Report on Capacity Building at Pilot Site Level for improved Health Care Waste Management

July 2002

This report describes a capacity building programme for improved health care waste management at Leratong Hospital and Itireleng Community Health Clinic

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ABBREVIATIONS

HCWM – Health care waste management

PPE – Personal and protective clothing

EHP – Environmental health practitioner

HCW – Health care waste

OH&S – Occupational health and safety

INTRODUCTION

This report describes the capacity building programme to be undertaken at Leratong hospital and Itireleng clinic to support the introduction of the improved HCWM system. This improved system utilises reusable containers that will replace the present system of disposable cardboard boxes.

The capacity building programme described here is based on the findings of the Survey Reports (April/May 2002) and The Waste Management Equipment Plan for the Pilot Sites (November 2002). The report does not detail any discussions found in these documents. The document "The Waste Management Equipment Plan for the Pilot Sites" describes the proposed health care waste management system to be pilot tested. The pilot test consists of two parallel sets of equipment: i) reusable wheelie bins and ii) reusable stackable plastic boxes. Both equipment systems will be introduced at Leratong. The stackable boxes only will be introduced at Itireleng. This document describes the capacity building activities that are necessary to support the proposed equipment changes.

The capacity building programme forms part of the pilot testing of the improved HCWM system at the pilot sites. The results of this test will inform the final capacity building recommendations made by the Gauteng Sustainable Health Care Waste Management Project with respect of the tender specifications, the roll out plan of the improved system into all other public health facilities in Gauteng, the Guidelines and Strategy Documents. The programme outlined here will also inform a number of recommendations to be made in the Provincial Capacity Building Report.

THE APPROACH TO CAPACITY BUILDING

A "performance discrepancy analysis" has been applied to the problems of poor performance in the existing health care waste management system. This approach describes "capacity" in terms of "performance." Overall when building capacity one looks to enhance the <u>performance</u> of organisations or systems. Performance is therefore a useful analytical tool. Performance gaps are associated with both equipment failure and inadequacies and the other performance issues such as poor management, human resource issues and policy gaps. Capacity building therefore ensures that the "hard" and "soft" sides to development programmes are sufficiently addressed for successful implementation and long term sustainability. It is important that capacity building is not reduced to training and knowledge and skills gaps only.

The performance of the new improved HCWM system is linked to:

- Firstly the performance of the present HCWM system, both well functioning and under functioning aspects of the system, and,
- Secondly the proposed new improved HCWM system, it's equipment, practice and procedures.

The Survey Reports provide a detailed picture of the present HCWM system at a public hospital and clinic in Gauteng. The surveys examined both the hard and soft aspects of the present HCWM system. It is critical that all aspects of the present system where there is under-performance such as lack of training, poor supervision or inappropriate equipment are addressed if they are not to be imported into the proposed system.

SECTION 1: Performance discrepancy analysis and capacity building at the pilot sites

1.1 What is a performance discrepancy analysis?

A performance discrepancy analysis identifies areas of performance where there is less than optimum functioning. These areas of discrepancy or under-functioning can also be described as "gaps". For HCWM the three critical commonly identified gaps are:

- Knowledge gaps
- Skills gaps
- Attitude gaps

However, in addition to these areas other important areas are known to impact on the delivery of HCWM systems. These are:

- Inter-staff relations
- Worst case scenarios when the HCWM system breaks down completely
- Technology gaps
- Policies and procedures gaps
- Organisational, management and supervisory gaps

1.2 Description of each discrepancy area

Each area of discrepancy identified above is summarised in the following list.

Knowledge gaps: There is a set of basic information that all categories of health workers should know about HCWM. This includes basic knowledge of types of health care waste, segregation of health care risk waste, occupational health and safety issues, use of specific equipment etc.
Skills gaps: Skills are distinguished from knowledge by being something "you can do" rather than something "you know". Skills include correct use of equipment and the implementation of procedures, for example, closing liners correctly, loading sharps correctly into sharps containers and completing an incident report form.
Attitude gaps: For effective HCWM it is essential that health workers hold positive attitudes towards care of the environment, occupational health and safety and team work. Attitude gaps occur when health workers hold "poor" attitudes. At Leratong nurses use the word "negligence" to describe poor behaviour and attitudes to HCWM.
Worst-case scenarios: This category describes situations when the performance of the HCWM system is seriously undermined and jeopardised. For example, there is no collection by the service provider or no provision of red liners, both of which are events that have occurred at the pilot sites (refer to the survey reports)
Inter-relations: Inter-relations is concerned with staff relations, especially those that adversely impact on the performance of the HCWM system such as poor communication between general assistants, nurses and doctors.

