

Waste minimisation in healthcare

User guide

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A Victorian
Government
initiative



Waste minimisation in healthcare

User guide

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Foreword

I am pleased to present this Waste minimisation in healthcare User guide for your use and application to waste management activities. The guide will assist when preparing tender and contract documents for waste management, reporting waste generation in annual reports and reducing volumes of waste materials.

The Department of Human Services and Sustainability Victoria have jointly produced the User guide to assist healthcare services to reduce their environmental footprint and achieve a sustainable future.

The Department of Human Services encourages all sectors involved in healthcare service delivery to use the information in this guide to reduce the healthcare industry's environmental impact.

This guide provides a user-friendly guide for minimising waste, promoting re-use and recycling and improving environmental management practices. The guide draws best practice tools and applicable knowledge together and includes waste management tools such as:

- a guide to legislative and compliance requirements
- healthcare waste signage
- a performance specification
- waste reporting
- case studies.

I would like to acknowledge support from Sustainability Victoria for its funding contribution to this project. Special thanks also need to be made to the project's steering committee including representatives of several Victorian public hospitals whose support and knowledge has been indispensable. Finally, thank you to the Australian and New Zealand Clinical Waste Management Industry Group and the Victorian Environmental Protection Authority for their assistance with developing components of the guide.



FRAN THORN

Secretary

Department of Human Services

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Overview

The Victorian Government has identified waste management as an important area for all Victorians in moving towards a sustainable future. In particular the healthcare and hospitals sector are finding that waste management issues are becoming relevant, especially due to the number of hazardous materials, infectious controls, the high costs associated with disposing healthcare waste as well as the environmental implications of healthcare waste disposal.

Identifying the cost savings associated with waste minimisation practices as well as promoting the environmental benefits from separating waste and recycling materials provides opportunities to raise the profile of facilities and enhance community relations.

Introduction to the User guide

The Waste minimisation in healthcare User guide has been developed to promote and encourage waste minimisation, resource efficiency and assist in developing waste management strategies for Victorian healthcare services.

The project is a joint initiative between Sustainability Victoria and the Department of Human Services and is based on a waste audit consultancy service review on waste management activities and recommendations for improvements within the healthcare sector.

The guide draws upon experience of healthcare professionals as represented on the project's steering committee as well as others from healthcare facilities who have successfully implemented waste minimisation programs.

Who is this User guide for?

This guide is aimed at hospital and healthcare staff including senior management, waste management officers, environmental service officers and any others interested in promoting waste minimisation in healthcare.

About the User guide

The guide contains advice on how to promote and encourage waste minimisation in healthcare facilities by providing information about legislative and best practice requirements and specific tools as outlined below.

Waste and Recycling Signage

Healthcare-specific waste and recycling signage and poster have been developed to assist facilities in separating different types of waste and promoting waste minimisation programs throughout the facility.

Where appropriate, the signage was developed to meet relevant Australian standards. The signage was created in collaboration with the Australian and New Zealand Clinical Waste Management Industry Group (ANZCWMIG) and Sustainability Victoria.

These documents are available on the Sustainability Victoria website at:

www.sustainability.vic.gov.au

Also, see the Department of Human Services website at:

www.dhs.vic.gov.au/environment/waste

A copy of the poster is inserted into folder pocket of this guide, further copies can be downloaded from the Department of Human Services website at: **www.dhs.vic.gov.au/environment/waste**

Performance specification

The performance specification document has been developed to assist facilities with tendering and waste contracting to meet best-practice waste management requirements in healthcare.

The tool outlines performance specifications to be used by healthcare facilities when preparing waste management tendering and contract documents. The information should be considered as a guide and build on existing arrangements.

The document is available in Word Document format on the Department of Human Services website at: www.dhs.vic.gov.au/environment/waste

Waste reporting

Waste reporting is encouraged to assist facilities to practice good waste management control through tracking results, measuring progress and reporting accomplishments to senior management.

Two key reporting methods are essential to develop good waste reporting practices: waste reporting for senior management and reporting from waste contractors. This recommends methods to assist facilities with introducing waste reporting.

Waste Wise case studies

Three case studies from Waste Wise healthcare facilities provide examples of how waste minimisation has been achieved. Waste Wise is a program of Sustainability Victoria to assist organisations on the journey towards becoming ResourceSmart by reducing, reusing and recycling their waste.

The facilities are:

- Maroondah Hospital
- Western District Health Service (WDHS)
- Northeast Health Wangaratta.

Other useful resources

Waste management in hospitals and healthcare – online tool

The Waste management guide for hospitals and healthcare is an online reference tool that has been developed to assist healthcare with reducing waste and promoting recycling on site. The document provides a summary of hospital and healthcare compliance and legislative requirements relating to waste management.

This document is useful for providing information about:

- waste and recycling streams generating in healthcare
- definitions and examples of waste and recycling streams
- alternatives available for waste disposal
- on-site management and off-site disposal methods
- summary of legislation, policies, standards, codes and compliances relating to healthcare waste management.

The document is available for viewing on the Department of Human Services website at: www.dhs.vic.gov.au/environment/waste

Capital Development Guideline for waste management – online tool

The Capital Development Guideline for waste management has been developed to assist in achieving a consistent approach and best practice in planning, design and implementation phase of all capital investment projects in terms of waste management.

