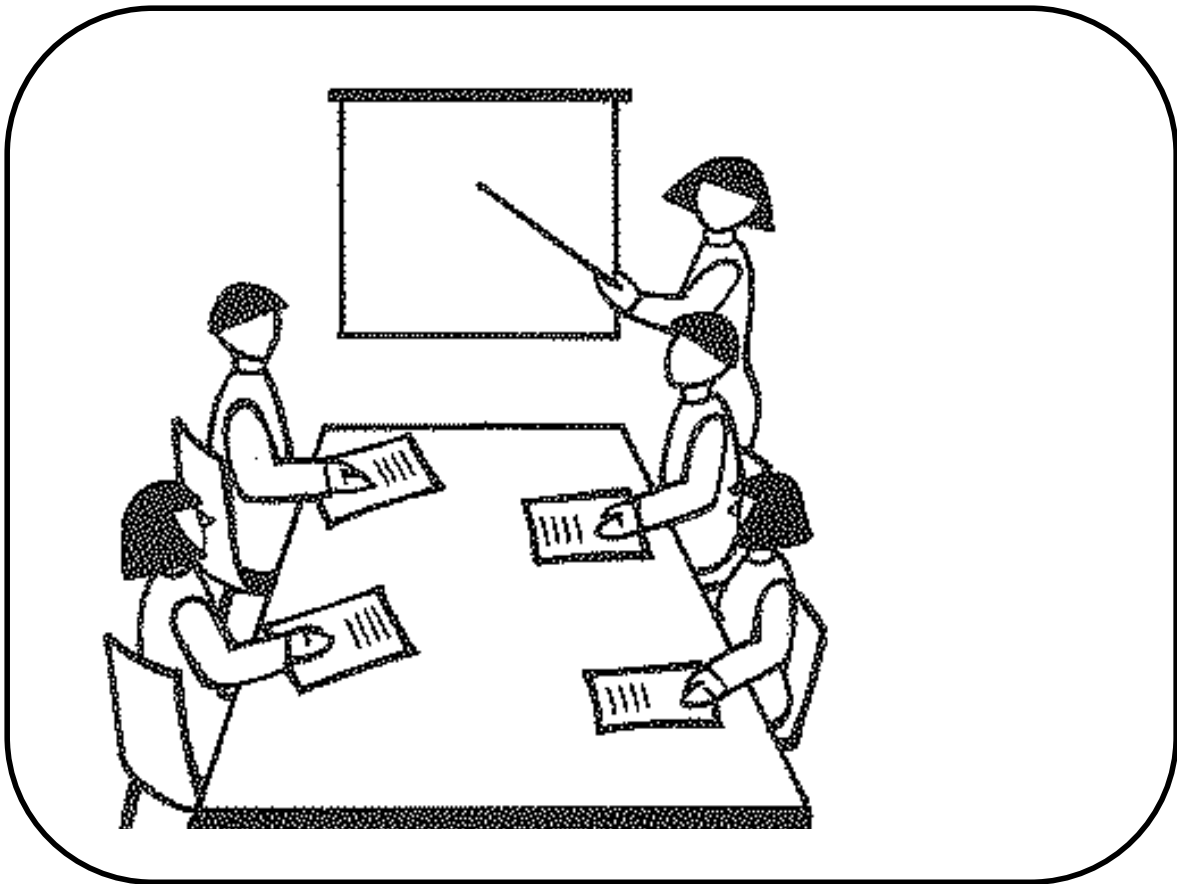


Guidelines on Sustainable Health Care Waste Management in Gauteng

MODULE 2: How to Organise a Health Care Waste Management System:

- Organising Steering Group
- Developing HCWM Plan
- Organising HCWM Team
- Conducting audit procedure
- Tender procedures
- Developing training programme



2. Module 2: How to organise a Health Care Waste Management System

2.1 Objectives of Module 2

The objective of this module is to equip management of health care facilities with tools required to develop plans for improving the standard of the HCWM system.

This module, furthermore, presents measures for:

Analysing the present state of the HCWM

Establishing a Steering Committee for preparing a plan for improving HCWM and monitoring its progress

Establishing a firm organisational structure, e.g. a HCWM Team, for carrying out the daily HCWM

Implementing “green procurement”

Developing Technical Specifications for waste handling equipment, services etc.

Implementing tender procedures for contracting service providers for collection, treatment and disposal of HCRW

Developing training programmes for the staff to improve their skills within HCWM

Conducting audits of the HCWM system.

The goal of this module is to make the individual HCFs able to introduce a planning system that currently will improve the HCWM of the facility.

2.2 Target Group for Module 2

The target group of this module includes management at health care facilities and other decision makers, involved in managing the health care waste and supervising those taking care of the daily HCWM. The target group for this Module also include staff responsible for procurement of equipment and articles for the daily operation of the entire health care facility. The module will not apply directly to operational staff.

2.3 Scope of Module 2

The module is focusing on the HCRW in larger health care facilities, public as well as private. However, the guidelines contained in this module can – with some modifications - also be applied to smaller health care facilities and other generators of HCRW. The last section on tender procedure is primarily directed towards private health care facilities, as the outsourcing of activities within public health care facilities is done by the Department of Health.

2.4 Reference to Other Modules

This Module should – like all the following modules – be read in conjunction with Module 1. For further information on ways and means to handle the HCRW in its different steps from generation at the health care facilities to its final disposal, reference is made to the following modules of these Guidelines.

Some legislation on HCW management will be of particular importance to the management of HC facilities, e.g. regulation concerning cleanliness and storage of HCRW as well as occupational health and safety. Regulation is dealt with in Module 1, including a summary of legislation that relates to HCW management.

2.5 How to organise a HCW Management System

This first section of Module 2 describes a procedure to set up a plan for improving the health care waste management at a health care facility to establish a firm organisation for carrying out the daily work.

The procedure described is following the general principles for implementing environmental management systems as described in the international standard for Environmental Management System, ISO 14001 (ref. 6).

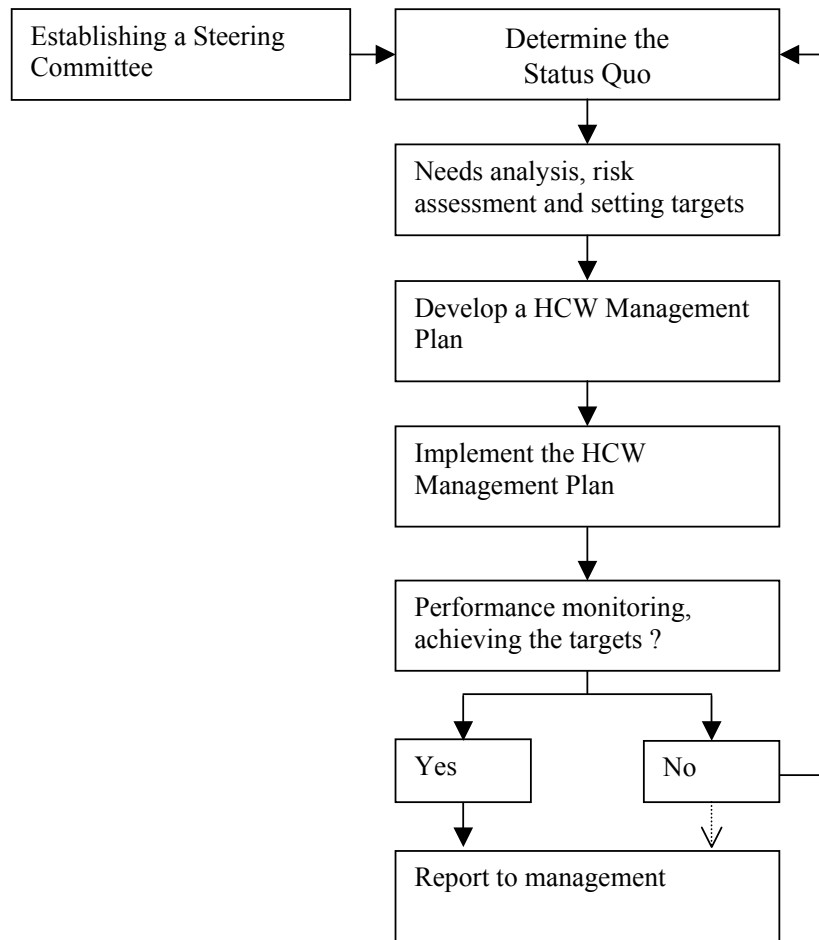
The environmental management systems normally covers all environmental aspects, while the present procedures, however, is focusing on the waste management aspects of health care facilities.

The following description is primarily applicable to large HC facilities, but will also be applicable for smaller HCF's, by allowing some modifications of the proposed procedures. Likewise it will also be appropriate for the organisations, taking care of the HCW downstream the HCFs, although the procedures have to be modified to a greater extend.