Technology gaps: The specifications, standards and appropriateness of equipment all impact on the performance of the system.
Policies and procedures gaps: Policies, guidelines, procedures and/or codes of practice are essential to support any HCWM system. Policy and procedure gaps happen where policies and/or procedures are missing. Often policy and procedures for HCWM is written into one document called a "Code of Practice."
Organisational, management and supervisory gaps: These gaps relate to the management function as a whole. The Code of Practice referred to above would normally be expected to describe the organisational structures necessary to support HCWM at a health facility level. This includes roles of senior management, all categories of staff, the role of the occupational health and safety committee and the service contract with the service provider.

1.3 Cadres of staff included in the performance discrepancy analysis

The views and roles of the following staff categories listed below are included in the performance discrepancy analysis for Leratong and Itireleng. All of the information used to inform the performance discrepancy analysis was collected during the surveys at Leratong and Itireleng. Most of the information informing the performance discrepancy analysis was collected during focus group research with key categories of workers. These key categories of workers for waste are general assistants, ward helpers, enrolled and auxiliary nurses, professional nurses and doctors. In total ninety-four health workers were part of the focus group research at the two pilot sites. The reader is referred to sections in both Survey Reports titled "Health Worker Knowledge, Attitudes and Practices" for more details of this research. Other information used in the performance discrepancy analysis was collected during the system audit as part of the survey report.

Categories of staff included in the performance discrepancy analysis

- Hospital management
- Nurses (professional, auxiliary, enrolled and residential)
- Doctors
- Medical Support staff (pharmacy, physiotherapy, blood bank, X-ray, allied workers, laboratory)
- General assistants/ward helpers
- Non-medical support staff (stores, security, kitchen, kit room, mortuary, laundry, administration, workshop and groundsmen)
- General public (patients, visitors)

1.4 The application of the performance discrepancy analysis

The purpose of this document is not to revisit the findings of the survey report. The survey report identifies all the major areas of weakness in the present HCWM system. Rather the performance discrepancy analysis described here is where possible framed in the positive. This is done by listing what should be done to address the poor performance areas of the old system that will impact on the performance of the new system. It also lists what needs to be done to address likely problems with new equipment. For example,

the poor attitude/behaviour of nursing and other staff that is described above as "negligence" is addressed in the performance discrepancy analysis through the positive promotion of the personal and workplace value of OH&S, care of the environment, team work and open communication with seniors about waste. Likewise technology gaps in the performance discrepancy analysis only relate to the proposed new system such as using a horizontal loading sharps container and do not focus on the problems with the use and application of the present equipment.

1.5 Knowledge, attitudes and skills gaps at Leratong and Itireleng

Table 1 summarises what needs to be taught to address the present knowledge, attitudes and skills gaps at the pilot sites. The Survey Reports concluded that general knowledge about the present waste system was better and more comprehensive among general assistants than some categories of medical staff. Doctors at Leratong were shown to have the least working knowledge of the present HCWM system. However at Itireleng where there had been no training by the health care waste service provider all levels of workers lacked confidence about their knowledge of the waste system and segregation practices.

The proposed areas for training in relation only to skills relate to the skills' gaps for each cadre of worker in relation to the implementation of the two reusable systems.

Table 1: Teaching areas to address present knowledge, attitudes and skills gaps

Performance Gap	Hospital Management	**Nurses**	**Doctors**	**Medical Support Staff**	**General Assistants**	**Non-medical Support Staff**
Knowledge	-OH& S -HCWM system -Hospital policy & procedures re HCWM -Training & Coaching -Supervision methods -HCWM policy for Gauteng	-HCWM system -Segregation of waste -Recycling - Procedures - OH& S reporting - Monitoring & enforcement	-HCWM system Segregation of waste -Recycling - Procedures - OH& S reporting -Monitoring & enforcement	-HCWM system Segregation of waste -Recycling - Procedures - OH& S reporting -Monitoring & enforcement	-HCWM system Segregation of waste -Recycling - Procedures - OH& S reporting -Monitoring & enforcement	-HCWM system Segregation of waste esp. general -Recycling - Procedures - OH& S reporting -Monitoring & enforcement
Attitudes	-Protection of OH&S -Care of the environment -Waste is a team effort -Leadership & support	-Protection of OH&S -Care of the environment -Communication with seniors about waste -Part of a team	-Protection of OH&S -Care of the environment Communication with nurses & general assistants about waste -Part of a team	-Protection of OH&S -Care of the environ-ment - Part of a team	-Protection of OH&S -Care of the environment -Communication with medical staff about waste -Part of a team	-Protection of OH&S -Care of the environment - Part of a team
Skills	-Respond to HCWM reporting -Active involvement in OH&S	-Use new sharps containers -Seal liners -Proper use & placing of coloured liners -Segregate all waste correctly - Coach other staff - Use monitoring & reporting system	-Use new sharps containers -Segregate all waste correctly -Use monitoring & reporting system - Coach other staff	-Use new sharps containers -Segregate all waste correctly -Use monitoring & reporting system -Seal liners	-Seal liners -Use PPE correctly -Proper use & placing of coloured liners -Load internal trolley -Unload internal trolley into 770l wheelie bins -Coach other staff -Use monitoring & reporting system - Chemicals & cleaning	-Proper use and placing of coloured liners - Seal liners - Segregate all waste correctly - Use monitoring & reporting system - Coach other staff