The guideline is intended as a guide rather than mandatory requirements. It has been developed to:

- assist with the design of sustainable waste management systems within facilities
- provide guidance in responding to waste management issues in hospitals associated with planning, construction and ongoing waste management systems for handling waste and recyclable materials.

The document is available for viewing on the Department of Human Services website at:

www.dhs.vic.gov.au/environment/waste

Information available for healthcare waste management to assist healthcare facilities improve their environmental performance is constantly evolving. Look for the latest versions of these resources as well as new materials at: **www.dhs.vic.gov.au/environment/waste**

Waste and recycling signage



These documents are available on the following websites:

www.sustainability.vic.gov.au

www.dhs.vic.gov.au/environment/waste

Performance specification

Performance specifications for waste tender and contract documents

Note: this document excludes any legal and contractual requirements

Context

The use of specifications that contain specific requirements, standards and Key Performance Indicators is recommended when preparing waste management tendering and contract documents. The following information should be considered as a guide and build on existing arrangements. The context in which the tender documents are prepared is set out below.

The performance specifications section (see Attachment 1) should be used when preparing, negotiating or evaluating the tenders or contracts. Performance specifications need to set out the service, parameters and agency requirements including:

- duration of the specified contract
- agency-specific terms and conditions
- waste management collection, treatment and disposal services
- value-add to contract (advise what can be done)
- other requirements include provision or ownership of containers, method and frequency of collection, on-site treatment and disposal of defined types of rubbish and materials or disposal, recycling or re-use.

Examples of waste streams generated in healthcare facilities include:

1. General waste

Rubbish (general waste)

2. Recyclables

Full commingled (cans, bottles, clean paper and cardboard)

Partial commingled (cans, bottles and cartons)

Office paper

Confidential paper

Cardboard

Food

Green waste/organics

X-ray

Toner and printer cartridges

Mattresses

Batteries

Fluorescent tubes

Electronic waste

3. Clinical

Clinical waste

Clinical waste incineration only

Sharps waste

4. Related

Cytotoxic waste

Pharmaceutical waste

Radioactive waste

Process

Waste management contracting process should include the following steps (see Attachment 2).

1. Identify the waste or recycling contract/s required.
 - Defining the desired qualitative outcomes as well as innovative methods of collection and improved measures for waste management service delivery.
 - Defining expected quantifiable service outcomes such as number of bins or skips on site to be collected monitored and reported such as the weight or amount of waste/recycling to be collected.
2. Prepare tender specification plus other standard contractual documents and conditions.
 - Draft requirements of waste management, forming a section of the tender document to ensure the waste/recycling collection service meets the standards and expectations of the healthcare facility.
 - Provide information for potential contractors to use during the tender process.
 - Appoint tender selection panel to review, evaluate tenders.
3. Advertise tender
 - Seek competitive submissions for assessment and awarding of contract.
 - Clarify any issues of concern including any that require negotiation.
4. Review and evaluate.
 - Selection panel to review tenders, evaluate and make recommendations to the facility's board.
5. Award contract and execute.
6. Implement contract including induction contract administration.
7. Regularly monitor and review contract.

Tender assessment

- Awarding a waste management contract will need to comply with statutory requirements relating to any commercial contract for public bodies. Generally agency supply/procurement departments have standard tendering processes that will need to be complied with.
- Evaluating and awarding contracts needs to be done in a manner that is equitable and transparent. This can be done by appointing a selection panel to analyse the key selection criteria that should be completed by the tenderers during the tender assessment period.
- It is recommended that performance specifications be used to identify key selection criteria.
- The potential contractor should address all key selection criteria, providing evidence for their responses. They should comply with all aspects of the tender.
- Key selection criteria would normally include:
 - collection costs, rental costs, purchasing costs
 - frequency of collection
 - recording and reporting of collection and disposal
 - portfolio of recycling/waste minimisation initiatives or examples
 - education/signage
 - length of contract
 - team experience
 - quality plan
 - transition plan/costs.

Consultation

There is a need to discuss performance specifications with key group areas such as:

Healthcare staff including:

- waste officers
- contract managers
- environmental services staff
- purchasing officers
- senior management
- infection control staff

Contractors including:

- waste/recycling collection provider
- bin rental/repairs services
- bin cleaning services.

Consultation with internal and external stakeholders should occur prior to the tender stage. A list of topics for discussion is set out below.

Topics to discuss with internal staff

- Identify staff involved in the process. Set up a tendering team involving engineers, waste officers, contract managers, purchasing officers, cleaning supervisors, environmental officers.
- Identify all current collection contracts.
- Identify expiry dates of current collection contracts.
- Identify standard contract condition documents that will apply to the agency.
- Identify all waste streams and disposal method, such as pharmaceutical for incineration, cartons, cans and bottles for recycling, rubbish (general waste) for landfill.
- Specify the collection service and ensure it is clear and accurate.
- Identify other waste streams that can be recycled and method of disposal, such as fluoro tubes, X-ray and batteries.
- Estimate waste and recycling amounts produced.
- Identify costs including current disposal, bin hire and cleaning staff.
- Identify changes to infrastructure, fittings and fixtures in the event of a change of contractor, product or storage container.

Topics to discuss with contractors

- Identify past successes and failures.
- Encourage using Australian national standards, policies and legislation.
- Identify innovations and initiatives at other facilities.
- Willingness to participate in facility accreditation.
- Willingness to participate in regular meetings.
- Contractor accreditation process ISO 14001.

Attachment 1

Performance specification – waste management

Below is a list of performance specifications and advisory notes.