Due to the variance in duties and responsibilities for the individual stakeholders involved in the cradle-to-grave HCW management process, there is a need for allocation of responsibilities that is directly related to the HCRW management process. For that purpose a detailed and integrated system will be described, after which selected items will, in the form of a table, be allocated to the various stakeholders.

Setting up and implementing a HCW management plan for larger generators may include the following steps, as shown in Box 2.2 below.

Box 2.2: Setting up and implementing a HCWM Plan



Each of these steps of the HCWM Plan is described in further details below.

2.5.1 Determination of HCW Management Status Quo

The first requirement for setting up integrated HCW management systems is to make a detailed analysis of the Status Quo. Annexure 2.1 shows an example an audit form that can be used during the investigation of the Status Quo at a variety of health care facilities. Items that may not be appropriate for the particular facility to be investigated, can be omitted.

Although the survey will be adjusted to meet the needs of the particular health care facility, the following are typical areas to be reported on:

Size of Health Care Facility (HCF)

The size of the HCF in terms of the number of beds and average occupancy rate, average number of out-patients per month, number of samples analysed, or similar factors that will determine the size of the HCW stream, can be used as a basis to compare the HCRW generation rate at different times and with that of other similar facilities. In most health care facilities such data is already available from the HCF administration section as it is used in planning the facility's daily operation.

Waste Generation Rate

The HCRW categories and mass generated in accordance with the definitions provided in module 1. Where appropriate and possible, this information should reflect a breakdown by subdivisions like wards, departments etc. to get a better understanding of the way in which HCRW is generated within the larger health care facilities. Some of this data may already exist, as some HCF's remunerate the service providers according to the amount of HCRW collected. However, more detailed data on the waste stream may be required to improve the HCW management system and to cut down on the cost for disposal of HCRW.

The HCW Management Organisation and Resources

Another set of information that is important for the Status Quo is the resource allocation for the execution of HCW management functions within the health care facility, both in terms of human resources as well as material resources (equipment and materials). The names, levels, job descriptions and duties of each person involved in HCW management are to be listed, as well as the percentage time that each of these persons effectively spend on HCW management. Training activities to improve the awareness related to HCW management and infection control should be registered. As far as material resources are concerned, the capital infrastructure as well as the monthly operational costs is to be listed. It is finally important that the budget allocation (also in terms of the overall budget of the facility) is compared with the actual expenditure.

HCW Management Practices

Existing HCW management practices employed within the health care facility in terms of HCW segregation, containerisation, internal storage and transport, central storage, external transport, treatment and disposal, are to be evaluated and reported upon. Existing contracts with external service providers responsible for transport and treatment of HCRW should be listed. Other important aspects to note is for instance the level of compliance with legislation like for instance the relevant parts of the Occupational Health and Safety Act (NOSA). Finally, the existing organisation and procedures for infection control should be registered.

Documentation

Copies of relevant and important documentation like reports, minutes of meetings and notes taken during interviews and discussions held with affected staff members, is all to be included or referred to (as the case may be) in the status quo report, as such information may shed more light on a number of key elements in the HCW management process.

2.5.2 Needs Analysis and Setting Target

All information collected during the status quo analysis, is to be used to identify possible shortcomings that may exist with the present waste management system. This is to be done by comparing the status quo with these HCW management Guidelines, to determine the extent to which the existing system fulfils the requirements for sustainable HCW management.

A detailed analysis of strengths and weaknesses for HCW management in that particular facility is to be undertaken. This will among others include a risk assessment of aspects that are of particular importance within the health care sector, e.g. needle stick incidences. Weaknesses are, once identified and listed, to be converted into strengths by identifying the root cause of any particular weakness, and by identifying alternative ways to address such problems.

All needs identified are to be addressed and target for their fulfilment are set. The activities to fulfilling the needs make up the Plan for developing a sustainable HCW Management System (from here onwards referred to as "the Plan") for that particular health care facility.

2.5.3 Establishment of a HCW Management Structure

Establishment of a Steering Committee

For the development, implementation, execution and monitoring of a HCW Management Plan, tailor made for the health care facility, a certain Steering Committee (PG) could be established, that would include the following representatives:

The Management of the HCF (e.g. Technical Manager)

The Matron

The Waste Management Officer

Occupational Health and Safety Officer

The Infection Control Sister/Officer

Chief Pharmacist

Radiation Officer

Departmental heads.

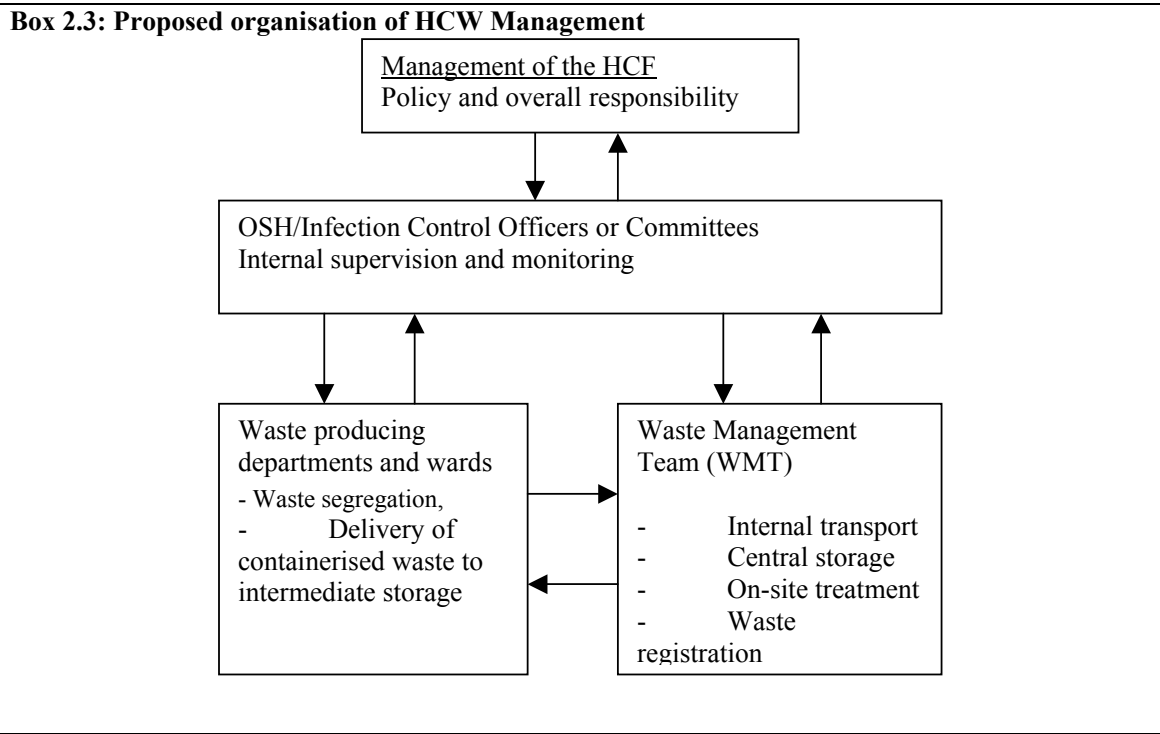
In cases where above-mentioned officers are represented in the Occupational Health and Safety Committee (OSHC) or the Infection Control Committee (ICC) it would be appropriate to let one of the latter committees be responsible for implementing the HCW Management Plan.

Establishment of a HCWM Team

Good administration and organization, together with the provision of the required resources is vitally important for the rendering of sustainable HCW management services at any HCF. The final requirement is of course a well-trained and well-informed workforce that is committed to ensure the successful implementation of an improved HCW management system.

Most HCF's already have a HCW management organisation, but it may not be a single unit. Therefore, a HCW Management Team (WMT) could be established to take care of the daily waste management. It is important that the Team is given clear tasks and responsibilities as well as clear understanding is made with those departments they will have to serve in terms of which types of waste they have to collect and when.

Although it will ultimately depend on the size and particular needs of the health care facility for which it is to be implemented, a typical HCW Management Team for a large HCRW generator could be structured as illustrated in Box 2.3 below.



The responsibilities of the Waste Management Officer and each of the above mentioned Steering Committee members are briefly described in the following boxes (Box 2.4 – 2.10).

