Empowered lives.
Resilient nations.

GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

GLOBAL HEALTHCARE WASTE PROJECT

MODULE 12:
Labeling, Handling and Collection of Healthcare Waste

World Health Organization

Health Care Without Harm

UIC UNIVERSITY OF ILLINOIS AT CHICAGO SCHOOL OF PUBLIC HEALTH
Environmental and Occupational Health Sciences Division

Module Overview

- Describe appropriate labeling, handling and collection procedures for wastes, particularly infectious and sharps wastes
- Present the steps in developing a collection system
- Describe methods of bag closure
- Describe ways for handling common problems

Learning Objectives

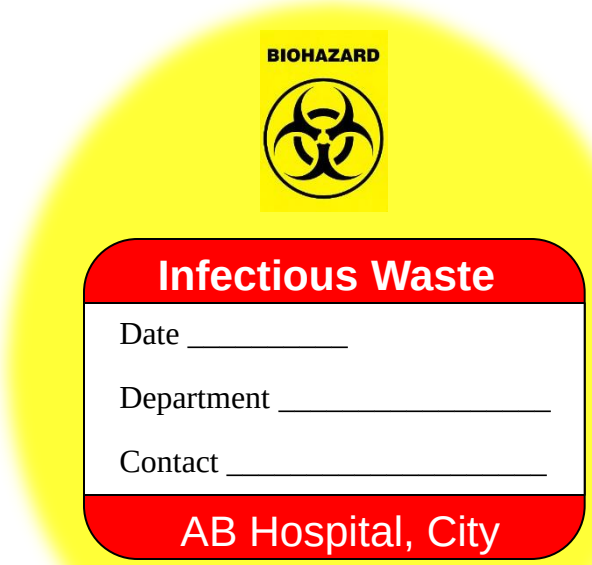
- Describe the requirements for labeling
- Describe the requirements for handling and collection of different types of waste
- Know the steps in developing a collection system
- Demonstrate proper methods of bag closure, handling and collection
- Demonstrate procedures for dealing with common problems

Steps in Healthcare Waste Management

- Waste classification
- Waste segregation
- Waste minimization
- Handling and collection
- On-site transport and storage
- Treatment and disposal

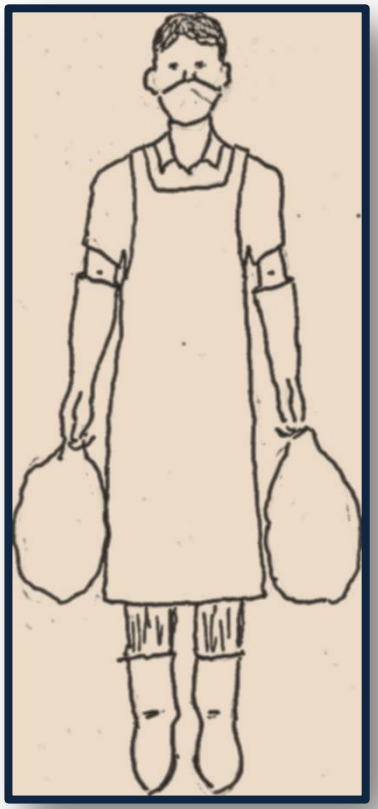
Waste Labeling

- Should be established as part of a healthcare waste management plan
- Recommended waste label content:
  - Date
  - Type of waste
  - Point of generation (to allow tracking)
- Weight should be routinely recorded, where possible.