These have been prepared for guidance can be added/deleted or moved to suit specific agencies.

The performance specification includes the following material:

Part A: Introduction and background information

Part B: Technical requirement of contract

Part C: Information required from tenderers

Part D: Award process

Part A: Introduction and background information

1. Introduction
 - *Describe what the facility is seeking, such as a high-quality waste management service, environmentally sustainable conduct*
2. Background
 - *Provide information about the facility*
 - *Provide information about how this section relates to the other sections of the tender document*
 - *Provide information about how this section will relate to the contract document*
3. Aims and objectives
 - *Describe scope of work*
 - *Describe what the contract is for, such as collection and disposal of recyclables/green waste*
 - *Provide definitions of waste categories related to the contract*
 - *Describe the intentions, such as separation, training and education initiatives, efficient service*
4. Site details
 - *Detailed description about the site/s*
Name and of number sites
5. Length of contract
 - *Provide information about contract period*
 - *Include a clause about contract extension or cancellation (optional)*
6. Providing references
 - *Request references – names, addresses and contact details of at least three referees*
7. Agency contact information
 - *Provide contact details – nominated contact, job title, address, telephone numbers and email addresses*
8. Tenderer's contact information
 - *Provide contact details – nominated contact, job title, address, telephone numbers and email addresses*

Part B: Technical requirement of contract

9. Legislation and guidance (See Waste management guide for hospitals and healthcare on the Department of Human Services website)
 - *Describe the minimum level of standards the successful tenderers should meet, such as ACHS (Australian Council on Healthcare Standards), ANZCWMIG (Australia New Zealand Clinical Waste Management Industry Group), OHS precautions*
 - *Name the legislations, such as Environmental Protection Act 1970, Worksafe Code of Practice*
 - *Describe that the collection, transfer and disposal should comply with current legislation*
10. Certificates and licences
 - *Request copies of all certificates and licences*
11. Waste categories
 - *List and provide detail such as definitions for the waste categories the tender request is for, noting that this list may change throughout the contact*
12. Quantities of waste generated
 - *Provide estimated volumes or weight anticipated for collection and disposal*
 - *Provide a schedule of current potential quantities*
13. Pricing
 - *Request pricing details of hire or purchase of equipment*
 - *Request details for basis for charge, weight or volume*
 - *Request details of additional fees and taxes*
14. Container/materials policy
 - *Request containers of a certain standard*
 - *Request colour coding on waste containers*
 - *Request bin containers comply with Standards Australia bin colours AS4123.7 where possible*
 - *List colour coding, such as 'Clinical waste – yellow', 'Paper – blue'*
 - *Describe if contractor will be responsible for waste containers*
 - *Describe who will be responsible for maintenance and cleaning*
15. Equipment policy
 - *Request description of rental or purchase policy of skips, containers*
 - *Request description of rental or purchase of compactors or balers*
16. Storage of waste
 - *Request descriptions of how contractor will manage the following, but not limited to:*
 - *storage of clinical waste including:*
 - *use of approved containers, colour coding*
 - *responsibility for repair of containers and process*
 - *responsibility for cleaning containers and process*
 - *storage of general waste*
 - *storage of recyclables*
 - *storage of equipment*

17. Collection points
 - *List collection points*
18. Collection details
 - *Detail any collection details to be noted, such as collection time, number of containers*
19. Transportation of waste
 - *Request detail of how waste will be transported from collection point to disposal facility*
20. Vehicle access
 - *Note if there are any access issues such as keys for secure areas, boom gates, security passes or time of day or day of the week*
21. Disposal
 - *Request details of disposal or treatment processes*
22. Spillages and accidents
 - *Request notification about spillages and accidents*
23. Schedule
24. Service schedule
25. Service variation
 - *Describe if contractor will provide emergency, urgent, unplanned collection service at request by the facility, if necessary*
26. Recording and reporting of collection and disposal
 - *Request description of how this will be done (Attachment 2)*
 - *Note that weight/volume and costs must be established*
 - *Note contractors must provide information on time and date of collection*
 - *Level of feedback*
 - *Frequency of feedback*
 - *At minimum the report should detail:*
 - *total weight/volume/category/site/monthly*
 - *cost/category/site/monthly*
 - *total number of collections*
27. Reporting incidents/spillage/accidents
 - *Note that the contractor is responsible for cleaning up and disposal of on-site incidents occurring*
 - *Tenderers to provide details of methods for dealing with incidents, spills and accidents and costs associated*
 - *Report should detail:*
 - *number of incidents involving contamination*
 - *criticality, frequency and location*

28. Monitoring the contract
 - *Describe how contract will be monitored*
 - *Request regular meetings between contractor and facility*
29. Invoices
30. Contract implementation action plan
31. Recycling/waste minimisation initiatives and successes
 - *Request tenderers to provide proposal to address recycling and waste minimisation initiatives such as:*
 - *what can be recovered*
 - *method to reach targets*
 - *potential revenue*
 - *alternatives*
32. Education/signage (See waste and recycling signage on the Department of Human Services website)
 - *Advise if education and assistance is available*
 - *Describe methods and how this will be done*
33. Miscellaneous/other waste streams
34. Key performance indicators
35. Noise control
 - *Describe importance of keeping noise levels down*
36. Contractors staff
 - *Contractor staff must be trained prior to commencing work, details of training should be available on request*
 - *Contractor staff must be provided with suitable protective work ware*
 - *Contractors name must be clearly worn at all times while on site*
37. Environmental policy
 - *Request details of any environmental policy developed*
38. Accreditation
 - *Request details of accreditation levels and certificates*
39. Quality assurance
 - *Provide assurances of service continuation if the market collapses*
40. Contract management
41. Dedicated waste officers
 - *Tenderers to provide name of a nominated waste manager who be primary contact*
 - *Define roles and responsibilities*
42. Cleaning frequency of bins
 - *Tenderers to provide details on bin cleaning process and frequency*