Box 2.4: Responsibilities for Waste Management Officer:

The Waste Management Officer (once appointed), will be directly responsible for implementation of the day-to-day execution of the HCW Management and as such he/she will be head of the HCWM Team. The Waste Management Officer should have direct access to all sections of the hospital where HCW is generated and should report directly to the (technical) manager of the hospital/clinic, superintendent, the Matron or similar, depending on the local situation. The specific duties and responsibilities are:

To liaise with the affected members of the Steering Committee on the responsibilities of the various parties involved in HCW management, as well as ensure clear division of responsibilities between the HCWM Team and other departments of the HCF;

Supervise HCWM Team, and ensure that responsibilities are clearly defined and divided among the team members, as well as that they receive sufficient instruction and training;

To ensure through communication with the heads of the various departments that segregation of the waste is only done at source, that only containers sealed in the correct manner are handled by hospital attendants and ancillary staff, and that manual handling of HCRW containers is limited;

To liaise with the Procurement Officer to ensure that the required infrastructure, equipment and materials are provided for the effective execution of the HCW management system;

To ensure that the requirements of the OHS Act are complied with and that Personal Protective Equipment (PPE) is supplied and utilized by affected workers;

To liaise with the managers of nursing, medical and laboratory staff to ensure that concerns, problems etc. are being addressed and that staff is being trained and kept aware of correct HCW management procedures;

To monitor, report on and liaise with relevant Heads of Departments on effectiveness of HCW segregation, containerisation and internal storage of HCW;

To manage and directly supervise the daily internal collection and transport of HCW containers from the internal storage areas to the central waste storage area, and that full containers are immediately replaced with the correct new/sterilized containers;

To prevent dumping or unauthorised storage of HCW containers in areas not designated for the storage or disposal of HCW;

To ensure and supervise the correct use of the central HCW storage area and that HCW is not stored for periods longer than what is specified for the particular conditions;

To coordinate and supervise any HCRW treatment activities that may be undertaken on site, and to ensure that the residue from the treatment process is disposed of on an appropriately permitted waste disposal site;

To liaise with the Chief Pharmacist and Radiation Officer to obtain first hand knowledge on the procedures and equipment required for the handling, treatment and disposal of pharmaceutical, chemical and radioactive HCRW;

To liaise with the contractors for external transport of waste to ensure clear understand between the two parties of the conditions for delivery and collection of waste;

To verify the credibility of contractors that are appointed to render any HCW management activities, and to undertake ongoing inspections on any external facilities used for the treatment/disposal of HCW;

To monitor the effectiveness and appropriateness of the procedures and equipment used for the loading and transport of HCW both onsite as well as offsite;

To monitor the effectiveness with which HCRW is treated and the residue disposed of by external contractors.

To ensure that emergency procedures are available, information on the emergency procedures are disseminated and that the required emergency equipment is available.

To investigate and report on any incidents.

Box 2.5: Responsibilities for Head of Facility.

The Head of the Facility, as the person ultimately responsible for the environmentally sound and safe management of HCRW, should:

- Appoint staff members to serve on the Steering Committee;
- Appoint a HCW Management Officer, and ensure that a HCWM Team with clear tasks and responsibilities is established;
- Ensure that the HCW Management Plan remains updated;
- Allocate sufficient human and material resources for effective implementation and maintenance of the HCW Management Plan;
- Incorporate monitoring procedures in the HCW Management Plan;
- Temporary reassign and immediately appoint a successor for any key member that may resign;
- Ensure adequate and appropriate information and training for all affected staff members.

Box 2.6: Responsibilities for Heads of Departments.

The Heads of Departments within the health care facility to whom certain responsibilities may be delegated, should be responsible for:

- Ensuring that all health care professionals are familiar with the segregation and storage requirements and that the required HCW management standards are adhered to;
- Liaise on with the Infection Control Officer and HCW Management Officer to ensure that procedures are adhered to, that the required standards are maintained, and that the necessary corrective action is taken in the event of non-performance by any staff members;
- Ensuring that appropriate training is provided to staff members within their departments so they are aware of the importance of proper HCWM;
- Motivating staff members to comply with the requirements laid down for effective HCW management.

Box 2.7: Responsibilities for the Occupational Health and Safety Officer/Infection Control Officer.

The OSH/IC Officer will be the most senior person directly involved in HCW management and will have the duty and responsibility to monitor and audit the execution of the HCW management plan. The responsibilities for the OSH/IC Officer inter alia includes the following:

- Identifying training requirements according to staff grade and occupation;
- Organising and supervising staff training on HCW Management;
- Liasing with the relevant management structures to coordinate the required training.

Box 2.8: Responsibilities for Chief Pharmacist and Radiation Officer.

The Chief Pharmacist and Radiation Officer have special responsibilities due to the specialised nature of the waste generated in their areas of jurisdiction. Their respective roles and responsibilities are:

- To liaise with Department Heads, the Waste Management Officer, the Matron and Hospital Manager to advise on the ways in which pharmaceutical/radioactive HCRW is to be handled, treated and disposed of in a safe and environmentally sound manner complying with the relevant legislation;
- To coordinate continuous monitoring on the procedures followed for safe handling, treatment and disposal of pharmaceutical/radioactive HCRW;
- To ensure that appropriate training is provided to personnel dealing with pharmaceutical/radioactive HCRW;
- To ensure correct handling, treatment and disposal of genotoxic waste.

Box 2.9: Responsibilities for Matron or Senior Nursing Officer.

The Matron or Senior Nursing Officer as the most senior operational member of staff represented on the Steering Committee. The Matron's HCW management related duties are:

- To ensure appropriate HCW management training for all health care professionals, hospital attendants and ancillary staff, in the form of introductory training as well as refresher training;
- Liaise with the Department Heads to ensure coordination of training as well as to identify and address any HCW management related problems that may exist in the respective departments;
- Liaise with the HCW Management Officer and other HCW specialist (Chief Pharmacist and Radiation Officer) to devise solutions to any problems identified and ensure effective implementation of the required HCW management measures.
- Ensure coordination of HCWM with the current activities within infection control.

Box 2.10: Responsibilities for Procurement Officer.

The Procurement Officer will be responsible for the supply of equipment and materials required for HCW Management. The particular duties are:

- To liaise with the Waste Management Officer to ensure continuous and timely supply of the correct equipment and consumables required, without having a build-up of excess materials in the stores;
- To undertake quality control checks on materials and services (e.g. outsourced services) delivered and to have equipment and materials replaced that does not meet the required standards;
- To investigate the availability and cost effectiveness of new waste management products on the market;
- To investigate the availability and cost effectiveness of environmentally friendly products ("green procurement")
- To investigate the market of service providers for HCW transport, treatment and disposal
- Investigate out-sourcing of tasks within HCWM and take care of tender procedures.

2.5.4 Development of a HCW Management Plan

The HCW Management Plan is a description of the activities to be implemented for improving the management of HCW and will primarily be based on the findings of and needs identified during the HCW Status Quo analysis for that particular facility. For each activity a time schedule and a possible deadline should be indicated.

Compiling of the draft HCW Management Plan will be the responsibility of the Waste Management Officer, who is to circulate the document to other members of the Waste Management Steering Committee for evaluation, commenting and discussion.

It is proposed that the Waste Management Plan includes the information summarised in Box 2.11 below. Annexure 2.2 includes an example of a template for the development of a Waste Management Plan.

Box 2.11: Information to be included in the Waste Management Plan:

- Information on HCW categories generated
- If possible, estimated generation rates for each category (optional);
- Information on the existing human and material resources available and utilised for HCW management;
- Firm Plan for implementation of green procurement, including potentials for substitution of materials/equipment, targets and time schedule;
- Firm Plan for HCW reduction, reuse and recycling, including potential items, targets and time schedule;
- The requirements for improving HCW segregation and containerisation to meet the needs of the particular facility including plan for training and information on the issue as well as targets and time schedule;
- Plan for implementing a waste labelling and registration system;
- Reference to the applicable local, provincial and national standards, guidelines and legislation on HCRW management
- The need for in-house guidelines and standards that is related to HCW Management
- The technical specifications for interim storage facilities at source as well as operational procedures for interim storage;
- The technical specifications and operational procedures for onsite handling, transport and storage in a central storage area;
- Identification and evaluation of possible opportunities for outsourcing of HCRW management services
- Identification and evaluation of the most technically and financially feasible treatment options for the particular categories of HCRW generated;
- Requirements for record keeping and reporting on various aspects related to HCW management, with particular emphasis on the requirements for the HCWIS;
- Training requirements and procedures to be followed for implementation of training programmes.
- Comparison between estimated and actual costs of HCW management for the particular facility, as well as a comparison with the unit costs incurred by similar facility;
- A draft strategy and an action plan, including targets and time schedule for the various activities, required for implementation of the HCW Management Plan;
- Procedures for monitoring and revising the HCW Management Plan
- Information on the managerial outline, lines of communication, as well as contact details of the responsible persons that can be contacted in the event of an emergency.

Once the draft HCW Management Plan has been compiled, it is to be circulated to all members of the Waste Management Team, who should, after consultation with the affected staff from their respective departments, submit written comments on the document. After considering the comments, the Steering Committee is to discuss the document and reach agreement on the most effective way the upgrading of the HCWM is to be implemented. Where consensus cannot be reached even after specialist input was obtained, the final decision will be with the Head of the Hospital that will ultimately be the person responsible for the duty-of-care required in terms of the South African National Waste Management Strategy (NWMS, ref. xx).