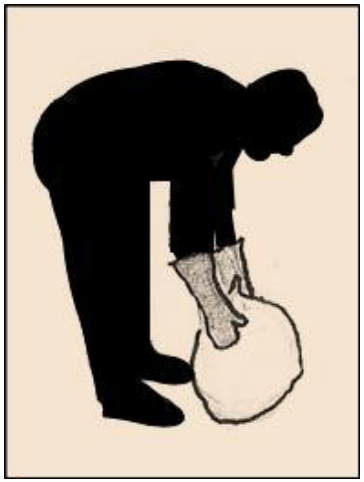
Waste Handling

- Should be established as part of a healthcare waste management plan
- Waste handling
  - Requires use of proper PPE
  - Requires use of good body mechanics

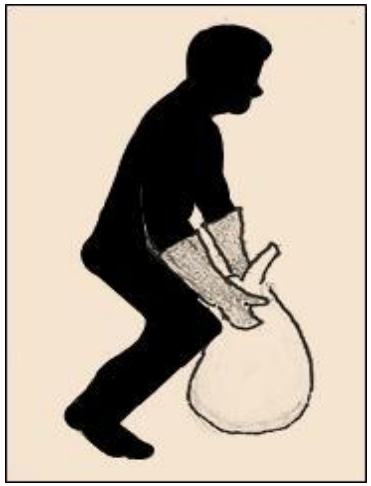


Waste Handling

- Body mechanics
  - The way we move when conducting activities
- Good body mechanics could protect the body from injury.
- Examples of bad and good body mechanics when lifting



WRONG



RIGHT

Waste Collection

- Should be established as part of a healthcare waste management plan
- Waste collection
  - Should ensure that waste from each area is collected at least daily (except for sharps)
  - Should ensure that containers are not overfilled
  - Should ensure segregation is maintained
- Sharp waste should be collected when the box is 3/4th filled

Steps for Developing a Waste Collection System

- Identify the points of generation of different types of wastes within the healthcare facility
- Quantify the amounts of wastes and calculate optimum container sizes for each area
- Evaluate how quickly the containers fill
- Set up fixed collection times so infectious waste containers are removed when 3/4th full; set up a notification procedure for whenever waste needs to be removed sooner
- Resupply bags or containers during removal
- Conduct continuous monitoring and improvement

Some Considerations When Scheduling Collection Times

- Match collection times with the regular pattern of waste generation during the day
- Examples:
  - In medical areas where the morning routine begins with the changing of dressings – collect infectious waste mid-morning to prevent accumulation of soiled bandages
  - In facilities with set visiting hours – collect general and recyclable waste after visitors have departed
  - Collect infectious waste from surgical theaters according to the schedule of operations

Infectious Waste Containers

- Ideal infectious waste containers are those that have
  - Lids that remain closed except when waste is discarded
  - Pedal-operated devices to open the lids
  - Color-coded bags inside the containers

Infectious Waste Collection

- Wastes should be transported to the designated central or interim storage area
- Waste bags and containers should be labeled with the date, type of waste, and point of generation so that it can be correctly and easily tracked through to disposal
- Do not redistribute the waste contents by shaking the bag as this could cause liquids or aerosols to be released.

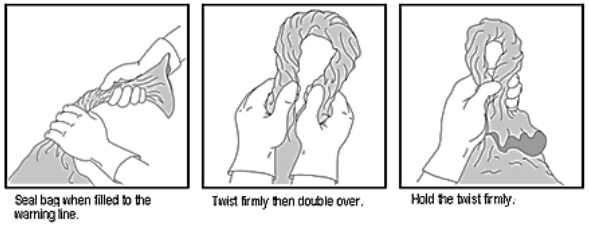
Proper Bag Closure

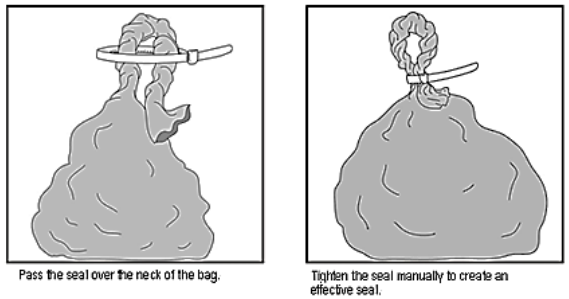
- Staff should ensure that waste bags are tightly closed or sealed when they are about ¾ full
- Bags should *not be* closed by stapling (which can cause tears)
- A plastic tag or tie can be used
- Light-gauge bags can be closed by tying the neck
- Heavy-gauge bags may require a plastic sealing tag of the self-locking type