Part C: Information required from tenderers

Service schedule

General information

Clauses

Part D: Award process

Contract award criteria and weighting

Attachment 2

The checklist (checklist identifying the work plan)

Task	Completed by
Preliminary review	
Define project team	
Develop waste collection aims and objectives	
Waste reporting data	
Draft key specifications	
Draft tender document	
Develop list of possible tenderers to invite	
Pre-tender stage	
Finalise specifications	
Finalise tender document	
Propose tender deadline date	
Appoint tender selection panel	
Request for tender	
Issue tender documents	
Receive tenders	
Evaluate tenders	
Recommend tender	
Award contractor	
Award successful contractor	
Advise to unsuccessful contractors	
Contract commencement	
Sign contract	
Commence contract	

Waste recording/reporting data for contract administration of waste management contracts

	What to report	When to report it	YTD comparison
1.	Weight or volume/waste stream/site (kg or litres)	Monthly	Yes
2.	Cost/waste stream/site	Monthly	
3.	Report on trends (reduction, increases) in weight/volume (kg, litres)/waste stream/site such as plotting: - performance over time - recycling over landfill	Monthly	Yes
4.	List of waste management incidents and measures introduced to deal with these (such as OHS contamination)	When it happens	

Reporting requirements

1. Reports for senior management

Reporting to facility senior management has been identified as an area that is currently inadequate. Senior management reporting is important to track improvements in financial and environmental performance, issues of concern to health services (such as infection control) as well as provide an opportunity to demonstrate these benefits and achievements through annual reports.

Using senior management reports will:

- encourage proper administration of waste and recycling contracts
- assist with budgeting and financial management
- identify trends such as quantities of waste or recycling generated, recycling or re-use opportunities
- track OHS, risk and contamination levels.

Recommendations

- Quarterly senior management reporting should include at a minimum:
 1. Performance of contracts
 - efficiency and frequency of collection
 - management of key performance indicators
 2. Total costs of collection and disposal for non-prescribed and prescribed waste on a quarterly basis
 - total cost of damage and repairs to bins trolleys and so on (optional)
 3. Total weight generated for non-prescribed and prescribed waste on a quarterly basis
 4. Total number of risks or associated incidents on a quarterly basis
 - contamination
 - OHS
 - infection control.
- Encourage use of AIMS (Agency Information Management System) standardised waste categories and unit measures such as weight and cost.

2. Reporting from waste contractors

Requesting reporting from contractors ensures that the contract is being reported on regularly and provides basis for proper administration.

It is proposed that contractors undertake waste reporting and recommend the following format be included in tendering and contracting of waste management. The reports would become the basis for supervision and performance assessment.

Waste recording/reporting data for contract administration of waste management contracts

	What to report	When to report it	YTD comparison
1.	Weight or volume/waste stream/site (kg or litres)	Monthly	Yes
2.	Cost/waste stream/site	Monthly	
3.	Report on trends (reduction, increases) in weight/volume (kg, litres)/waste stream/site such as plotting: - performance over time - recycling over landfill	Monthly	Yes
4.	List of waste management incidents and measures introduced to deal with these (such as OHS contamination)	When it happens	

Waste Wise case studies



Western District Health Service (WDHS)

Achieving cost savings through best practice waste minimisation

Brief description of sector and business

The Western Health District Health Service (WDHS) is based in Hamilton, Coleraine and Penshurst, in the Southern Grampians Shire. WDHS incorporates Francis Hewitt Community Centre, Grange Residential Care Service, Hamilton Base Hospital, Coleraine and District Health Service, Penshurst & District Health Service and YouthBiz. In total, 96 acute beds, 170 high- and low-level extended care and residential aged care beds, 35 independent living units, community health and youth services are provided.

When did the organisation join Waste Wise?

WDHS joined Waste Wise during 2001 and became certified in 2002. Hamilton Base Hospital and Coleraine District Health Service currently hold silver certification.

Snapshot

Key elements

Conducts waste audits, participates in benchmarking program, encourages staff to segregate waste, recycle and recognise good practice.

Achievements

Current savings in waste disposal costs at Hamilton Base Hospital equates to \$2,435 due to the success of the recycling program.

347.86m³ or 174 large waste skips not going to landfill.

WDHS currently achieves silver certification.

Key lessons

Form a waste action group. Establish an action plan and goals. Fully achieve the goals.

Educating, involving and encouraging staff is crucial to achieving positive outcomes.

Enlist help from external parties: Sustainability Victoria, your local regional waste management group, and waste disposal contractor.

Resources required

Proper recycling creates self supporting funding. Use part of the savings for bins or prizes/awards to present to staff for excellence.

Why did the organisation get involved in the program?

WDHS has placed the need to monitor and reduce its general waste high on its agenda. They are committed to achieving continuous improvement in waste minimisation. WDHS also continues to meet the required criterion of the Australian Council on Healthcare Standards (ACHS) 'Safe Practice and Environment' 3.2.3.