Input from officials of the local authority will be advantageous, and where any of the waste management services are already outsourced, it is further important that the affected waste management contractor make input to the Waste Management Plan.

Once the consultation process is completed, the Waste Management Officer should finalise the waste management plan for official approval, circulation and implementation by the senior management of the health care facility. It is to be noted that the HCW Management Plan should be a living document that is to be updated whenever there is a change in the physical conditions or selected technology that will justify amendments to the plan. It is to be expected that there is a need to update the Plan with relatively small intervals in the beginning and later on with larger intervals.

2.5.5 Implementation of the HCW Management Plan

As the party responsible for duty-of-care of HCW generated within the facility, the Head of the Hospital is responsible for the implementation of the HCW Management Plan, see Box 2.12 below.

Box 2.12: Steps required for implementation of HCW Management Plan.

The following are the suggested steps for implementation:

Distribute the interim HCW Management Plan to all supervising staff responsible for HCWM and related tasks. This is to be done by the HCW Management Officer, in consultation with the Steering Committee;

Ensure that the job descriptions for persons responsible for the implementation and execution of the HCW Management Plan clearly defines their respective duties, and that this is communicated to such staff members;

Ensure that the formal contracts, detailing the tasks and responsibilities for activities that are to be outsourced, are in place and that the contractor's role and responsibilities are clearly defined in the HCW Management Plan;

Undertake a broad awareness campaign amongst affected employees on all levels, not only to introduce the HCW Management Plan, but also to highlight the roles and responsibilities of the various stakeholders. This is also providing an opportunity to address questions put forward for clarity;

Task specific training programmes on the equipment to be used, is to be initiated on the different levels for all staff members affected by HCW Management. Attendance of training should be compulsory and the students are to be examined to ensure effectiveness of the training;

On arrival of any additional/new equipment ordered for implementation of the HCW Management Plan as well as on commencement of any outsourcing contracts that are entered into, implementation of the final HCW Management Plan can commence;

The HCW Management Plan is to be reviewed annually, or whenever conditions at the health care facility change to such an extent that a revision of the Plan may be justified.

2.5.6 Performance Monitoring, Reporting and Implementation of Remedial Measures

Throughout the process, it is important that the success of the HCW Management Plan implementation be monitored and reported upon. Wherever problems are identified, the required remedial measures are to be implemented and the effect thereof monitored. The monitoring and reporting procedures, described in Box 2.13 below, are to be implemented.

Box 2.13: Steps required for Performance Monitoring, Reporting and Implementation of Remedial Measures for HCW Management plan.

The following are the suggested steps for Performance Monitoring, Reporting and implementation of remedial measures:

A formal audit covering the full waste stream from generation to central storage/collection and which are jointly undertaken by the Waste Management Officer and the Occupational Health and Safety/Infection Control Officer, is to be undertaken on e.g. a monthly basis. Reports on these formal audits, also including recommendations on ways in which the problems can be rectified, are to be copied to all members of the Steering Committee, and circulated to the senior personnel in the affected departments/wards, or contractors where services are outsourced;

A formal audit on the treatment and disposal (as well as transport where offsite treatment facilities are used), is to be undertaken by the waste management officer and the WM/OHS/IC Officer on a three monthly basis;

Informal follow-up audits are to be undertaken within two weeks from the date on which audit reports on the formal audit are distributed to ensure compliance or positive action regarding required remedial measures;

Discussion on audits should be placed on the agenda to form part of all Steering Committee meetings; Incentives and possibly penalties/corrective actions should be used to ensure compliance by both internal as well as external personnel.

2.6 Waste Minimisation, Green procurement and Environmental Management

There are a number of alternative procedures and methodologies available that will reduce the mass of HCRW requiring treatment, whilst ensuring that the waste will cause less environmental problems in managing it. These procedures and methodologies include:

Waste minimisation
Reuse
Green Procurement.

It will be the responsibility of the management and the Steering Committee of the HCF to ensure that the above measures is considered in connection with the HCWM Plan, while it primarily will be the responsibility of the health care professionals and workers, in cooperation with the procurement department, to introduce the new ideas in the daily work. Hence, more details are included in Module 3 on waste generation, segregation and containerisation, as well as in Annexure 3.1.

Waste Minimisation represents all measures required to prevent waste from being generated e.g. through more effective planning of work that will result in the correct use of appropriate products. Another way in which waste minimisation can be achieved is through effective segregation of HCW, thus reducing the amount of HCRW that requires treatment.

Reuse stands for renewed use of reusable rather than the once-off use of disposable products regularly used at health care facilities, e.g. different glassware such as petri dishes, linen, bandages, etc. Reuse of different products usually requires cleaning / sterilisation of the items before being reused. Through

Careful investigation, a substantial number of disposable products used at health care facilities could be replaced with reusable products. However, new initiatives have to be considered against the background of possible risks of infection.

Green Procurement is the selection of environmentally less hazardous materials in the procurement process and products that generates less waste during and after use. This could for instance include procurement of mercury free thermometers, PVC-free plastic products or the substitution of plastic products that contains heavy metal dyes or colouring. Products with only the minimum packaging required would further result in less waste being generated. New initiatives have to be balanced in relation to the functionality and cost effectiveness of the alternative products.

Finally, the introduction of a complete environmental management programme, like for instance the international standard ISO 14001 (ref. 6), can be considered. Such environmental management programmes do not only include waste management, but all environmental aspects related health care facilities, including wastewater management, emissions from energy production, energy savings, etc.

The full range of options for waste minimisation, re-use of products, the introduction of “green-procurement” and implementation of environmental management system are summarised in the Box 2.14 below.

Box 2.14: Waste minimisation, green procurement and environmental management options (for further details, see Annexure 3.1)

Waste minimisation

Options:

Procedures to reduce the generation of waste;
Effective segregation of HCW;

Increased recycling

Option:

Use of reusable products where appropriate;
Use of waste products for alternative applications
Recyclable materials separated from HCGW.

Introduce “green procurement”

Options:

Substitution of PVC containing products;
Substitution of heavy metal containing products, e.g. Hg-free thermometers;
Non-heavy metal containing dyes and colourings;
Substitution of supplies being excessively packaged;
Substitution of products with disposable containers.

Environmental management systems.

Options:

Introduction, execution and monitoring of Environmental management systems.

2.7 Tender Procedures for Contracting Service Providers

An important point in the establishing the sustainable HCWM system at a HCF is to get the best service at the best price. This can be ensured through selecting service providers through a tender procedure. Such tender procedure will normally include the steps shown in Box 2.15 below.

Box 2.15: Different steps of the tender procedure

Selection of tender strategy in consultation with end users;
Identification of services to be outsourced
Development of tender materials that will address the needs of end users;
Appoint tender adjudication committee;
Formulate tender adjudication criteria;
Call for interest (pre-qualification tender);
Selection of qualified bidders;
Invitation to main tender by pre-qualified tenders (submitting tender materials);
Adjudicate once tenders officially closed;
Select most suitable service provider based on tender adjudication criteria, in consultation with tender adjudication committee;
Negotiate minor terms of contract with successful bidder;
Appoint successful contractor;
Roll-out of contracts;
Regularly performance monitoring and contract management.

The first step in outsourcing certain activities is to establish a strategy for how the outsourcing should take place. Such a strategy should among others include considerations on:

What is the overall purpose of outsourcing (cost reduction, improved service etc.)
Which activities should be outsourced and how does it fit into other plans of the HCF
Who should be responsible for the outsourcing and how should it be organised.

The second step is to identify and describe the service/activity that should be outsourced. It is important to describe the activity precisely, and to ensure that the consequences of outsourcing for other parts of the organisation has been thoroughly evaluated.

The third step is to appoint tender adjudication committee. This committee has to set up the adjudication criteria, and later to evaluate the bids in relation to the criteria.

The fourth step is to prepare the tender materials, that includes the description of the services and the conditions for bidding and for adjudication of the submitted proposals.

The fifth step is to call for interest: The first step in approaching possible bidders is the announce the need for services, e.g. through advertising in newspapers that interested parties can express their interest in submitting a proposal to the HCF in this or that way (pre-qualification tender)

Based on the expression of interest the tender adjudication committee will evaluate the incoming expression of interests to select those companies that is considered to be capable of conducting the service.

The sixth step is to invite those parties that are selected for the bidding. They will then receive the tender materials.

In the seventh step the incoming proposals will be received within a certain deadline and studied by the tender adjudication committee. The proposals will be opened and the committee will evaluate them according to the criteria established.

Based on the criteria, the winner will be selected by the tender committee.

When the service provider has been selected through the tendering procedure the final step is to negotiate and sign the contract. It is further important that the outsourcing organisation allocate time and resources regularly to monitor the received services, to ensure that service is carried out according to the conditions agreed upon.

