

Report
The Health Care Waste summit
18 & 19 May 2009

Most of the presentations will be on the health care waste forum's website, as well as the handouts will be handed over to SASOHN.

I will try to summarise the important points related to Occupational Health Nurses.

1. Things to take into account when doing your Health Risk assessment for the people in your clinic handling medical waste.

- 1.1 Service logistics – size of clinic, waste volumes generated, number of locations in facility, storage available, and frequency of services.
- 1.2 Reusable bins can potentially be contaminated with pathogens and decontamination processes must ensure those pathogens are not disseminated to clinics, staff and patients. (Note that the Gauteng has the only by law that states the service providers must do swabs post cleaning, on their premises as well as after delivery to proof cleanliness. The feeling of the speaker was that it is proven over and over that even cleaning with water and soap will pose no risk to infect people handling the containers when it is VISUALLY CLEAN, therefore Gauteng should use their resources better as the taking of swabs is costly.)
- 1.3 Also disease transmission requires a chain of infection and ALL the links must be present before transmission takes place: Pathogen presence; Pathogen numbers; Pathogen virulence; Susceptible host; transfer from source to host; correct entry into host. The probability that all 6 steps are present is very low.
- 1.4 It is likely that risks associated with contacting HCW during its generation, handling, treatment and disposal are, in decreasing order:
 - Health care personnel
 - Laboratory workers
 - Waste Workers
 - General public.
- 1.5 Important aspects at the health care facility:
 - the dire need for good segregation to minimise the potentially infectious material from reaching the landfill sites and dump ground
 - the need for good, sound puncture proof containment to reduce the risk of contact with the infectious material (SABS approval)
 - the importance of health care workers wearing the correct protective equipment.
 - and the importance of good, sound hygiene, particularly frequent hand washing to reduce the transmission of the potential pathogens.

2. What to look for in a service provider.

- 2.1 There is a critical shortage of medical waste treatment facilities, the authorities are inflexible to look towards alternative
- 2.2 Lesser accredited incinerators create an increase in transport costs. Make sure your service provider take their waste to an accredited incinerator. (9 is certified, only 6 is running in SA.)

2.3 The criteria for the effectiveness of medical waste treatment are defined in 3 levels according to STAATT (State and Territorial Association on alternative treatment Technologies).

- In south Africa we should be at least a level III – Inactivation of vegetative bacteria, fungi, lipophilic/hydrophilic viruses, parasites, and mycobacterium at a Log 6¹⁰ reduction or greater; and inactivation of B. stearothermophilus and B. subtilis spores at a Log 4¹⁰ reduction or greater.

NOTE: Sterilisation, disinfection and cleaning are all modes of decontamination. Sterilisation is the only decontamination mode where removal of organisms is measured in logs (6 log removal of spores).

Summary of legislation required for health care waste.

(Waste minimisation and use is not included in the table since these aspects are considered to have limited applicability to health care waste)

ACT	GENERATION	STORAGE	TRANSPORTATION	Disposal.
Atmospheric Pollution Prevention Act	Provisional and/ or final registration certificate required	May be addressed in registration certificate	X	X
Environment Conservation Act • Waste provisions; • EIA requirements; • Basel Convention	Requirement to undertake an environmental impact assessment and to obtain authorization prior to undertaking certain activities, including in respect of hazardous substances. Provision will have limited application to health care waste	Not expressly, but sometimes dealt with through permitting requirements	Importation and exportation of waste may be controlled by regulation; South Africa is a party to the Basel Convention which includes HCW (permitting required in terms of Import and Exports Act)	Permits required to operate waste disposal facilities ; waste may only be disposed of in permitted facilities EIA authorization required for the establishment of disposal facilities
Hazardous Substances Act	Licenses required for Group IV substances - waste regulated through permit conditions and regulation	Storage of Group iv substances regulated by regulations—may not apply to HC waste	Importation or exportation of Group IV substances requires permission; Provisions of the Act apply to substances in transit on request of another country;	Group IV waste regulated through license conditions and regulation
National Environmental Management Act	Not specific requirements at present. Duty of care will be applicable to the management of health care waste; Public sector institutions will be obliged to take principles into account	X	X	Not specific requirements at present. Duty of care will be applicable to the management of health care waste; Public sector institutions will be obliged to take principles into account
National Health Act	Regulatory power— no specific provisions	Regulatory power —no specific provisions	Regulatory power— no specific provisions	Regulatory power—no specific provisions

Occupational Health and Safety Act	X	Duty to ensure that waste is properly stored and controlled to prevent the spread of infection	Drivers to be trained and waste to be labeled	Work procedures to be introduced; Reference is made to the requirements of the Environment conservation Act and Atmospheric Pollution Prevention Act
Transport Act	X	x	comprehensive provisions including the need for drivers to be trained and waste to be labeled	x

3. Procedures to follow.

3.1 Huge gap in the medical waste chain is the segregation of medical waste at the generators.

3.2 Colour coding and marking of packages:

YELLOW + THE WORD DANGER

- Sharps: Items such as needles, syringes, blades, clinical glass and any other items that are capable of causing a cut or puncture wounds. (*Viols will be for the pharmaceutical container and ampoules that you break open for the sharps container.*)

DARK GREEN + APPROPRIATE LABEL (Pharmaceuticals)

- Pharmaceutical waste: Unused medicines, medications, and residues of medicines that are no longer useable as medication.
- According to the pharmacist's presentation, a register where you indicate what medicine and the amount disposed of must be filled in, in 4 fold. You keep one copy, second copy the company transporting the waste keep, the third copy is given to the person receiving the waste at the waste treatment plant, and the 4th copy gets signed by the receiver and send back to the pharmacist that send the waste. (*on questioning him if only a pharmacist can sign the register, he said that because nurses have a scope to dispense certain medication we will have the scope to sign the register.*)
- Container to be weighed with you and at place it is received and noted on register. (Because nobody is going to open the container to count the said tablets that is in the container)
- Schedule 0 – 4 (including self medication) Dark green container.
- Schedule 5 & 6 Separate dark green container.
- Liquids (schedule 0 – 6) Pour contents into green container (only reason because mostly you will pay per weight)
- NO needles, syringes, vaccines or scalpel blades to be placed in these containers.

RED LIDDED BIN WITH LINER

- Health care risk waste: Waste that may, by circumstances of use, quantity, concentration or inherent physical, chemical or toxicological characteristics, have a significant adverse affect on public health and the environment when improperly treated, stored, transported or disposed of. NOTE – Infectious waste is considered hazardous waste.

GREEN PLASTIC BAG

- Aerosols.

3.3 Training to all staff is important to get the segregation right.