Actions implemented

Since 2001, WDHS has implemented the following.

1. Conducted waste audits at Hamilton Base Hospital that identified a large number of recyclables entering the general waste stream. The data is recorded and used for internal reporting purposes.
2. WDHS participated in and achieved top status in an external waste management benchmarking program coordinated by the Grampians & South Western Regional Waste Management Groups (RWMGs); this program focuses on the requirements of ACHS Criterion 3.2.3 – 'the waste management system supports safe practice and a safe environment'.
3. WDHS has successfully implemented many recycling and re-use programs. These include recycling of aluminium cans, steel cans, clear and coloured glass bottles and jars, plastics, milk and fruit containers, magazines, newspapers and brochures as well as cooking oil from the kitchens. In the administration departments, cardboard and white shredded office paper, mobile phones, batteries, printer cartridges and toners are all recycled. Outside lawn cuttings are sent for composting. Re-use programs have included cutting up old bath towels to make cleaning clothes, sending laundry and chemical containers to suppliers for re-use. Other programs include supplying local garages with old linen for use in the workshop.
4. Desire to contribute to the reduction of waste entering the environment by encouraging all campuses of WDHS to become Waste Wise participants.
5. Cost savings of \$2,435 has been achieved at Hamilton Base Hospital throughout the past financial year due to reduced waste disposal requirements because of the successful recycling program.

6. Full support from the WDHS executive.
7. Keeping staff informed by using waste education such as correct bin placement and signage.
8. Encouraging staff to segregate waste and recycle. Reward staff for good practice. Include Waste Wise tip of the week in the weekly 'Waste Wise tip of the week' section of the organisation's newsletter, also including staff pictures in Waste Wise educational PowerPoint display.
9. Quarterly environmental staff meetings that include waste management issues.
10. Staff competition on unique recycling ideas. Many entries with the winning entry receiving six bottles of wine as the first prize.
11. Eco-management PowerPoint display provided to the Department of Human Services to promote recycling.
12. Keeping the community informed of waste management achievements through the annual general report, quarterly community bulletin 'Wellbeings' and ad hoc articles in the local newspaper. Further Waste Wise achievements can be found in the 'South West Waste' community newsletter.

Achievements

- Hamilton Base Hospital has collected 347.86m³ of recyclable material since its latest waste audit in 2005–06. This clearly demonstrates how positive recycling can be as this figure equates to 174 large waste skips that didn't require servicing, therefore achieving a cost saving of \$2,435 to the organisation.
- WDHS topped the past and current annual external waste management benchmarking program. The first benchmark exercise involved six hospitals; the latest benchmarking exercise involved 18 health services and included both large and small facilities.
- A competition was held for staff where staff submitted their own waste wise recycling tips. The staff tips have been used in the weekly waste wise section of the hospital newsletter.
- The high number of entries to the competition indicated staff are enjoying the recycling activities.

Lessons learned

- Change to any system creates concern and hurdles. Encouraging staff to be involved in recycling was one of the main hurdles. This was overcome by involving staff from the very outset, gaining their input and ideas and by creating a sense of pride and enthusiasm about what could be achieved not only for the organisation but also the environment. A PowerPoint waste reduction program was developed which also features staff and departments actively recycling.

Future directions

Continue to:

1. monitor waste volumes through annual general waste audits at all WDHS campuses
2. participate in the external waste benchmarking program
3. encourage ongoing staff commitment.

Acknowledgements

Norman Saligari
 Hotel Services Coordinator
 Western District Health Service.

Maroondah Hospital



Demonstrating continuous improvement in waste minimisation

Brief description of sector and business

Maroondah Hospital is a community-based hospital in Melbourne's east that predominantly services the local government areas of Maroondah, Yarra Ranges, Knox and Whitehorse. With 1,700 staff employed, Maroondah Hospital services 309 beds including emergency department, adult and adolescent psychiatric units, acute medical and surgical services as well as GEM (geriatric evaluation and management) unit. Maroondah Hospital is a member of the Eastern Health Network.

When did the organisation join Waste Wise?

Maroondah Hospital began conducting their waste assessment in 2001 and was awarded with Waste Wise certification in 2004. Waste Wise was an added bonus to work we were doing independently.

Why did the organisation get involved in the program?

Australian Council on Healthcare Standards accreditation (EQulP) was the catalyst to participation in Waste Wise. The facility was looking at ways to move to a higher accreditation status.

Facility management was supportive of the free Waste Wise program and it as an opportunity to promote waste minimisation and environmental protection amongst staff and the community.

Snapshot

Key elements

*Setting up a waste management committee.
Introducing a component of waste management training for staff induction.*

Achievements

- *Regular audits and waste assessments*
- *Implementing a waste management policy*
- *Education and training*
- *Standardised waste management system*
- *Support from senior staff*

Key lessons

Communicate cost saving benefits and achievements with management.

Resources required

- *Staff dedicated to achieving financial goals achieved by good waste management.*
- *More time to work with staff.*

Actions implemented

In 2001 Maroondah appointed a waste management committee. The committee, that meets monthly, is headed up by infection control and comprises staff from engineering, hotel services, nurse education supply, pathology, radiology, operating suite, nursing and pharmacy.

Achievements

Since 2001 the waste management committee have achieved the following.