2.8 Developing Training Programmes

Another important point for a well functioning waste management system is information, training and instruction of the employees, especially those with specific tasks within the waste management unit. Hence, all doctors, nurses, assistant nurses and the relevant general workers should be trained and informed about the correct HCW management practises.

Table 2.1 below contains suggestions for items to be introduced to the different groups of employees through training programmes or the like.

Table 2.1: Training needs - proposals for training programmes

Topics	Waste Management Unit (WMU)	Responsible at department level	Nurses, ass. nurses, workers	ICC, physicians
Waste Management				
Definition of health care waste categories	Classroom	Classroom	On-the-job	Classroom
Health, safety & environmental impacts	Classroom	Classroom	On-the-job	Classroom
Organisation of HCWM	Classroom	Classroom	On-the-job	Classroom
Procedures for HCWM (Code of Practice)	Classroom	Classroom	On-the-job	Classroom/Print
Instructions concerning segregation	Classroom	Classroom/On-the-job	On-the-job/Print	Classroom
Instructions concerning storage	Classroom/On-the-job	Classroom	Print	
Instruction concerning treatment	Classroom/On-the-job			
Instructions concerning external transport	Classroom/On-the-job			
Auditing of HCWM	Classroom	Classroom		
Legislative aspects of HCWM	Classroom	Classroom		Classroom
Infection Control				
Sources of infection hazards	Classroom	Classroom	On-the-job	Classroom
Principle for infection control	Classroom	Classroom	On-the-job	Classroom
Personal hygiene	Classroom/On-the-job	Classroom/On-the-job	On-the-job	

Notes: Classroom: Class room training
On-the-job: On the job training and information

Print: Printed information materials

It is important that the training is considered as a current activity, not only to ensure that new staff members are receiving the necessary information and training, but also to ensure that all the staff maintain a high level of awareness.

2.9 Annexure 2.1: Example of an Audit form for HCW Generators.

AUDIT FORM FOR HEALTH CARE WASTE GENERATORS

Auditor's Information:

The following audit form is generic and could be used to audit most of the Health Care Waste (HCW) generators in Gauteng. It is however important to recognise that there will be certain elements of audits that will be unique for any particular facility to be audited and some alterations to the forms may therefore be required.

Due to the wide spectrum of potential HCW generators to be audited, the following audit form is intended to cover the full spectrum, allowing users the opportunity to make deletions where required, rather than to add items to the audit. The audit is further subdivided in a way that will cover both the initial status quo investigation, as well as the routine audits. Once the status quo information is electronically captured, it will be printed on all future audits forms, only requiring the confirmation of the validity thereof by the auditor.

Where onsite HCRW treatment facilities are used, the audit thereof will be undertaken according to the generic audit forms to be developed for HCRW treatment facilities.

Section:	Description:	Page Number:
1	Audit Team Details.	
2	Health Care Facility Classification Details.	
3	HCW Management Policies & Procedures.	
4	HCW Generation.	
5	Financial Recording and Auditing.	
6	HCW Management Equipment and Infrastructure.	
7	Internal HCW Management.	
8	Occupational Health and Safety.	
9	HCW Collection and Transport.	
10	HCW Treatment / Disposal.	
11	General comments and recommendations	

SECTION 1 – AUDIT TEAM DETAILS

1.1 Lead Auditor Details:	Auditor Name:	
	Representing:	
	Tel Number:	
	Fax Number:	
	Cel Number:	
	Email address:	

Signature

1.2 Audit Team Members:	Name (1):	
	Representing:	
	Tel Number:	
	Fax Number:	
	Cel Number:	
	Email address:	

Signature

Name (2):	
Representing:	
Tel Number:	
Fax Number:	
Cel Number:	
Email address:	

Signature

Name (3):	
Representing:	
Tel Number:	
Fax Number:	
Cel Number:	
Email address:	

Signature

1.3 Audit Undertaken:	Date:	
	Time:	to

SECTION 2 – HEALTH CARE FACILITY CLASSIFICATION DETAILS

2.1 Facility Details:	
Facility Name:	
Former Name (If applicable):	
Physical Address:	
	Code: <input type="text"/>
Postal Address:	
	Code: <input type="text"/>

2.2 Contact Details:	
Contact Person: Prof./Dr./Sr./Mr./Ms.	
Tel Number:	
Fax Number:	
Cel Number:	
Email address:	

2.3 Community Served:	
Urban (City)	1
Urban (Town)	2
Rural	3
Informal Settlement	4

Note: Please tick the appropriate box.

2.4 Type of Facility:		Classification:
Hospital	1	Category 1
Clinic	2	Category 1
Blood Bank	3	Category 2
Laboratory	4	Category 2
Medical Practitioner	5	Category 3
Veterinary Surgeon	6	Category 3
Dentist	7	Category 3
Medical Specialist	8	Category 3
Pharmacy	9	Category 4
Pharmaceutical Industry	10	Category 4
Old Age Home	11	Category 5
Hospice	12	Category 5
Mortuary (Independent)	13	Category 5

2.5 Affiliation / ownership:	
National Government	1
Provincial Government	2
Local Government	3
Private (Group)	4
Private (Independent)	5
Others (Please Specify)	6

2.6	Specialist Activity:
2.6.1	Category 1 Facilities
2.6.1.1a	Hospital Type:
General Hospital	1
Training Hospital	2
Central Hospital	3
Regional Hospital	4
District Hospital	5
Sub-District Hospital	6
Mine Hospital	7
Military Hospital	8
Special Infectious Hospital	9
Psychiatric Hospital	10
Rehabilitation Hospital	11
Chronic Care Hospital	12
Other (Please specify)	13

2.6.1.1.b	Clinic Type:
Day Surgery	1
Primary Health Care Clinic	2
Dental Clinic	3
Industrial Clinic	4
Step Down Clinic	5
TOP Clinic	6
Sick Bays	7
Examination Rooms	8
Human Resource Centre	9
Mobile Clinic	10
Ante-natal clinic	11
Other (Please specify)	12

2.6.1.2a	Types of Wards
Cardio-thoracic	1
Ear, nose & throat	2
Eye Surgical	3
Gynaecological	4
ICU – Surgical	5
ICU - Cardiology	6
ICU - Neurology	7
Labour	8
Maternity	9
Medical	10
Neurological	11
Neuro-surgical	12
Orthopaedic	13
Paediatric	14
Plastic Surgical	15
Psychiatric	16
Surgical	17
Urological	18
Vascular surgical	19
Other (Please specify)	

2.6.1.2b	Types of Theatres
Cardio-thoracic	1
Dermatology	2
Ear, nose & throat	3
Eye	4
Gynaecology	5
Maxillo-facial	6
Multidisciplinary	7
Nephrology - kidney	8
Oncology	9
Plastic surgery	10
Pulmonology	11
Urological	12
Vascular	13
Other (Please specify)	14

2.6.1.2c	Types of Dept's.
Accounting	1
Administration	2
Bio kinetic	3
Blood bank	4
Central sterilisation	5
Dieticians	6
Doctors suites	7
Filing / Archives	8
Hospital management	9
Housekeeping & Cleaning	10
Kitchen	11
Maintenance	12
Mortuary	13
Nuclear Medicine	14
Occupational therapy	15
Orthotic	16
Out-patients	17
Pathology	18
Pharmacology	19
Physiotherapy	20
Psychology	21
Radio-therapy	22
Rehabilitation	23
Security	24
X-Ray	25
Other (Please specify)	26

2.6.2	Category 2 Facilities		
2.6.2.1a	Blood Bank Type:	2.6.2.1b	Laboratory Type:
Mobile blood donation clinic	1	Pathological	1
Permanent blood donation clinic	2	Research	2
Hospital blood bank	3	Pathology	3

Central blood bank	4	Biochemistry	4
OPTIONS TO BE LISTED		Microbiology	5
		Haematology	6
		Histology/Sistology	7
		Nuclear Medicine	8
		Serology	9
		OPTIONS TO BE LISTED	

2.6.3 Category 3 Facilities			
2.6.3.1a Medical Practitioner Type:		2.6.3.1b Veterinary Services Type:	
Independent Practitioner	1	Private Veterinary Surgeon	1
Conglomerate of Practitioners	2	Public Veterinary Surgeon	2
Medical Care Centres	3	Veterinary Research Centre	3
OPTIONS TO BE LISTED		OPTIONS TO BE LISTED	
2.6.3.1c Dentist Type:		2.6.3.1d Medical Specialist Type:	
Independent Practitioner		Independent Practitioner	
Conglomerate of Practitioners		Conglomerate of Practitioners	
Medical Care Centre		Medical Care Centre	
OPTIONS TO BE LISTED		OPTIONS TO BE LISTED	