1.6 Other performance discrepancy gaps at Leratong and Itireleng that need to be addressed in the capacity building programme

For the record it is important to highlight again the other significant gaps in the performance of the present system. These are:

Worst case scenarios

- The buying department at Leratong Hospital has at different times left the hospital stores without equipment for waste collection especially liners. This has been because of a breakdown in timely ordering or a problem with the supplier.
- The distribution of equipment around the hospital is not always reliable and therefore there is stockpiling of cardboard boxes and other equipment in the wards.
- The present budget does not allow for the procurement of sufficient bins for general waste and health care risk waste at the point of generation. Likewise old and worn bins are not replaced.
- At Itireleng a range liners of different colours (not just black and red) are supplied through the regional stores that results in incorrect colour coding.
- Poor management of staff routines and of the service provider contract can result in placentas being left uncollected for days at Itireleng.

Inter-relations

- Poor communication between general assistants and nurses. There are no multidisciplinary team meetings
- General assistants feel blamed when things go wrong with waste.
- Auxiliary and enrolled nurses also feel blamed by nursing seniors
- Doctors do not feel part of HCW management system and do not see they have a role in securing correct segregation of HCWM
- No system of positive feedback.

Technology and equipment

The correct use of the following equipment is important for the implementation of the proposed new system at Leratong:

SYSTEM A: Large wheelie Bins:

- 770 litre wheelie bins
- sealing of full wheelie bins
- weighing of waste
- use of tail gate lifting mechanism on truck
- sealing specicans
- capping of sharps containers and sealing when ¾ full
- correct fitting of liners in all stands and containers

- sealing of liners with rubber bands
- wearing gloves to handle waste
- correct lifting techniques
- cleaning of stands

SYSTEM B: Reusable stackable plastic boxes of different sizes: Reusable stackable boxes 100 litres, 50 litres and 30l box on nursing trolley

- correct fitting of liners in all boxes, containers and stands
- sealing of liners with rubber bands
- sealing of boxes when liner inside is closed
- correct lifting techniques for boxes
- correct stacking of boxes
- correct filling of cage trolley for internal transport
- weighing of waste in cage trolley
- use of tail gate lifting mechanism on truck
- sealing specicans
- capping of sharps containers and sealing when ¾ full

Policy and procedures

The survey reports at Leratong and Itireleng found that there are very few documented policies and procedures with regard to waste. It is essential that new procedures are developed to support the improved HCWM system. These policies and procedures will be compiled in a Code of Practice for Health Care Waste. The Code of Practice will outline the management of health care waste in a health facility.

The contents of the Code of Practice will include:

- Waste definitions
- Principles of the HCWM system
- HCWM organisation, training and reporting including roles and responsibilities
- HCWM procedures

The Code of Practice will ensure that appropriate standards are set for HCWM. These standards will be described in detail in the procedures. The HCWM procedures to be included in the Code of Practice are:

- Segregation at source
- Handling of HCRW
- Handling of sharps
- Manual handling of waste
- Closing of containers
- Closing of liners
- Collecting the waste from source containers
- Cleaning hospital containers

- Replacing liners
- Storing at intermediate storage areas
- Internal transportation of waste
- Collection routines
- Storing at central storage areas
- Weighing of waste and record keeping
- External transportation of waste
- Emergency procedures
- Ordering of waste equipment

Organisational, management and supervisory gaps

The present management capacity for the HCWM system is very weak at the pilot sites. There are several compounding reasons for this. One reason is because there is no policy to support HCWM. Because of this it also means that there is no internal or external auditing of the HCWM system. Also there is no HCW champion in health facilities who can facilitate development of the HCWM system. The Occupational Health and Safety structures at both the pilot sites are weak and there are no dedicated OH&S staff who can assume a leadership role for HCWM. All of this is compounded by a lack of training provision both for managers and for all categories of health workers. Consequently middle management supervision of HCWM line functions in the hospital and clinic wards and departments is very poor and there is no internal performance monitoring of the HCWM system. The OH&S committee at both pilot sites does not report on waste or is involved with inspections.