Audits and waste assessments

- Assessment of the waste streams including clinical waste, related waste and general waste was undertaken to assess what waste materials were being generated in the facility and if and how they can be re-used or recycled. The results of the audit lead to an assessment of recyclable materials.
 - In February 2003 the waste management committee re-audited the clinical waste area. Immediate feedback was provided to the clinical areas where breaches in the facilities Environmental policy were made. Follow-up education sessions were offered to staff. Audits have been conducted annually since.
 - Nurse unit managers participated in the waste audits and saw the contamination levels first hand. This resulted in a significant decrease in contamination levels at ward level throughout the facility.
 - The results of the audits from 2003 to 2005 showed a 5.4 per cent drop in contamination levels in the general waste stream. Indicating if waste is properly segregated there is a higher percentage of the waste being put into the correct stream.
- In 2004 Maroondah underwent renovations that saw a new emergency department and an extra 32-bed ward added. Despite the increase in capacity waste costs have remained stable.

Waste management policy

- Adopting a waste management policy that included recycling cans, glass and plastic bottles, paper and cardboard, mercury as well as toner and printer cartridges.
- Environmental commitments were also included within the policy.

Education and training

- Education sessions have been rolled out through out the hospital outlining the correct disposal and segregation of waste according to the policy.
- Education and training has been included in the orientation program of all new staff.
- An educational poster was designed to attempt to reduce contamination in clinical areas. The poster included how to separate waste and 'what goes where'.
- A letter recommending that new products entering the hospital be considered for the amount of excess packaging was drafted and sent to the supply managed and the product evaluation committee (PEC). The PEC now has this included as part of purchasing policy and this forms part of criteria for product selection.
- Tips for reducing, reusing or recycling are sent out to staff within a monthly newsletter.

Standardised waste management system

- A standardised system for collection materials was established. The solution was to provide containers that were colour coordinated and had the appropriate, consistent signage throughout the organisation. Audits show that waste is being streamed has a higher percentage going to correct stream. Despite doubling the size and through put of the emergency department and adding an extra 32-bed ward, waste costs have remained stable.

Innovations

- Maroondah have recently converted from using X-ray film to using digital technology for X-rays. This has seen an elimination of X-ray film waste generating within the hospital
- The waste committee recently switched to publishing agendas, minutes and information on the staff intranet to eliminate paper usage and unnecessary printing or photocopying. Their actions were noted by the CEO and similar trends are being encouraged across the hospital.
- Kinguard recycling will be trialled at the facility in 2008.

Lessons learned

- Communicate financial savings to management.
- Sometimes recycling is not as cost effective therefore reducing volume is essential.
- Developing environmental and waste management policies reflect good intention.

Future directions

- Paper reduction targets.
- Decreasing the use of polystyrene cups.
- Encouraging IT technology rather than printing/storing hard copy.

Acknowledgements

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Northeast Health Wangaratta



Innovation and achievement in waste reduction

Brief description of sector and business

Northeast Health Wangaratta was established in 1872. Since then it has grown and developed as a major health service for the region, servicing some 28 townships beyond the boundaries of the Rural City of Wangaratta with a catchment population of approximately 90,000.

Northeast Health Wangaratta is a busy, modern 221-bed health service, providing a range of acute inpatient and community-based service and a referral centre for outlying district hospitals and community-based services.

Inpatient beds comprise 115 acute, 62 nursing home, 20 psychiatric and 16 rehabilitation and sub-acute. Northeast Health Wangaratta is the municipality's largest employer with 1,014 staff.

When did the organisation join Waste Wise?

Northeast Health Wangaratta joined Waste Wise in 1999–2000.

Snapshot

Key elements

- *Successfully integrated waste reduction into whole organisation*
- *Recycling everything from oil to incontinence pads*

Achievements

- *Increased bottle, can and containers recycling by 560 per cent from 2001 to 2004*
- *First hospital in Australia to recycle nappies and incontinence pads*
- *Twice Waste Wise certified*
- *Accreditation from Clean Up Australia*
- *State finalist in Tidy Town – Rural City Pride 2004*

Key lessons

- *Try one process at a time; document it and report back to staff how it is progressing*
- *Involve and inform staff and visitors*

Resources required

- *Staff who will take the time and effort to turn general waste into recycling gold*
- *Upper management support*
- *Time to work with and inform staff*

Why did the organisation get involved in the program?

Since 1990, Northeast Health Wangaratta has been working to continually improve its waste disposal and recovery systems. Influencing factors include:

- regulatory changes banning the use of low-temperature incinerators
- directives from the Department of Human Services to reduce waste
- increasing landfill charges and diminishing landfill area
- awareness that the volume of waste generated by hospitals and health agencies, if not addressed, has major environmental impacts throughout the community.

Actions implemented

Reducing waste

- Working closely with suppliers to encourage the reduction of non-degradable and/or non-recyclable and bulky packaging.
- Encouraging staff to bring their own coffee cups for the staff canteen.

Re-using

- Re-use plastic laundry collection bags covers.
- Re-use of stationery to make note pads for staff.
- Store wooden delivery pallets for pickup for re-use for craft and firewood.
- Shredded paper made available for re-use as packaging or composting material.

Recycling

- First hospital in Australia associated with the recycling of incontinence pads and nappies. In the first six weeks of the program, waste to landfill was reduced by 3,495 kilograms.
- Cardboard, cans, plastics, steel and glass are all streamed and collected in house for recycling.

- Aluminium can collection bins placed in public areas for staff and visitors to recycle.
- Clean paper and clean paper towels from wards and public toilets are collected for recycling.
- Cooking oil and kitchen slurry collected monthly for recycling.
- Out-of-date X-ray film sent away for extraction of plastic and silver for recycling and re-use.