2.6.4 Category 4 Facilities			
2.6.4.1 Pharmaceutical Industry Type:		2.6.4.1b Pharmacy Type:	
a			
Pharmaceutical Manufacturer	1	Medicine Dispensary	1
Pharmaceutical Importer	2	Pharmacy	2
Pharmaceutical Distributor	3	Hyper Pharmacy	3
OPTIONS TO BE LISTED		OPTIONS TO BE LISTED	

2.6.5 Category 5 Facilities			
2.6.5.1 Old Age Home Type:		2.6.5.1b Hospice Type:	
a			
Without Health Care Facilities	1	Cancer Care Centre	1
With Health Care Facilities	2	OPTIONS TO BE LISTED	
Chronicle Illness Facilities	3		
OPTIONS TO BE LISTED			

2.7 Infrastructure & Staff	
2.7.1a	Category 1 Facility Infrastructure

2.7.1b	Category 1 Facility Staff
--------	---------------------------

	No.	% Use
Wards		
Theatres		
Departments		
Laboratories		
Number of Beds - Formal		
Number of Beds - Informal		
On-site HCRW treatment plant		
Average in-patients per month		
Average out-patients per month		
Number of surgeries per month		
Kitchen		
Canteen		
Floor area of facility (m ²)		
Stand area (ha)		
Storeys / floors		
Intermediate HCW stores		
Central HCW stores		
Distance to cent. HCW store-m		

	HCW Job Descript. Available ?	No. Full time	No. Part time	No. Con - tract
Specialists				
Doctors				
Doctors in training.				
Sisters				
Senior nurses				
Nurses				
Nurses in training				
Nursing assistants				
Porters				
Management				
Administration				
Kitchen				
Laundry				
Housekeeping / cleaning				
HCW Internal collection				
HCRW on-site treatment				
Garden maintenance				
Technical maintenance				
Others (please specify)				

2.7.2a Category 2 Facility Infrastructure		
	No.	% Use
Research laboratories		
Test and control laboratories		
Blood transfusion rooms		
Blood storage rooms		
Distance to cent. HCW store (m)		
Floor area of facility (m ²)		
Stand area (ha)		
Storeys / floors		
Intermediate HCW stores		
Central HCW stores		
Distance to cent. HCW store (m)		

2.7.2b Category 2 Facility Staff				
	HCW Job Descript. Available?	No. Full time	No. Part time	No. Con - tract
Scientists				
Laboratory technicians				
Gen laboratory assistant				
Cleaners				
HCW management staff				
Others (Please specify)				

2.7.3a Category 3 Facility Infrastructure		
	No.	% Use

2.7.3b Category 3 Facility Staff				
	HCW Job Descript. Available?	No. Full time	No. Part time	No. Con - tract

Consulting rooms		
Mini theatres		
Overnight facilities		
Floor area of facility (m ²)		
Stand area (ha)		
Storeys / floors		
Intermediate HCW stores		
Central HCW stores		
Distance to cent. HCW store-m		

Specialists				
Doctors				
Dentists				
Veterinary surgeons				
Medical assistants				
General assistants				
Cleaners				
HCW management staff				
Others (Please specify)				

2.7.4a Category 4 Facility Infrastructure		
	No.	% Use
Pharmaceutical factories		
Pharmaceutical stores		
Pharmaceutical dispatch areas		
Pharmaceutical retail areas		
Floor area of facility (m ²)		
Stand area (ha)		
Storeys / floors		
Intermediate HCW stores		
Central HCW stores		
Distance to cent. HCW store (m)		

2.7.4b Category 4 Facility Staff				
	HCW Job Descript. Available ?	No. Full time	No. Part time	No. Con - tract
Pharmacists				
Management				
Administration				
Sales				
Cleaners				
HCW management staff				
Others (Please specify)				

2.7.5a Category 5 Facility Infrastructure		
	No.	% Use
Single rooms		
Double rooms		
Wards		
Floor area of facility (m ²)		
Stand area (ha)		
Storeys / floors		
Central HCW stores		
Distance to cent. HCW store-m		

2.7.5b Category 5 Facility staff				
	HCW Job Descript. Available ?	No. Full time	No. Part time	No. Con - tract
Nursing staff				
Management				
Administration				
Cleaners				
HCW management staff				
Others (Please specify)				

SECTION 3 – HEALTH CARE WASTE MANAGEMENT POLICIES & PROCEDURES

3.1 Existence of Health Care Waste Management Policies & Procedures							
	Internally developed	Centrally developed	NOSA	SABS	ISO 14001	OHS act compliant	Gauteng HCW policy compliant
Internal HCW management policy							
Internal HCW management procedures							
Occupational health procedures							
Occupational safety procedures							
Environmental standards							
Emergency procedures							
Medical waste management plan							

3.2 Revision of Health Care Waste Management Policies & Procedures				
	Date of latest revision	Frequency of revision	Party responsible for revising	Party responsible for approval of revision
Internal HCW management policy				
Internal HCW management procedures				
Occupational health procedures				
Occupational safety procedures				
Environmental standards				
Emergency procedures				
Medical waste management plan				

3.3 Dissemination of Information for Health Care Waste Management Policies & Procedures				
	Circulation of written documentation	Distribution of written documentation	Induction training	Refresher training

Internal HCW management policy				
Internal HCW management procedures				
Occupational health procedures				
Occupational safety procedures				
Environmental standards				
Emergency procedures				
Medical waste management plan				

3.4 Target Groups for Dissemination of Health Care Waste Management Policies & Procedures

	Chief Executive Officer	Dept. Heads	Matron/ Senior Nursing Officer	Hospital Engineer	Infection Control Officer	Pharmacist	Laboratory Supervisor	Safety Coordinator	Cleaners / HCW worker
Internal HCW management policy									
Internal HCW management procedures									
Occupational health procedures									
Occupational safety procedures									
Environmental standards									
Emergency procedures									
Medical waste management plan									

3.5 Existence of Health Care Waste Management Strategic Plan

	Internally developed	Centrally developed	Senior management	Middle management	Health care professionals	Infection control

Strategic plan development						
Strategic plan information dissemination						
Strategic plan implementation						
Compliance monitoring						
Strategic plan revision and updating.						

SECTION 4 – HEALTH CARE WASTE GENERATION

4.1 Average monthly HCW generation rates over the previous year.					
Health Care Risk Waste	HCW generated (kg/litre)	HCRW treated on-site (kg/litre)	HCRW treated off-site (kg)	Discharged to sewer (litre)	Radioactive waste to AEC (kg)
General Infectious Waste					
Sharps					
Pathological Waste					
Pharmaceutical / Chemical					
Liquids					
Radioactive Waste					
(Silver recovery)					
Other (please specify)					
Total HCRW					
Health Care General Waste					
General / non-infectious					
Liquids					
Foodstuffs used as pigswill					
(Cardboard recovery)					
(Paper recovery)					
(Plastic recovery)					
(Metal recovery)					
(Glass recovery)					
Other (Please specify)					
Total HCGW					
Total HCW					

SECTION 5 – FINANCIAL RECORDING AND AUDITING

This Section will to a greater or lesser extent apply to all five categories of health care waste generators and users of these audit forms will be required to apply this Section to the extent to which it may be appropriate for the particular facility.

5.1 Estimated annual capital cost of HCW management: (Please combine where individual costs cannot be presented)				
	Internal Costs (Rands):		Outsourced Costs (Rands):	
	HCGW	HCRW	HCGW	HCRW
HCW bins.				
HCW reusable containers.				
Nursing trolleys (specialised)				
HCW collection trolleys.				
Upgrade of HCW storage areas.				
Upgrade of HCRW treatment facility.				
Others (Please specify)				
Total annual HCW management capital costs.				

5.2 Estimated annual operational cost of HCW management: (Please combine where individual costs cannot be presented)				
	Internal Costs (Rands):		Outsourced Costs (Rands):	
	HCGW	HCRW	HCGW	HCRW
Waste bin maintenance.				
Nursing trolley maintenance.				
HCW collection trolley maintenance.				
HCW storage area maintenance.				
HCRW treatment maintenance.				
Other maintenance (Please specify)				
HCW disposable containers.				

Internal collection and transport.				
External collection and transport.				
Treatment.				
Disposal.				
Other service costs (Please specify)				
Total annual HCW management operational costs.				