The management of any HCWM system also needs to be appropriately supported by the external service provider. In the private sector service providers usually provide both training and consultancy support to health facilities. However improved training and consultancy support by the present service provider will not form part of the pilot site test, but will form part of the new tender specifications.

The impact of all of this on HCWM cannot be over-stated. It is essential that this gap be addressed if any new equipment system is to be successful. The lack of adequate written policies and procedures makes the implementation of any management system impossible. Therefore the provision of a Code of Practice described above is a critical first step to changing management practice.

1.7 Draft specification for a capacity development programme

The approach to capacity building at Leratong Hospital and Itireleng Clinic will have the following seven elements:

1. Provision of new policy and procedures for HCW Management written as a Code of Practice
2. Introduction of improved monitoring and reporting through OH&S Committee
3. The introduction of a dedicated HCW officer and an assistant

4. Knowledge training
5. Awareness activities
6. On the job skills coaching
7. Evaluation of capacity building activities

All of these elements will be implemented at both of the pilot sites. Each of the elements will be facilitated by the capacity building consultant in collaboration with key counterparts at the pilot sites.

The approach to implementing the capacity building activities will be different at the two pilot sites. At Leratong the implementation of all pilot site activities is process led with maximum participation and consultation with the HCWM task team formed by the hospital staff.

At Itireleng it is planned to introduce the improved equipment and the capacity building programme over a much shorter period. This is because Itireleng is a much smaller institution and there is limited time and opportunity for staff to be available to participate in task team meetings and activities. The approach to Itireleng will in fact mirror what can be expected during the rollout of the improved system to all other public health care clinics. During the roll out it cannot be anticipated that there will be sufficient time or resources to establish HCWM task teams at each health facility to drive the implementation of an improved HCWM system. At Itireleng it is planned to introduce new equipment, staff training and reporting and monitoring within a 3-5 day period.

The remainder of this document describes the capacity building plan for Leratong. This plan will be adapted at Itireleng to meet the shorter time frame.

SECTION 2: The capacity building programme for Leratong Hospital

The capacity building programme at Leratong will have seven elements identified in Section 1. This section addresses the planned implementation of these in the hospital.

The seven elements of the capacity building programme are:

- Provision of new policies and procedures for HCW Management in a Code of Practice
- Improved monitoring and reporting through the OH&S committee
- Appointment of HCW officer and assistant
- Knowledge training
- Awareness activities
- On the job skills coaching
- Evaluation of capacity building activities

2.1 Policy and procedures

The introduction of new equipment and management expectations will require that critical policies and procedures are drafted or revised. Section 1.6 of this document lists the policies and/or procedures necessary to support improved HCWM.

The revised policies and procedures for HCW Management will be drafted in consultation with the HCWM task team, the quality control committee and hospital management. The new policies and procedures will be collated in a Code of Practice Booklet that will be made available to all levels of hospital management.

This code of practice booklet will also include aspects of a broader management system, such as, roles and responsibilities, monitoring and reporting and supervision and enforcement. Some of the recommendations in this booklet will also be reflected in the "Guidelines for Sustainable Health Care Waste Management" being prepared by the Gauteng Sustainable Health Care Waste Management Project. The Code of Practice will be integrated into the training programme. In particular it is hoped that the Code of Practice will help underpin better supervision and enforcement of standards.

The Code of Practice will be written for Leratong Hospital. It is not planned to write a Code of Practice for Itireleng clinic in the pilot. Instead the clinic will utilise the basic principles and standards found in the Leratong Code of Practice.

2.2 Monitoring and reporting

Internal and external monitoring and reporting of the HCWM system does not presently occur at either pilot site. The occupational health and safety committee is a legislated body that is under-utilised for HCWM. Section 24 of the Occupational Health and Safety Act clearly states minimum reporting requirements that are relevant to health care waste

and should be happening in health facilities. The committee will be trained to understand their role in waste management, the importance of regular inspections, incidence and accident reporting.

An Environmental Health Practitioner (EHP) from the Regional Office will externally audit the HCWM system at the pilot sites. Regional EHPs are currently expected to carry out hospital inspections although there are no written standards to inform this. EHPs will be prepared for this task by attending a 5 day intensive training course to be organised as part of the provincial capacity building programme. Two EHPs from Region A are already members of the HCWM task team at Leratong.