Environmentally friendly purchasing

- Purchasing office paper and paper products that have a significant recycled content.
- Sourcing recyclable materials as a priority for use and sale in canteens and kitchens.
- Purchasing recycled paper pens.

Staff involvement

- Monthly orientation tours and waste management lectures are conducted with new staff to create an awareness of waste reduction systems. Presentations are also made at staff forums.
- Sessions held with new doctors to encourage recycling at their accommodation.
- Waste information notice board in staff canteen with information relating to current initiatives.

Communicating to the public

- Encouraging other health services, childcare centres and nursing homes and hostels to participate in Nappy/Incontinence Pad Recycling Program.
- Working towards setting up nappy recycling collection service for local residents.
- Presentations to other health care institutions on waste management and recycling advising how to implement waste management and reduction programs and how to establish varying waste streams.

Achievements

- Waste Wise two-year certification 2003–05 to 2005–07.
- 2004 Tidy Town state finalist in the Rural City Pride category.
- Waste Reduction Accreditation Program Clean Up Australia High Achiever Accreditation.
- Northeast Health Wangaratta Staff Quality Award for Environmental Improvements.
- Achieved the 'Extensive Achievement' recognition from the EQulP Evaluation and Quality Improvement Program from Australian Council for Healthcare Standards for the hospitals waste/ recycling initiatives.
- Due to stage 4 water restrictions, the hospital has installed four 1,800 litre water tanks to re-use water from the haemodialysis reverse osmosis unit to water the gardens during the night – occurs approximately three times a week saving about 13,000 to 15,000 litres per week.
- Joined 'Grow me the Money' a group of committed environmental businesses working to reduce the impact offices and corporations have on the environment in 2007 to increase networking.
- Talked to other institutions and school children regarding recycling to help the health of our planet.

Lessons learned

- Find a recycler that can effectively assist with the collection and processing of waste generated and make sure they are being recycled not dumped at waste tips.
- Conduct regular audits as a means of ensuring that programs remain on track and remember it's not always monetary value that you are saving, it could just be that you are participating in recycling to show that as an organisation you care.
- Have a waste management notice board in the staff room or staff café with bright displays to indicate that waste management is not all 'gloom and doom'.
- Listen to the staff who work in the areas in which you are trying to introduce recycling.
- Provide an overview at staff meetings, hand out recycled pens, make up writing pads, distribute lollies and generally make the sessions fun.
- Report progress regularly to OHS and infection control meetings regarding waste/recycling.
- Document information where ever possible. Reporting through tables and graphs are a great way to track waste streams.
- Pick an area to focus on for a month and provide feedback using graphs education.

Future directions

Looking to further reduce waste throughout the hospital and its annexes.

Acknowledgements

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A guide to waste management responsibilities in healthcare

The Waste Minimisation in Healthcare project promotes and encourages waste minimisation and resource efficiency in Victorian healthcare facilities. This guide has been developed to help facilities build their capacity to improve waste minimisation and resource efficiency outcomes.

The guide aims to inform healthcare employees of the considerations that should be taken into account when assigning waste management responsibilities. By following this guide healthcare facilities will ensure their waste management practices are efficient and effective.

1. Organisational awareness

Waste management roles are directly dependent on the organisation; each facility has different ways of managing waste to suit their individual needs. Each employee, regardless of their position in waste management, needs to know and understand the overall capacity they have in developing sustainable waste management practices. Each employee in waste management must know and understand:

- the most senior point of contact (manager) for all waste management related issues
- the team of staff they are working with in waste management
- the time commitment allocated for waste management tasks
- the budget specified for waste management tasks
- the organisational policies and procedures for waste management
- other responsibilities for waste management in the healthcare facility
- relevant government legislation, policies, directions and commitments surrounding waste management.

2. The purpose

Each employee has a role in waste management although some particular employees have a more direct role in contributing to the core functions of waste management in a healthcare facility. The two key functions of employees with a distinct waste management role should include:

- providing communications and operational advice on relevant waste management issues
- contributing to a comprehensive waste management program through its development, implementation, integration, monitoring and/or management.

Key facts

It is estimated that 260 million kilograms of solid waste is produced by Australian hospitals per annum. The exact amount of waste produced by Victorian hospitals alone is unknown but this information can be gathered through improved waste data collection and reporting. With health services growing at approximately 5 per cent per year, the amount of waste produced by healthcare continues to grow.

3. The core tasks

Waste management spans all departments within a healthcare facility and it is likely that core tasks are spread throughout these different departments. For a more efficient and consistent waste management practice, a list of core tasks that should be considered is listed below. These core tasks are in addition to existing practices in the facility such as ensuring particular legislation, regulations and standards are met. The core tasks that should be considered are as follows.

Waste operations and assessment

- Develop and endorse a reporting structure in which healthcare employees with a waste role have a clear reporting line.
- Develop and implement key performance indicators (KPIs) for waste management in line with the requirements of the Australian Council on Healthcare Standards and industry best practice.
- Coordinate and/or undertake assessments of the waste production in all departments of the healthcare facility.
- Coordinate and monitor all waste disposal operations.
- Take suitable actions to reduce total waste produced and increase resource efficiency outcomes.