Proper Bag Closure

- Examples of bag tying methods
  - Simple knot

  - Goose-neck or swan-neck method





  - Self-locking tag

Bag Removal and Replacement

- The bags or containers should be replaced immediately with new ones of the same type
- A supply of fresh collection bags or containers should be readily available at all locations where waste is produced

Collection of Sharps

- Safety boxes should not be more than ¾ full when closing and sealing them.
- Overfilling increases the risk of needle-stick injuries.
- If a cardboard safety box has a broken handle, check all sides and bottom to make sure there are no protruding needles before removing the container.
- Heavy-duty gloves should be used when handling sharps containers.

Chemical Waste Collection

- Chemical wastes should never be mixed or disposed of down the drain but stored in strong leak-proof containers
- All chemicals should be clearly labeled
  - type of waste
  - name of the major chemicals
  - any necessary hazard labels, e.g. corrosive, flammable, explosive, or toxic

Pharmaceutical Waste Collection

- Unused pharmaceuticals should go back to the pharmacy for return to the manufacturers or dispatched to specialist waste treatment contractors
- Spilled and contaminated pharmaceuticals should go directly from the point of generation to the facility waste storage
- Pharmaceuticals should be kept in their original packaging to aid identification and prevent reaction between incompatible chemicals

Radioactive Waste Collection

- Where specialist disposal services exist, they should collect and handle radioactive wastes.
- Otherwise, waste may be stored in radiation-proof repositories (leak-proof, lead-lined, and clearly labeled with name of radionuclide and date of deposition) where it can decay naturally

Discussion

- What is your facility's protocol for different types of wastes?
- How do you collect…?
  - Non-infectious wastes
  - Chemical waste
  - Mercury (broken thermometer)
  - Pharmaceutical wastes
  - Cytotoxic drugs
  - Radioactive wastes

How to Handle Improperly Segregated Waste

- Poorly segregated waste should never be sorted, but instead treated as the most hazardous type of waste in the container
- Corrective action must be taken to ensure that the waste is segregated properly in the future

How to Handle Leaking Bags or Containers

- Leaking bags or sharps containers should be placed in a secondary container (e.g., another plastic bag) with the same color code and label.

How to Handle Overfilled Bags

- Do not attempt to transfer portions of the waste to another bag or container
- Two workers with proper PPE are needed
- With one worker holding open a larger secondary container (e.g., a larger plastic bag of the same color code), another worker should carefully place the overfilled bag or container into the secondary container putting the overflowing waste in first
- Affix a special label on the outside container if it is not color-coded; follow clean-up procedures if there is a spill
- Report the overfilled bag to your supervisor

How to Handle an Overfilled Sharps Container

- Do not attempt to transfer portions of the waste to another container
- Using long heavy-duty gloves that protect the arms, carefully place the overfilled container into a larger secondary container that is puncture-resistant (e.g., a thick hard cardboard box or plastic box)
- Affix a special label on the outside container if it is not labeled and follow clean-up procedures if there is a spill
- Report the overfilled container to your supervisor

Overfilling Waste Container

- Why does this happen?
- How can it be prevented?

Overfilling Sharps Container

- Why does this happen?
- How can it be prevented?

Country-Specific Requirements

Add information here about the country specific guidelines or requirements for labeling, handling, and collection of healthcare wastes.

Discussion

- What are some procedures and protocols in place in your facility for handling and collecting wastes?
- Are there different guidelines set up for different types of wastes – infectious, chemical, etc.?
- Do you know about country-specific guidelines for handling and collection?
- How does your facility deal with the removal of wastes?
- What labeling process do you follow?
- What are some of the weaknesses and strengths of your current system?
- How can existing practices be improved?