2.3 HCW Officer and Assistant

To strengthen management capacity and to facilitate improved HCWM it is critical to designate two people with the role of Health Care Waste Officer and Assistant Health Care Waste Officer. These are designated posts and are therefore part time responsibilities. The terms of reference for these posts is found in the appendices. It is estimated that the HCW Officer post is for 30% time. The hospital will designate a HCW Officer and Assistant. It is recommended that the HCW Officer and Assistant will be staff from infection control, occupational health and safety or the cleaning department. At the pilot site the HCW Officer and Assistant will facilitate all aspects of the HCWM system including the introduction of equipment, training, monitoring and reporting, supervision and enforcement and help problem solve. They will be supported in this role by the capacity building consultant and the environmental health specialist.

In the long term the HCW officer will be the critical interface with the service provider. The new tender specifications will, depending on a successful outcome at the pilot sites stipulate that the service provider will interact directly with the HCW Officer in health facilities. The 5 day training programme referred to in the preceding section will prepare DoH designated staff from across the province for this new role. The HCW Officers and Assistants from Leratong and Itireleng will be participants on the first HCWM training programme. However the implementation of the capacity building programme at the pilot sites is not dependent on their completion of this training. This is because the training is only likely to commence in August 2003 and because designated staff at the pilot sites will be supported and introduced to their role by the consultants at the pilot site.

2.4 Training

The approach to training in the hospital will be a train the trainer approach. This is a cascade method of training that aims to reach the maximum number of people within a short period of time. The approach relies on supervisors being trained to teach their own staff. To do this they will receive a teaching pack that will include teaching posters, teaching notes to reinforce the main information to be taught, interactive teaching exercises that can be easily completed on the wards and in the departments. Information will be generic and where possible multidisciplinary training will be encouraged to build

better communication between cadres of workers with regard to waste. The training programme will communicate critical information, supportive attitudes and essential skills. One training programme will be developed to support the introduction of both sets of reusable equipment. One set of teaching posters will be used for both equipment systems. However it must emphasized at the outset that training for HCWM must be ongoing if there is to be sustained culture change in relation to waste management. Therefore the proposal here is for initial, start-up training only. It will be essential that hospital staff repeat the training programme during the second part of the pilot period.

The Personnel Development Department (PDD) at Leratong will organise the training of supervisors in the hospital who then train their workers in the workplace, for the majority of the Leratong's 900 staff knowledge training will happen in their wards and departments. Where possible training should be multi-disciplinary, for example, a ward or department supervisor trains doctors, nurses and general assistants together and will include staff working on night duty. The train the trainer sessions will be conducted by the capacity building consultant and the HCW officer.

Supervisors will be prepared for their teaching through a two-hour in-service training session. Where practicable the training for supervisors should also be multi-disciplinary, nurse and general assistant supervisors being trained together. In this session the supervisors will be introduced to the key teaching information, other teaching tools, how to use the teaching posters and will be given a code of practice booklet reinforcing the most important information, standards and key procedures for HCW management. Each supervisor will get their own teaching pack to keep in their workplaces. Training will necessarily have to be an ongoing activity.

Doctors who are outside the usual training channels at the hospital will where possible be integrated into these proposed plans. However it is expected that doctors will only participate at training sessions organised through the Continuing Professional Development programme. Interns working at the hospital can be best reached through their academic co-ordinator. It is thought that it will be necessary to complement the cascade training approach with training directed to specific groups of workers as necessary. However the same teaching posters and other tools will be used for all staff.

It is planned that the training conducted by supervisors in their wards and departments will last a maximum of 20-30 minutes per session. It is planned that there should be two training sessions for all staff. However the exact use of the teaching posters and other tools will not be prescriptive. Each training session will be supported by the use of teaching posters. It is envisaged that supervisors should aim to have no more than 20 people attending each session.

The content of the two sessions will be broadly the same for all categories of workers with some modification for the medical and non-medical support staff as appropriate. The training will largely reinforce critical information and also address aspects of attitude change. The broad content of the two sessions is informed by the analysis found in Table

1 and is summarised into two teaching sessions the boxes below. One teaching poster will be designed to support each training session.

Session 1: Knowledge training for all categories of staff
• Introduction to HCWM system: The equipment and how it is used. • The HCWM team: Promote everyone is responsible for waste. Who is the HCW Officer and Assistant? • Care of the environment: How does HCW get disposed of, what happens if risk waste gets mixed with other waste and visa versa? • Correct segregation of waste: How to separate waste correctly • Recycling at Leratong: Promote recycling of cardboard boxes and glass vials • Coaching others: The importance of all staff recognising their responsibility to coach others to dispose of waste correctly.