5.3 Income generated from HCW recovery (Rands)	
Cardboard recovery	
Paper recovery	
Plastic recovery	
Metal recovery	
Glass recovery	
Silver recovery	
Other service costs (Please specify)	
Total recovery income generated	

5.4 Percentage of annual budget allocated for HCW management.										
< 0,5%	0,5 - 1,0%	1,01 - 1,5%	1,51 - 2,0%	2,01 - 2,5%	2,51 - 3,0%	3,01 - 3,5%	3,51 - 4,0%	4,01 - 4,5%	4,51 - 5,0%	>5,01 %

5.5 Annual HCW management budget:					
	Financial admin	Health care professional	Infection control	Cleansing department	Others (Please specify)
Annual budget centrally done internally by:					
Annual budget internally done by:					
Consultation for budget with:					

5.6 Financial management and control systems:							
	Financial admin	Health care professional	Infection control	Cleaners	Waste collectors	None	Others (please specify)
HCGW quantities verified on collection by:	1	2	3	4	5	6	7
HCRW quantities verified on collection by:	1	2	3	4	5	6	7
Invoices for external services verified by:	1	2	3	4	5	6	7
Payment made at <u>individual</u> health care facility by:	1	2	3				
Payment made from <u>central</u> facility by:	1	2	3				

5.7 Financial Auditing			
	Internal	Central	External
Financial audits undertaken:	1	2	3

SECTION 6 – HEALTH CARE WASTE MANAGEMENT EQUIPMENT AND INFRASTRUCTURE

Note: Please tick or complete the appropriate box.

6.1 Types and average number of containers used / circulated per month for HCW collection:						
	Size (1)	No.	Size (2)	No.	Size (3)	No.
Health Care Risk Waste						
Plastic Bags						
Cardboard Boxes						
Plastic Box Containers						
Wheelie Bins						
Sharps Containers						
Bio-Hazard Containers						
Other (state)						
Health Care General Waste						
Plastic Bags						
85-Litre Waste Bins						
Wheelie Bins						
Skip Containers						
Roll-on Roll-off Containers						
Static Compactor						
Other (state)						

SECTION 7 – INTERNAL HEALTH CARE WASTE MANAGEMENT

HCW source identification: Ward / department / theatre					
7.1 HCW containers					
7.1.1a Supply of appropriate HCRW containers					
	Excellent	Good	Acceptable	Poor	Unacceptable
General Infectious Waste					
Sharps					
Pathological Waste					
Pharmaceutical / Chemical					
HCRW Liquids					
Radioactive Waste					
(Silver recovery)					
Other (Please specify)					
Comments:					

7.1.1b Supply of appropriate HCGW containers					
	Excellent	Good	Acceptable	Poor	Unacceptable
General / non-infectious					
Foodstuffs used as pigswill					
(Cardboard recovery)					
(Paper recovery)					
(Plastic recovery)					
(Metal recovery)					
(Glass recovery)					
Other (Please specify)					

Comments:

7.1.2a Effective distribution and accessibility of HCRW containers					
	Excellent	Good	Acceptable	Poor	Unacceptable
General Infectious Waste					
Sharps					
Pathological Waste					
Pharmaceutical / Chemical					
HCRW Liquids					
Radioactive Waste					
(Silver recovery)					
Other (Please specify)					
Comments:					

7.1.2b Effective distribution and accessibility of HCGW containers					
	Excellent	Good	Acceptable	Poor	Unacceptable
General / non-infectious					
Foodstuffs used as pigswill					
(Cardboard recovery)					
(Paper recovery)					
(Plastic recovery)					
(Metal recovery)					
(Glass recovery)					

Other (Please specify)					
Comments:					

7.1.3a Physical condition of HCRW containers					
	Excellent	Good	Acceptable	Poor	Unacceptable
General Infectious Waste					
Sharps					
Pathological Waste					
Pharmaceutical / Chemical					
HCRW Liquids					
Radioactive Waste					
(Silver recovery)					
Other (Please specify)					
Comments:					

7.1.3b Physical condition of HCGW containers					
	Excellent	Good	Acceptable	Poor	Unacceptable
General / non-infectious					
Foodstuffs used as pigswill					
(Cardboard recovery)					
(Paper recovery)					
(Plastic recovery)					
(Metal recovery)					

(Glass recovery)					
Other (Please specify)					
Comments:					

7.1.4a Effectiveness of HCRW container removal, cleansing or replacement					
	Excellent	Good	Acceptable	Poor	Unacceptable
General Infectious Waste					
Sharps					
Pathological Waste					
Pharmaceutical / Chemical					
HCRW Liquids					
Radioactive Waste					
(Silver recovery)					
Other (Please specify)					
Comments:					

7.1.4b Effectiveness of HCGW container removal, cleansing or replacement					
	Excellent	Good	Acceptable	Poor	Unacceptable
General / non-infectious					
Foodstuffs used as pigswill					
(Cardboard recovery)					
(Paper recovery)					
(Plastic recovery)					

(Metal recovery)					
(Glass recovery)					
Other (Please specify)					
Comments:					

7.2 HCW generation area					
	Excellent	Good	Acceptable	Poor	Unacceptable
Sufficient staff					
Staff appropriately trained					
Appropriateness of nursing trolleys					
Condition of nursing trolleys					
Safe HCW handling practices applied					
Prevention of spillage / litter					
Removal of spillage / litter					
Effective segregation of HCW					
Appropriate containerisation					
Prevention of access to HCW containers					
Odour generation from containers					
HCW management general appearance					
General OHS awareness by staff					
Effective injury reporting system					
Inoculation programme in place					
Anti retroviral treatment available					
Other (Please specify)					

Comments:

7.3 Intermediate HCW storage area					
	Excellent	Good	Acceptable	Poor	Unacceptable
Intermediate storage facility provided					
Accessibility for internal collection					
Suitable ventilation					
Suitable illumination					
Access control					
Demarcation of areas for HCW types					
Facility for storage of radio-active waste					
Sufficient space for empty and full cont.					
Facility for approved disposal of liquids					
Litter or spillage of HCW inside area					
Timely removal of HCRW and HCGW					
Odours generated in storage area					
General OHS awareness by staff					
Effective injury reporting system					
Inoculation programme in place					
Anti retroviral treatment available					
Others (Please specify)					
Comments:					

7.4 Container marking / identification system used:						
	Container colour coding	Manual marking	Labelling or tagging	Bar-coding	Transponder tagging	No system used
Method of identification						

7.5 Information presented in container marking / identification system:					
	HCW category	HCRW subcategory	HCW source per facility	HCW source per ward / dept / theatre	Date of containerisation
Identification information presented					

7.6 Internal collection and transport					
	Excellent	Good	Acceptable	Poor	Unacceptable
Appropriate and sufficient trolleys					
Physical condition of HCW trolleys					
Cleanliness of HCW trolleys					
Sufficient staff					
Staff appropriately trained					
Staff using appropriate PPE					
Collection roster and routes developed					
HCRW supervised at all times					
HCRW only placed in secured areas					
General OHS awareness by staff					
Effective injury reporting system					
Inoculation programme in place					
Anti retroviral treatment available					
Others (Please specify)					

Comments:

7.7 Central HCW storage area					
	Excellent	Good	Acceptable	Poor	Unacceptable
Central storage facility provided					
Accessibility for internal collection					
Suitable ventilation					
Suitable illumination					
Access control					
Protection against natural elements					
Prevention of rodents and vermin					
Demarcation of areas for HCW types					
Facility for storage of radio-active waste					
Sufficient space for empty and full cont.					
Litter or spillage of HCW inside area					
Timely removal of HCRW and HCGW					
Suitable access for collection vehicles					
Effective HCW recording system					
Odours generated in storage area					
General OHS awareness by staff					
Effective injury reporting system					
Inoculation programme in place					

Anti retroviral treatment available					
Others (Please specify)					
Comments:					

SECTION 8 – OCCUPATIONAL HEALTH AND SAFETY

8.1	Is HCW management addressed during occupational health and safety meetings?	Yes	No
-----	---	-----	----

8.2 Frequency of occupational health and safety meetings:				
Monthly	2-monthly	3-monthly	6-monthly	Annually

8.3 Frequency of Personnel Protective Equipment issuing:							
	Daily	Weekly	Monthly	Six monthly	Annually	As Required	Not Issued
Aprons							
Gloves							
Goggles							
Face Masks							
Safety Shoes							
Overhauls							
Other							

8.4	Is a Policy / Guideline available that outlines the emergency procedures required in case of an injury / spills (e.g. needle-stick injury) or contamination of a HCW worker?	Yes	No
-----	--	-----	----

8.5 Number of injuries in the last year caused by used sharps:					
	0	1-10	11 - 20	21- 30	More than 30
Needle stick injuries					
Cuts by sharps objects					

8.6 Actions taken after injuries with sharps:						
	Anti-retroviral treatment given?	Internal incident reporting?	Internal investigation and prevention?	OHS Act requirements met?	Dept of Labour requirements met?	Follow up testing?
Needle stick injuries						
Cuts by sharps objects						

8.7 Number of HCRW spills in the last year:					
	0	1-10	11 - 20	21- 30	More than 30
Infectious waste					
Sharps					
Pathological waste					
Liquid waste					
Radioactive waste					
HCGW					

8.8 Actions taken after HCRW spills:				
	Safe removal of HCW	Disinfection of affected area	Internal reporting	Internal investigation and prevention
Infectious waste				
Sharps				
Pathological waste				
Liquid waste				
Radioactive waste				
HCGW				