Waste data collection and reporting

- Coordinate and/or undertake waste data collection and analysis.
- Prepare data reports on specified waste streams using information from waste contractors.
- Understand waste data collection and reporting requirements through the Department of Human Services' *Instructions for completing Energy and Environmental Forms*.
- Report the waste data results through the Department of Human Services' *AIMS (Agency Information Management Systems)* corporate reporting system.
- Report on waste assessments, results, strategies and achievements to senior management.

Key facts

It is estimated that the Victorian public hospital sector is paying a minimum of \$10 million per annum for the disposal and treatment of solid waste and recyclables. However, the overall cost of waste management within the public hospital sector, including disposal plus transport and associated costs, is likely to be at least \$90 million per annum. By reducing the amount of waste produced, healthcare will reduce their overall costs for waste management.

Waste education and training

- Educate relevant staff on the importance of efficient waste management practices, including the relevance of the *Waste Minimisation in Healthcare kit*.
- Ensure appropriate waste separation practices are in place and that appropriate segregation signage and containers are used.
- Train and educate staff on their responsibilities through appropriate waste minimisation and segregation.
- Educate relevant staff on best practice guidelines and legislative requirements in waste management.
- Inform relevant staff about the Department of Human Services' *Capital Management Guidelines for Waste Management*.

Waste minimisation

- Assess waste reduction opportunities and implement suitable programs and practices where applicable.
- Assess resource recovery opportunities and implement suitable programs and practices where applicable.
- Use the Department of Human Services' *Waste Management in Hospitals and Healthcare – Online Tool* to provide ideas on more efficient waste management of particular waste streams.
- Demonstrate examples of waste minimisation and resource recovery to save costs incurred by the healthcare agency.
- Provide reports on progress in waste minimisation and resource recovery.

Key facts

General waste sent to landfill takes up valuable space as well as producing several environmental and social problems. It means that any natural resources embedded within that waste are not recovered and can create greenhouse gas emissions, pollution and litter. Landfills can also be unpleasant for nearby neighbours due to potential odour and litter issues. By minimising general waste through source reduction and waste segregation, associated environmental impacts and social issues will be reduced.

4. Consider the best structural approach

Waste management responsibilities and actions need to span various departments to achieve effective agency-wide results. Therefore it is crucial that departments and individuals work together to achieve the best overall waste management outcomes for the healthcare facility.

In an effectively functioning waste and environmental program there should be a broad framework to bring decision makers and implementers together to bring about change. Each team/individual has a specific role but should communicate and work together to ensure common goals are met through the best structural approach. Each employee should have a specified role, support and leadership from above. A broad framework in striving to achieve the most effective structural approach should include:

- a senior executive with overall responsibility for efficient and effective waste management systems and practices
- a team of senior management with the authority to make high-level decisions on waste management
- a team of representatives from a variety of departments that largely have an operational responsibility in waste management
- a team of representatives that largely have an implementation responsibility in waste management.

Regardless of the structural approach in the healthcare agency, each employee in waste management should give consideration to:

- building a strong relationship with senior management who have the authority to make high-level commitments and decisions in waste management
- contributing to the development and effective functioning of a dedicated team with operational, communication and/or implementation waste responsibilities across a variety of departments
- being part of a network of healthcare employees managing waste across Victoria and sharing experiences
- engaging in other sustainability-related programs with external stakeholders that could produce wider sustainability benefits to the healthcare agency
- making best use of resources available through external stakeholders such as the Department of Human Services, Sustainability Victoria and the Department of Sustainability and Environment.

5. Strive for continual improvement

This guide outlines key tasks to ensure the development of efficient waste management systems in healthcare facilities. Healthcare facilities should strive for continual improvement of waste and environmental management. With the growing importance and recognition of environmental sustainability, the responsibilities associated with waste management will only expand and evolve.

Key facts

Incinerating clinical waste produces many harmful by-products such as dioxin, mercury, acid gases, heavy metals, particulates and other toxic organic compounds. By minimising clinical waste through source reduction and waste segregation, associated environmental impacts will be reduced.

Key resources

Waste operations and assessment

Australian Council on Healthcare Standards

www.achs.org.au

Waste data collection and reporting

Department of Human Services, *Instructions for completing Energy and Environmental Forms*

www.health.vic.gov.au/aims

See *AIMS 2008/2009 Public Hospital User Manual*, under Energy and Environment Reporting.

Department of Human Services, *Agency Information Management System (AIMS)*

www.health.vic.gov.au/aims

Agencies will be able to access the AIMS Online Entry System for reporting purposes once waste is uploaded into AIMS.

Waste education and training

Department of Human Services, *Waste Minimisation in Healthcare* kit www.dhs.vic.gov.au/environment/waste

Department of Human Services, *Capital Management Guidelines for Waste Management*

www.capital.dhs.vic.gov.au/WasteManagementGuideline

Waste minimisation

Department of Human Services, *Waste Management in Hospitals and Healthcare – Online Tool*

www.dhs.vic.gov.au/environment/waste

Sustainability Victoria, *ResourceSmart Government program*

www.resourcesmart.vic.gov.au/for_government/waste_and_recycling.html

A dedicated ResourceSmart Healthcare program is being developed but in the meantime this website has useful information on waste minimisation and recycling.

Consider the best structural approach

Practice Greenhealth

www.practicegreenhealth.org

Key facts

Health Care Without Harm

www.hcwh.org

Victorian Government, *Towards Zero Waste*

www.sustainability.vic.gov.au/www/html/1344-towards-zero-waste.asp