Session 2: Knowledge training for all categories of staff
• Relevant procedures in the Code of Practice for all staff to know about • Coaching others: The importance of all staff recognising their responsibility to coach other to dispose of waste correctly. • The HCWM team: Promote that everyone is responsible for waste and the role of the HCW Officer and Assistant • Importance of reporting accidents and unsafe incidents to the occupational health and safety committee • Supervision and enforcement: Promote a positive approach to supervision that recognises good work

An additional teaching poster will be designed for general assistants that will discuss PPE and the role of general assistants in waste management.

Training of hospital management is a crucial aspect of ensuring that all levels of the hospital team understand the new waste system. Training for hospital management will be integrated into management sessions and will be conducted by the HCW officer and/or capacity building consultant. A set of overhead transparencies will be prepared for this. The content for this training is summarised in the box on the next page.

Training for hospital management
• Introduction to HCWM and the new equipment • The role of the OH&S committee • Unsafe incident and accident reporting • Response to HCW reporting • Care of the environment and the disposal of HCW • Waste is a team effort • HCWM policy in Gauteng • Supervision methods • Training and coaching • Hospital policy and procedures and the introduction of the Code of Practice

A summary of the estimated total number of staff for training including supervisory staff who will act as trainers is found in the table below.

Table 1: Categories of staff for knowledge training

Cadre of health worker	**# of staff**	**# of supervisors**	**# of training sessions required**
Nurses & doctors including nurses in residence	732	30	2 train the trainer sessions to cover all supervisors
General assistants	157	13	2 train the trainer sessions to cover all supervisors
Medical support staff	95 (including 29 outsourced lab staff)	10	2 train the trainer sessions to cover all supervisors
Non-medical support staff	113	10	2 train the trainer sessions to cover all supervisors
Hospital management	Not applicable		Training to be integrated into management meetings
Doctors	Estimated at 100		1 additional training session at cpd meeting
Cleaners	Estimated at 50		2/3 additional training session to cover night duty staff and cleaners who are not designated to specific wards or departments

2.5 Awareness activities

Awareness activities are an important component of capacity building. This is because they can be used to reinforce positive attitudes and essential information. Awareness activities can also target the general public to encourage them to drop litter in the correct bins. Awareness activities can also be used as incentives through sponsored competitions.

A booklet of low cost and no cost awareness activities will be given to the HCW officer for the hospital to implement two or three awareness activities as appropriate during the pilot period. For example, a competition to award good practice could be run in collaboration with the service provider, mural painting, drama and bin-painting are all examples of awareness activities. The awareness activities will be developed to promote simple and focused messages such as correct segregation practice, the importance of team-work and the protection of everyone's health and safety.

At the pilot site a sum of between R5 000 and R10 000 will be made available for awareness activities. The hospital will provide a motivation for their proposed expenditure for the approval of the Gauteng Sustainable Health Care Waste Management Project.

A package of stickers to label bins and encourage correct waste segregation will be part of the awareness print materials. For example, a sticker can be placed over the general waste stands stating "General waste only" or over bracketed sharps containers stating "Sharps only."

2.6 Skills training

Skills training will be included in the training programme and then reinforced on the job. Supervisors will coach their staff. However all staff will be encouraged during the training programme to remember to coach and demonstrate to others the correct disposal of waste and the correct use of equipment.

Supervisors will receive a checklist of skills as part of their teaching pack. A set of smaller laminated A3 posters will reinforce critical skills.

2.7 Evaluation

Evaluation of the capacity building programme is essential. It will aim to:

- Check the success of the capacity building programme
- Help revise all print materials ready for use/distribution throughout the province as part of the roll out of the next HCRW contract.

The evaluation of the capacity building elements will be integrated into the overall test criteria for the pilot project as a whole. However it is envisaged that the evaluation of the specific capacity building components will involve:

- A KAP study (knowledge, attitudes and practice) pre and post the training intervention
- Key informant interviews with HCW officers, assistants and other key role-players at the pilot sites
- Record keeping of training sessions and skills demonstration
- Focus group discussions with trained supervisors
- Timesheets for HCW officers and assistants

2.8 Roles and responsibilities

The capacity building programme will be implemented through the HCWM task team at Leratong Hospital. PDD in collaboration with other members of the task team and the HCW Officer will facilitate the training aspects of the capacity building programme. All print materials used for training will be distributed to both pilot sites during preparation for comments.

