined with the waste numerical profile audit to present an overall performance determination. Operating and waste treatment / disposal costs should be reviewed periodically to evaluate any fluctuations in costs.

9.6 Hygiene

Regularly washing and maintenance of equipment used to contain and transport waste. Provide hand-washing facilities for employees and promote regular hygiene procedures that comply with the Infection Control Policy 95/13. It may be useful to designate specific areas for equipment maintenance and hygiene that are properly equipped with emergency showers and drainage to sewer. Emergency showers and location of spills equipment should be identified throughout the HCF.

9.7 Manual Handling

Collection and storage processes should be streamlined to reduce manual handling effort and risks. The use of smaller MGBs greatly reduces the handling and lifting of waste. Where manual handling risks have been identified the tasks should be assessed and the risks should be controlled in accordance with the code of practice on manual handling. That is where loads exceed 16kgs team handling procedures or mechanical aids should be used. Large loads such as MGBs should be gripped with both hands and handled one at a time (to avoid twisting the body during manual handling). Wheeled bins should not be lifted. Circular No 97/35. Guidelines for The Prevention of Manual Handling Incidents in NSW Public HCF.

9.8 Personal Protective Equipment (PPE)

PPE must be worn when required. PPE is the last option in the hierarchy of hazard controls and should only be used if elimination, engineering controls and or changes to work practices do not adequately remove / reduce the risks. Assess risks and provide suitable PPE for the nature and degree of the hazard. Waste collectors should be made aware of their obligations under Section 19 of the OH&S Act 1983. Waste collectors are under a statutory obligation to wear appropriate PPE.

The risk of spills or splash exposures necessitates the wearing of face and eye protection. Carrying of bags is to be minimised and where it can not be avoided the waste collector is to wear protective gauntlets and apron to minimise the risk of injury. Protective gauntlets should be worn whenever collecting waste, even if the process involves wheeling a locked MGB to the holding area.

9.9 Sharps, Blood and Body Substance Exposures

Precautions must be implemented to protect against exposure to sharps, blood and body fluids. These precautions include:

- providing a purpose designed sharps container as close as practical to the point of generation of the sharp;
- providing appropriate PPE for potential blood and body substance exposures;
- conducting compliance checks to confirm people wear protective clothing;
- investigating all incidents to identify causes of exposures and take remedial action to eliminate risks;
- OH&S Committees or an appropriate forum must review incident reports and confirm completion of action;
- train staff in first aid and injury management procedures for sharps injury and body substance exposure;
- reinforce the need for staff to report all incidents and injuries;
- analyse statistics to identify any risk exposure trends; and
- develop and promote needle stick protocols.

Circular 98/11 - Management of Health Care Workers Potentially Exposed To HIV, Hepatitis B and Hepatitis C.

9.10 Employee Vaccination Programs

Each HCF should have an employee vaccination program. Maintain and keep long term records to ensure booster injections are given as required.

10 Training

10.1 About this section

This section explains the importance of training in the processes of achieving continuous improvement in waste management.

10.2 Training and Promotion

Area Health Services and HCF must train managers, supervisors and employees in waste management and reinforce knowledge with promotional activities and special emphasis programs. Training programs must be revised as new equipment is introduced or as technological change occurs. All casual staff need to be trained in waste management before starting employment.

Continuous improvement may be achieved by regularly reinforcing awareness of waste management issues. The following topics should be covered:

- operating manuals outlining safe and approved work practices;
- Material Safety Data Sheets;
- staff awareness of policies at orientation to the HCF;
- legislative compliance;
- provision of and compliance with the use of personal protective equipment;
- hygiene procedures;
- waste stream definitions and waste segregation practices;
- costs and benefits of waste management;
- explanation of recycling programs;
- details of employee vaccination program;
- management of needle stick and blood body substance exposure; and
- WMP.

Community languages should be used where appropriate.

10.3 Information, Education, Training and Safe Systems of Work

HCF management is responsible under the OH&S Act 1983 for providing appropriate information, education, training and ensuring that safe systems of work are developed and maintained.

This should include the provision of OH&S and public health information relating to the equipment and chemicals/drugs used in the HCF, eg Material Safety Data Sheets for chemicals, operating manuals for clinical devices using / decontaminating hazardous substances, etc.

10.3.1 Information

HCF employees who handle waste should be provided with the following information:

- occupational hazards and management of exposure to blood and body fluids;
- policies and procedures for specific waste handling and prevention of injury and disease;
- details on available immunisation programs (for Hepatitis B in particular);
- access to medical care and counselling services with rights to privacy; and
- management of needle stick and blood body substance exposure.

The information should emanate from one source only to avoid the distribution of conflicting information.

10.3.2 Education and Training

Management should provide education and training to waste generators, handlers, collectors, transporters, and key managers instrumental in the implementation of the WMP, and waste treatment facility operators.

Handlers must be trained and equipped to undertake the handling, internal transport, spill management and storage requirements for the different types of wastes arising at the HCF.

The purpose of education and training is to minimise the risk of injury associated with waste handling and facilitate efficient waste management. Education and training programs should include:

- approved work practices;
- regulatory requirements and methods of compliance;
- the use of required personal protective equipment;
- waste minimisation, segregation, labelling, containment and disposal strategies;
- first aid and medical treatment for needle stick and other waste handling related injuries; and
- hand washing strategies.

Education and training should be provided at the induction of new employees, on an on-going basis, with the introduction of new equipment, and at times of technological change.

