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## Reducing UPOPs and Mercury Releases from The Health Sector in Africa

# *Module 32: Storage & Management at central facilities*

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# Content

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- ▶ Waste reception procedures
- ▶ Visual inspections
- ▶ Reporting requirements



# INTRODUCTION

- ▶ All Healthcare waste treatment facilities should have internal waste reception procedures in line with National legislation and reporting duties.
- ▶ Proper waste reception procedure provide valid information on the origin, waste generation and quality of waste segregation.
- ▶ This procedure allows more effective planning of the daily treatment process.
- ▶ Waste reception procedure is important step because it can provide rapid assessment of the condition of the waste in order to identify the need of increased safety requirements.
- ▶ Beside H&S considerations, it is necessary to assess the waste contents in order to prevent possible damage of the treatment equipment.



# Waste reception procedures

In order to provide good management of the waste reception procedure, at least the following steps should be respected:

- ▶ Visual inspection of the waste
- ▶ Waste transfer documentation handling
- ▶ Measuring of the quantity
- ▶ Maintain records of the received waste
- ▶ Preparation of reports for received waste



# Visual Inspection 1

Visual inspection of the delivered waste is performed to ensure the following:

- ▶ That the delivered waste is properly segregated and it does not contain improperly disposed sharps, toxic, corrosive or explosive substances.
- ▶ That the waste is correctly labelled at the point of generation.
- ▶ That the waste was not stored for longer period of time.
- ▶ That the waste segregation on the point of generation is correct or require improvements.



## Visual Inspection 2

Visual inspection of the delivered waste should be done with minimal and safe contact with waste.

Main reason is to prevent improperly packed waste to be treated. Some materials may harm the operator, the treatment process and the treatment equipment.

The inspection should be focused on improper segregation, risk assessment for the future handling of the waste, visible leakages, type and conditions of the packing materials and transport containers and determine corrective actions.



# Visual Inspection 3






# Checking Labels

## IMPORTANT

All waste packing should be labelled accurately and should contain at least the following information (in some countries the label is legally required and defined):

1. Date Label Completed
2. Producer of the Waste (Ward No. or Dept.)
3. Name of the Person who completed the label

INFECTIOUS HEALTHCARE WASTE	
Waste Producer (Department):	Date: Time:
Name of person labelling waste container:	
<b>UN 3291 "(BIO) MEDICAL WASTE, N.O.S"</b>	





# Measuring of the quantity

- ▶ The waste must be measured in order to determine the exact amount that has been received for treatment.
- ▶ The waste is weight does not include transport packing (container) unless the transport container is a single use container.
- ▶ **Waste weight=Full container weight-Empty container weight**

- *The waste data should be recorded on a basis of origin.*
- *If the waste is measured at the point of collection, this measurement uses as confirmation on that measures*
- *In some countries received waste is mandatory to be reported in the annual waste management report*





# Vehicle hygiene inspection

Before completing the transport documentation, the transport vehicle is checked and if there are visible contamination or spillage inside the transport bay.

If there is a visible contamination, the driver is in charge of resolve the issue in accordance with the procedures for decontamination or spillages management.



# Reports for received waste

Depending on the reporting period it will be necessary to prepare the plan for reporting of received amounts.

The reporting plan should have the following concept:

1. Daily Report – for internal purpose and in case if needed for e.g. the infection control committee.
2. Monthly Report - for internal purpose and in case if needed for e.g. the Infection control committee and competent Authorities.
3. Quarter, Half year or Annual report – depending on the National legislation, reporting to competent Authorities



# Waste disposal documentation

The waste treatment or disposal service provider must return evidence that the waste has been properly treated or disposed.

This does not apply for collectors of recyclable materials

The evidences must be correlated and with the adequate waste transfer notes as evidence for the regulator that the waste has been treated and disposed properly



# General Requirements for Central Storage Areas

The storage area should:

- have good lighting and at least passive ventilation
- not be situated near fresh food stores and food preparation areas
- have a supply of cleaning equipment, protective clothing, and waste bags or containers
- have a washing basin with running tap water and soap for the staff
- be cleaned regularly at least once a week
- have a capacity appropriate to the volumes of waste generated
- be labelled in accordance with the hazardous level of the stored waste



# Labels for Central Storage Areas

		
No entry for unauthorized persons for all storage areas	Biohazard sign for infectious and sharps waste	Toxic sign for chemical and hazardous pharmaceutical waste
		
No eating or drinking	No smoking	

# Central Storage Area at a Hospital



# Storage of Infectious Waste and Sharps

- The storage area should have a biohazard sign
- Regular inspection and cleanup (at least weekly) of storage areas should be part of HCWM plans
- Workers should be trained in site spillage procedures
- Sharps can be stored without problems, but other infectious wastes must be kept cool if storage times are exceeded, or refrigerated at a temperature of 3°C to 8°C if stored for more than a week





# Storage Times for Infectious Waste

According to the WHO guidance for the safe management of HCW, storage times for infectious waste (e.g. the time gap between generation and treatment) should not exceed the following if the storage area is *not* cooled:

## Temperate Climate

- ▶ 72 hours in winter
- ▶ 48 hours in summer

## Warm climate

- ▶ 48 hours during the cool season
- ▶ 24 hours during the hot season



# Pathological Wastes Storage

- Considered as biologically active waste
  - Expect gas formation and pathogen growth
- Storage should be air-conditioned or refrigerated (e.g. in the morgue) and should be stored at a temperature of 3°C to 8°C
- In some cultures, body parts are given to the family for ritual procedures or are buried in designated places



# Pharmaceutical Wastes Storage

- Classification (WHO, 1999)
  - Non-hazardous waste which can be stored in the non-hazardous storage area:
    - Ampoules with non-hazardous content (e.g. vitamins)
    - Fluids with non-hazardous contents like vitamins, salts (NaCl), amino salts...
    - Solids, semi-solids like tablets, capsules, granules, powders for injection, mixtures, creams, lotions, gels, suppositories, etc.
    - Aerosols, including propellant-driven sprays and inhalers

# Pharmaceutical Waste Storage

- Hazardous wastes that should be stored in accordance with their chemical characteristics or specific requirements for disposal:
  - Controlled drugs (should be stored under government supervision)
  - Disinfectants & antiseptics
  - Anti-infective drugs, like antibiotics
  - Genotoxic drugs (genotoxic waste)
  - Ampoules with antibiotics



# Chemical Wastes Storage

- ▶ Consider characteristics of the different chemicals to be stored and disposed
  - inflammable, corrosive, explosive
- Spillage kits, PPE and first aid equipment (eye-shower, etc.) should be available
- Should have adequate lighting and good ventilation; constructed of materials suitable to withstand explosion or leakage
- ▶ Storing liquid chemicals
  - storage should be equipped with a liquid and chemical proof sump or catch- containers under the storage containers



# Chemical Wastes storage

- Storage compartments should be labelled in accordance to their hazardous class
- Liquid and solid waste should be stored separately
- If possible the original packaging should be used for storage
- Labels should have the following:
  - Hazard Symbol(s), Waste classification, Date, Point of generation (if applicable).



# Examples of Chemical Waste Storage



Safety cabinet  
for flammable  
substances



Flammable  
substances  
inside the safety  
cabinet



Liquid chemicals  
on a chemical-  
resistant plastic  
container

Images from the WHO Blue Book