The capacity building consultant will prepare the following:

- All print materials including posters, code of practice booklet, awareness activities booklet etc.
- Contribute to the preparation of new hospital policies and procedures
- Organise and facilitate workshops for the OH&S committee in collaboration with the environmental health consultant.
- Liase with the regional DoH as necessary
- Prepare terms of reference for the HCWM task team and the HCW officer and assistant.
- Conduct training sessions.
- Prepare evaluation tools for capacity building activities.

The implementation of all other aspects of the programme will be the responsibility of the HCW officer and his/her team. All developments in the capacity building programme will be negotiated with hospital management as necessary.

2.9 Timeframes

Capacity building is an integral part of the planned test and therefore details of the planned timeframes are found in the implementation plan for the pilot sites. Elements of the capacity building programme such as the appointment of the HCW Officer and Assistant, building the role of OH&S committee, preparation of evaluation tools and the preparation of print materials will precede the introduction of new equipment. These will start in November 2002. The project's support to the pilots will end after approximately 6

months of testing, but it is recommended that the pilot activities continue until the new HCRW tender is implemented throughout the province on 1 October 2003.

2.10 Budget

The capacity building programme at the pilot sites is fully funded by the Project except for the time given by the hospital/clinic staff. A proposed budget for pilot site activities is found in the appendices.

APPENDICES

- Terms of reference for the Health Care Waste Officer and Assistant
- Budget

Terms of reference for the Health Care Waste Officer in health facilities

Background

The Health Care Waste Officer (HCW officer) is a part time designated responsibility for a key player in the present waste management system. In hospitals and community health centres, the HCW officer should have one or two assistants to facilitate some of the tasks.

The HCW Officer acts as a champion for health care waste. He/she facilitates and co-ordinates health care waste management in a health facility. The HCW Officer liaises with all role players at all levels within the hospital including infection control, the cleaning department, OH&S committee, management, training and the external service provider. It is an approximately a 30% time post although during implementation of new equipment it will be up to 70% time for a limited period only.

It is essential to understand that the Occupational Health and Safety Act places responsibility for occupational health and safety squarely with the employer or CEO of the health facility. The effective management of health care waste is part of the duties of the employer imposed by this Act and it is an integral part of attaining good occupational health and safety standards in a health facility. For example, the risk of needlestick injury is reduced through improved containerisation and segregation practices; the risk of fire is reduced through good housekeeping standards and safe storage practices. Therefore accountability for health care waste management rests with the CEO or clinic manager and not with the HCW officer. Likewise management of the day to day implementation of the health care waste management system rests with line managers in the health facility and not with the HCW officer. The HCW Officer acts as a guardian of the standards and gives assistance and guidance to the CEO and hospital/clinic management.

Selection of the HCW officer

In hospitals across the province the cleaning department, infection control and occupational health and safety are all involved with the present health care waste management system. In different institutions these role players assume different levels of responsibility for waste. Presently many of these people are involved in crisis management with regard to waste. The introduction of a health care waste officer will help establish a pro-active approach to the management of waste in a health facility.

It is advised that the HCW officer be selected from senior nursing management, infection control or from dedicated full-time occupational health and safety services. The HCW Officer must have a background of matric plus three years tertiary training to successfully

complete the five day intensive training programme which will prepare him/her for this appointment.

In smaller health facilities such as a community health centre it is advised that the HCW officer should be a designated function of the OH&S representative or of senior nursing staff. In a small clinic the role of the HCW officer is greatly reduced and the clinic manager should be mindful of his/her responsibilities with respect to waste and should be designated as the HCW Officer.

Qualities of the HCW officer

The role of the HCW officer is to facilitate the management of health care waste in his/her health facility. Therefore it is essential that the HCW officer is able to communicate with a wide range of role players including senior management, external service providers and health workers. The HCW officer must be able to facilitate team work.

The HCW officer requires excellent problem solving skills and should be able to follow through a plan of action. He/she should have plenty of initiative and self-motivation. . The candidate should also be familiar with collecting information and the preparation of short reports to ensure proper performance monitoring.

Scope of work

The job of the HCW officer involves understanding all the waste streams generated in health facilities. The largest waste stream in a health facility is the general waste stream. This waste stream is collected by the municipality and taken to the landfill site. Health care risk waste includes sharps, infectious waste, anatomical waste, chemical waste and radioactive waste. Health care risk waste must be containerised correctly and taken to an approved treatment site. It is extremely costly to the DoH when general waste is disposed of in the risk waste stream and extremely hazardous when risk waste becomes part of the general waste stream and is taken to the landfill site. Because of the hazards associated with risk waste the HCW officer will focus his/her work around this waste stream. However he/she will not be successful in this task without also understanding and providing improvements to the general waste stream as necessary.