Approved work practices should be documented and promoted. Multilingual translations are to be provided to personnel who may not be proficient in English.

11 Community Health Centres

11.1 About this section

Community Health offer a range of services based on Community Health Centres or at external locations such as patients' homes and school dental clinics.

11.2 Clinical Waste Generated at Community Health Centres

All wastes generated by community health centre staff are to be handled according to these Guidelines. It should be the policy of all community health centres to ensure clinical wastes are returned to the community health centre for appropriate disposal.

There must be separation of the waste from the drivers compartment. All vehicles should be fitted with an appropriate spill kit, with staff involved trained in the use of the kits. Where possible, arrange for provision of clinical waste bins at the health centre for regular collection by a licensed waste contractor.

11.3 Sharps Containers

Sharps containers should be supplied at community health centres in accordance with these Guidelines. Special consideration needs to be given to the location of sharps containers due to the high number of children at these centres.

11.4 Motor Vehicle Transport

The transport of waste by community health workers in the course of their duties is acceptable in properly restrained containers, eg rigid, leak proof, spill proof. Spill kits should be available for every vehicle transporting waste and staff should be trained in their use.

The following points should be observed:

- sharps shall be transported in rigid containers which have been thoroughly cleansed prior to use and which are leak proof, shock proof and have securely fitting lids;
- lids shall be securely fitted to the containers to ensure that the wastes are prevented from spilling;
- containers should be thoroughly cleansed and disinfected before re-use;
- containers used for the transportation of clinical wastes shall be clearly marked;
- during transportation, containers holding the wastes shall be securely held inside the vehicle to prevent movement of the containers and spillage of wastes; and
- the transporter shall ensure that vehicles being used for the transportation of clinical wastes shall be securely locked when left unattended.

Appendix A1 – Recycling Directory

Paper and Cardboard

Category	Action	Outcome
Cardboard	Flatten & Bundle	Recycled Cartons
Confidential documents	Shred	Recycled Paper
Newspaper	Separate & Bundle	Recycled Newsprint
Office Paper	Bundle	Recycled Paper
Telephone Books	Take to BP Service Stations	Thermal Insulation
Milk Cartons	Rinse and Collect	High Quality Paper

Metals

Category	Action	Outcome
Aluminium	Contact a scrap merchant	Reprocessed Cans
Dental Amalgam	Contact a silver recovery contractor	Recovered Silver
Mercury Unwanted Stock	Contact a recovery contractor	Recovered Mercury
Scrap Steel. eg White Goods & Broken Equipment, Food Cans	Contact a scrap merchant	Reprocessed Steel
Silver X-Ray Films X-Ray Processors	Contact a silver recovery contractor	Recovered Silver

Glass

Category	Action	Outcome
Bottles & Jars Clear, Brown and Green	Separate and contact a recycler	Reused item or reprocessed glass
Window Glass Broken Panes	Separate and contact a recycler store in rigid containers	Reprocessed glass

Oils

Category	Action	Outcome
Vegetable Oil	Separate and contact a recycler	Animal Feed
Waste Oil Lubricating, Hydraulic, Transformer, Gear, Diesel, Sump	Separate and contact a recycler	Refined or used as fuels

Solvents

Category	Action	Outcome
Alcohol	Separate and contact a recycler	Reusable Alcohol
Xylene	Separate and contact a recycler	Reusable Xylene

Plastics

Category	Code	Outcome	Action
HDPE High Density Polyethylene Milk Bottles, 25 Litre Detergent Drums		Reprocessed	Return to Supplier
LDPE Low Density Polyethylene Squeeze Bottles		Reprocessed	Separate and arrange collection
PET Polyethylene Terephthalate Soft Drink Bottles		Recycled Bottles	Separate and arrange collection
PP Polypropylene Car Battery Casings		Reprocessed	Separate and arrange collection
PPVC Plasticised Polyvinyl Chloride Plastic Tubing		Reprocessed	Separate and arrange collection
PS Polystyrene Foam cups and packaging		Reprocessed or reused	Separate and arrange collection
UPVC Unplasticised Polyvinyl Chloride Clear Cordial & Fruit Juice Bottles		Reprocessed	Separate and arrange collection

Food Scraps and Green Waste

Category	Action	Outcome
Discarded salad ingredients and vegetable parings	Separate from cooked food waste. Mulch or worm farm	Garden Compost
Grass cuttings, tree/shrub prunings. Dead leaves	Mulch or worm farm	Garden Compost

Public Health Units

For advice about these Guidelines contact an Environmental Health Officer at your local Public Health Unit.

Broken Hill Public Health Unit
08 80880367

Central Coast Public Health Unit
02 4320 4545

Centre for Public Health
Albury 02 6021 4799
Wagga Wagga 02 6938 6402

Central Sydney Public Health Unit
02 9515 3180

Hunter Public Health Unit
02 4924 6477

Illawarra Public Health Unit
02 4226 4677

Mid North Coast Public Health Unit
02 6583 0750

Mid Western NSW Public Health Unit
02 63395513

New England Public Health Unit
02 6766 2288

Northern Rivers Institute of Health and Research
02 6620 7500

Northern Sydney Public Health Unit
02 9477 9400

South Eastern Sydney Public Health Unit
02 9382 8333

Southern NSW Public Health Unit
02 4827 3436

South Western Sydney Public Health Unit
02 9828 5944

Western NSW Public Health Unit
02 6881 2216

Western Sector Public Health Unit
02 9840 3603