8.9 What precautions are taken to prevent infection from such injuries/spills e.g. Hepatitis B & AIDS?

8.10 Occupational health and safety training for various staff groups:							
	Monthly	3-monthly	6-monthly	Annually	Bi-annually	Induction only	Not applicable
Chief Executive Officers							
Dept. Heads							
Matron/ Senior Nursing Officer							
Hospital Engineers							
Infection Control Officers							
Pharmacists							
Laboratory Supervisors							
Safety Co-ordinator							
Cleaners / HCW workers							
Others (Please Specify)							

8.11 Party responsible for implementation and monitoring of occupational health and safety:

Chief Executive Officers	Dept. Heads	Matron/ Senior Nursing Officer	Hospital Engineer	Infection Control Officer	Pharmacist	Laboratory Supervisors	Safety Co-ordinator	Others (Please Specify)

SECTION 9 – HEALTH CARE WASTE COLLECTION AND TRANSPORT

9.1 Internal or external service provision:					
	Internal service	Partially outsourced	Fully outsourced	Start of contract	End of contract
Internal HCW collection and transport					
HCRW collection and external transport					
Collection of expired pharmaceuticals					
Collection of HCRW with a silver contents					
HCGW collection and external transport					
Collection of segregated recyclable HCGW					

9.2 Frequency for collection and removal of HCRW:							
	Infectious Waste.	Sharps.	Pathological.	Pharmaceutical / Chemical.	Radioactive Waste.	HCRW liquids.	Silver recovery
Daily.							
Daily, excluding weekends.							
Every second day.							
Twice a week.							
Once a week.							
Every two weeks.							
Once a month.							

9.3 Frequency for collection and removal of HCGW:							
	HCGW	Liquids	Recyclable cardboard	Recyclable paper	Recyclable plastic	Recyclable metal	Recyclable glass
Daily.							
Daily, excluding weekends.							
Every second day.							
Twice a week.							
Once a week.							
Every two weeks.							
Once a month.							

9.4 HCW mass / volume data recording for transport:					
	Mass recording only.	Volume recording only.	Combination of mass and volume.	Fixed amount per facility	Others (Please specify)
HCGW.					
HCGW recyclable recovery.					
HCRW					
Silver recovery.					

9.5 Contact details of <u>HCGW</u> collection and transport service provider:	
Company Name:	
Contact Person:	
Telephone Number:	
Fax Number:	
E-mail:	

9.6 Contact details of <u>HCRW</u> collection and transport service provider:	
Company name:	
Contact Person:	
Telephone Number:	
Fax Number:	
E-mail:	

9.7 Contact details of HCGW recyclable collection service provider:	
Company Name:	
Contact Person:	
Telephone Number:	
Fax Number:	
E-mail:	

9.8 Contact details of expired pharmaceutical collection service provider:	
Company Name:	
Contact Person:	
Telephone Number:	
Fax Number:	
E-mail:	

SECTION 10 – HEALTH CARE WASTE TREATMENT AND DISPOSAL

In terms of the “Duty-of-Care” principle, generators of HCW are responsible for the safe and environmentally sound treatment and / or disposal of all waste generated on its premises. It is therefore expected, even where HCW treatment and disposal services are outsourced, that the generator will ensure that the services rendered comply with the required Guidelines for HCW management in Gauteng:

10.1 Internal or external service provision:					
	Internal service	Partially outsourced	Fully outsourced	Start of contract	End of contract
HCRW treatment					
HCRW residue disposal					
HCGW disposal					

10.2 Estimated percentage of HCRW treatment / disposal undertaken at respective facilities:					
	General infectious %	Sharps %	Pathological %	Pharmaceutical / chemical %	Liquids %
Sewer disposal.					
On-site treatment.					
Off-site treatment.					

10.3 Technology used for HCRW treatment:					
	General infectious %	Sharps %	Pathological %	Pharmaceutical / chemical %	Liquids %
Autoclaving					
Electro Thermal Deactivation					
Incineration.					
Microvawin g.					
Other (Please specify)					

10.4 HCW mass / volume data recording for treatment / disposal:					
	Mass recording only.	Volume recording only.	Combination of mass and volume.	Fixed amount per facility	Others (Please specify)
HCGW.					
HCRW					

10.5 Contact details of HCRW treatment service provider:	
Company Name:	
Contact Person:	
Telephone Number:	
Fax Number:	
E-mail:	

10.6 Method of disposal of untreated HCGW and treated HCRW residues:			
	General Waste Landfill %	Hazardous Waste Landfill %	Other (Please specify) %
Health Care General Waste			
Health Care Risk Waste			

10.7 Contact details of landfill operator for HCGW:	
Company name:	
Contact Person:	
Telephone Number:	
Fax Number:	
E-mail:	

10.8 Contact details of landfill operator for HCRW residues:	
Company name:	
Contact Person:	
Telephone Number:	

2.10 Annexure 2.2: Example of a Template for the development of a Waste Management Plan

Template for:

**HEALTH CARE WASTE MANAGEMENT PLAN
FOR
HOSPITAL**

September 2002

PREPARED BY:

Job			
Ref.No.	x	Prepd.	xTOK/NJB
Edition	V01	Checked	x....
Date	2002-09-27	Appd.	x....

Table of contents

1. Introduction

This Health Care Waste Management Plan (HCWMP) is prepared forHospital, by the Waste Management Steering Committee, with the following representatives:

The Management of the HCF
The Matron
The Waste Management Officer
Occupational Health and Safety Officer
The Infection Control Officer
Chief Pharmacist
Radiation Officer
Departmental heads.

The Plan is approved by the Management of the Hospital by, 2002, and is due to revision by, 2003.

1.1 Objectives of the Waste Management Plan

The Waste Management Plan has the objective of:

Ensuring that the health care waste management at the hospital currently will be improved to reach international standards.

1.2 Scope of the Waste Management Plan

The Waste Management Plan covers the following Health Care Waste categories:

.....
.....
.....

The HCWM is valid for the following period: 06/2002 – 12/2003, and is due to revision 01/2003.

2. Status Quo

2.1 Basic data on the hospital

Number of beds, departments, staff etc.

2.2 Description of the present HCW Management System

2.2.1 Description of the overall organisational structure of the hospital

Organogram, number of staff in different departments, responsibilities.

2.2.2 Description of the organisational structure of the HCW Management

Organogram, number of staff in different departments, responsibilities.
Description of present HCW Management practices.
Information and training activities.

2.3 Amounts of waste

Includes the latest data on the amounts of waste generated at the hospital divided on the various categories and on the various department if possible.

2.3.1 HCRW

2.3.1.1 General infectious waste

Sharps

Pathological waste

.....

.....

2.3.2 HCGW

2.4 Estimates of waste generation rates

Estimates of waste amounts generated at various department, divided on various categories, and comparing with previous generation rates.

2.5 Cost of waste management

Information from bookkeeping department on fees paid for disposal of waste.

3. Problem identification, needs analysis and risk assessment

This chapter includes a problem identification and a risk assessment.

The problem identification is based on the auditing, end reports from the various heads of department that have collected input from their staff.

The needs analysis is carried out through a comparison between the problems identified and the standards set for the various areas.

The risk analysis is carried out for those areas that include special risks of the human health and environmental pollution, e.g. needle stick injuries.

3.1 Problem identification

The problems can be divided into categories following the waste flow:

Waste generation, segregation, containerisation:

Human health (acute/permanent problems)

Environmental pollution

Internal transport and storage

Human health (acute/permanent problems)

Environmental pollution

.....

3.2 Needs analysis

The needs analysis is responding to the problems identification. For each problem the needs for implementing measures to overcome the problem will be described.

3.3 Risk assessment

For those problems that impose special risks, a risk assessment will be carried. This will also be taken into consideration in the description of needs.

4. Possible Solutions and Targets

For each of the problems identified a possible solution is described and targets for its accomplishment is established.

The targets include a description of how the problem should be addressed and within which time frame the problem will be solved.

The description of the solutions and the target are responding to the individual problems, and hence they will follow the waste flow.

The solutions include among others:

- Introduction of new procedures
- Provision of new equipment and materials
- Training and information
- Out sourcing of functions
-

5. Plan of Action

The plan of action describes the various activities that need to be implemented in order to overcome the problems and needs. The plan furthermore describes who will responsible for the various activities, and how they should be financed.

The various activities that have to be implemented in the Plan can e.g. divided on the various departments.

A special summary of the activities for the coming half year will be prepared, so it becomes obvious what will be monitored at the next audit.

6. Monitoring

The monitoring will measure how the various activities described in the previous Plan has been implemented. The monitoring will result in a report to the management of the hospital and the HCWM Steering Committee, indicating which activities that successfully have been implemented and which have not.