Key outputs of the HCW officer

To implement the requirements of the proposed Gauteng Code of Practice for health care waste in health facilities, the OH&S Act as related to health care waste and other relevant codes of practice. The health care waste officer will:

1. Maintain health care waste management standards in line with the Code of Practice, OH&S legislation, other guidelines and infection control.
2. Obtain commitment to improved health care waste management from all levels of management

3. Communicate to all role players about improved health care waste management
4. Monitor health care waste management on a regular basis through an ongoing programme of performance monitoring, auditing and incident reporting.

Supporting Outputs for the HCW Officer

1. <u>Maintain health care waste management standards</u>

1.1 Inform all levels of management about the requirements of the proposed Gauteng Code of Practice, the OH&S Act, other relevant codes of practice and other relevant guidelines.
1.2 Contribute to the development of procedures with regard to health care waste management as necessary
1.3 Assist with the implementation of procedures for health care waste management
1.4 Promote continuous improvement in health care waste management and encourage waste minimisation and recycling.

2. <u>Obtain commitment to improved health care waste management at all levels</u>

2.1 Liaise with all department heads about health care waste management through attendance at OH&S committee meetings, departmental meetings, senior management meetings or other mediums of communication
2.2 Integrate health care waste management with day-to-day routines of the hospital.
2.3 Liaise with supervisors and safety representatives with regard to incidents and where necessary support investigations
2.4 Liaise with the service providers on a regular basis

3. <u>Communicate to all role players about improved health care waste management</u>

3.1 Provide regular reports to hospital management about health care waste management
3.2 Provide regular reports to OH&S Committee about health care waste management
3.3 Ensure an ongoing training programme is in place for all staff in collaboration with the service provider
3.4 Co-ordinate awareness activities in collaboration with the service provider

4. <u>Monitor health care waste management on a regular basis</u>

4.1 To monitor the service agreements with all the service providers and check that contracts for the off site treatment of health care waste are honoured
4.2 Ensure that there is an internal performance monitoring of the health care waste management system
4.3 Ensure external audits are conducted by regional environmental health practitioners
4.4 Ensure there is an incident reporting and investigation system established in collaboration with the OH&S committee

4.5 Be proactive in the identification of problems and solutions with regard to health care waste management

Assistant HCW officer

The assistant HCW officer will have the qualities of the HCW officer but will share less of the responsibilities. A larger health facility can appoint two Assistant HCW Officers. It is not proposed to specify the exact role of the assistant because it is envisaged that in each health facility the responsibilities will be shared differently according to the background and position of the designated staff. However it is expected that the Assistant HCW Officer will be senior nursing manager and/or a senior from the cleaning department.

BUDGET

Capacity Building Element	Description	Activity	Budget	Subtotal
HCW Officer	Training	One week	2 500.00	
HCW Officer Assistant	Training	One week	2 500.00	
HCW Officer Itireleng	Training	One week	2 500.00	
				7 500.00
OH&S Management System	Workshops	5 x One Day	3 000.00	
	Audit & Feedback			
	OHS rep Training	One week	2 500.00	
	Regional EHO Training	One week	2 500.00	
	2 x pilot Code of	Design & Layout	8 400.00	
	Practice 30 page book	Artwork	6 400.00	
	A4 paper	150 copies	1 575.00	
				24 375.00
Knowledge Training	Teaching Posters			
	3 x A1 Full- colour	Design & Layout	6 600.00	
		Artwork	10 500.00	
		Repro	7 800.00	
		Printing 1000 Copies	25 173.00	
	Teaching Cards	Design & Layout	1 200.00	
		Copies	2 000.00	
	OHP Transparencies	Design & Layout	3 200.00	
		Copies	2 000.00	
				58 473.00
Awareness Activities	2 x Bins Stickers	Design & Layout	540.00	
	A5 Full Colour	2000 Copies	7 188.00	
	40 page Booklet	Design & Layout	5 600.00	
		Artwork	3 200.00	
		Copies	500.00	
	Activities Budget		10 000.00	
	2 x A1 Full-Colour Posters	Design & Layout	4 400.00	
		Artwork	7 000.00	
		Repro	5 200.00	
		Printing 1000 copies	16 678.20	
				60 306.20
Skills Training	3 x A3 Posters	Design & Layout	4 800.00	
	Full Colour	Repro	780.00	
	1000 Copies	Printing	9 099.00	
	Audit Form/ Booklet	Design & Layout	3 200.00	
		Copies	1 500.00	
				19 379.00
Evaluation	Research		50 000.00	
				50 000.00
	TOTAL		**220, 033.20**	