

WASTE MANAGEMENT INVOLVING SHARPS



INTRODUCTION

Medical waste is a sort of hazardous wastes generated by hospitals, clinics, health-care centers and laboratories etc.

It must be properly treated and disposed to avoid possible contamination.

- Of the total amount of waste generated by health-care activities, about 85% is general, non-hazardous waste.
- The remaining 15% is considered hazardous material that may be infectious, toxic or radioactive.
- Every year an estimated 16 billion injections are administered worldwide, but not all of the needles and syringes are properly disposed of afterwards.
- Open burning and incineration of health care wastes can, under some circumstances, result in the emission of dioxins, furans, and particulate matter.



WASTE CATEGORY

Radioactive waste: such as products contaminated by radionuclides including radioactive diagnostic material or radiotherapeutic materials

- **Solid waste** includes non-sharp items contaminated with any bodily fluids or biological material. For example, gloves, pipettes, towels, or culture.
- **Liquid waste** includes bulk quantities of blood or bodily fluids.
- **Sharps waste** includes any materials that can puncture or pierce through skin and is contaminated with biological material that can risk transmission or release to the environment. For example, needles, syringes, scalpels, microscopic slides, small broken glass or tubes.



CONT WASTE CATEGORY

- **Infectious waste:** waste contaminated with blood and other bodily fluids (e.g. from discarded diagnostic samples), cultures and stocks of infectious agents from laboratory work (e.g. waste from autopsies and infected animals from laboratories), or waste from patients with infections (e.g. swabs, bandages and disposable medical devices)
- **Pathological waste:** human tissues, organs or fluids, body parts and contaminated animal carcasses;
- **Chemical waste:** for example solvents and reagents used for laboratory preparations, disinfectants, sterilants and heavy metals contained in medical devices (e.g. mercury in broken thermometers) and batteries
- **Pharmaceutical waste:** expired, unused and contaminated drugs and vaccines;
- **Cytotoxic waste:** waste containing substances with genotoxic properties (i.e. highly hazardous substances that are, mutagenic, teratogenic or carcinogenic), such as cytotoxic drugs used in cancer treatment and their metabolites;
- **Non-hazardous or general waste:** waste that does not pose any particular biological, chemical, radioactive or physical hazard.



HEALTHCARE WASTE CLASSIFICATION



REGULAR WASTE



Clear or Black Bags

Includes:

- ▶ IV bags and tubing
- ▶ Empty medication vials or containers
- ▶ Trash / wrappers
- ▶ Dressings
- ▶ Chux / underpads
- ▶ Empty foley bags and other drainage bags
- ▶ Disposable patient items
- ▶ Sanitary napkins
- ▶ Gloves



BIOHAZARDOUS WASTE



Red Bags, Red Containers, or Bags / Containers with Biohazard Symbols

Includes:

- ▶ Blood and all OIM (Other Infectious Materials)
- ▶ Blood tubing / bags / hemovacs / pleuravacs
- ▶ Soaked / dripping bloody dressings
- ▶ Contaminated waste from isolation patients
- ▶ Suction canisters or liners with bloody fluid or OIM



SHARPS WASTE



Red Sharps Containers, marked with Biohazard Symbol

Includes:

- ▶ All sharps (except those contaminated with chemo)
- ▶ All empty syringes with attached needles, empty tubexes, empty carpujects
- ▶ Trocars, introducers, guide wires, sharps from procedures, specimen devices in endoscopy, etc.
- ▶ **Examples:** Needles, broken glass vials, blades, scalpels, razors, pins, clips, etc.



PHARMACEUTICAL WASTE



Blue Containers, often with Locking Mechanism

Includes:

- ▶ All syringes, tubexes, carpujects with residual (pourable) medication
- ▶ IV bags and tubing with residual medication
- ▶ Partially used / residual prescription or over-the-counter medication
- ▶ **Examples:** Vials, tablets, capsules, powders, eyedrops, etc.

UNOPENED / UNUSED OR EXPIRED MEDICATIONS:
CONTACT MEDPRO



HAZARDOUS PHARMACEUTICAL WASTE



Return to Pharmacy; Black Containers

Includes:

- ▶ Hazardous R.C.R.A** Pharmaceuticals: Contact MedPro
- ▶ **Examples:** Inhalers with residual (if empty - regular trash) unused nicotine gum or patches, epinephrine (sales not included), physostigmine, silvadenec, etc.

SHARP WASTE

The term “sharps” more broadly refers to any object or device with sharp points or edges that could potentially puncture the skin.

In the medical setting, this includes needles, scalpels, syringes, and things that could break like capillary tubes, glass, and exposed ends of dental wires.

The combination of contamination with pathogens and the ability to break through the skin’s protection make them one of the most dangerous wastes produced in healthcare.



BLOODBORNE ILLNESSES

The Occupational Health and Safety Administration (OSHA) estimates that nearly 6 million healthcare workers are at risk of exposure to bloodborne pathogens from sharps-related injuries at any given time.

Sharps are most used in healthcare facilities, sharp waste is also generated in homes and workplaces such as tattoo parlors, exposing people in the general population to potential bloodborne infections.

Once a sharp is used, it has the potential to contaminate anyone whose skin is punctured by the object.

As a result, after use, sharps should be placed in a shatter- and puncture-proof container. Sharps waste containers are leak resistant and marked with a biohazard waste label.



INJURIES RELATED TO IMPROPER SHARPS DISPOSAL CAN OCCUR FOR THE FOLLOWING REASONS:

Inappropriate sharps disposal practices by the worker

Improper design of sharps disposal container

Improper selection of sharps containers for the procedures being performed (e.g., surgical instruments)

Overfilling sharps disposal container.



HOW TO MANAGE SHARP WASTE?

The safest and best way to dispose of sharps is to place them into appropriate sharps containers immediately after use.

This helps reduce the risk of injury and can eliminate the spread of bloodborne pathogens.

As we've mentioned before, disposal should be done in puncture-proof, leak-proof, closed, and clearly labeled containers.



STAY SHARP

PROPER USE SAVES RESOURCES

Use sharps containers for:



Needles
and syringes



Glass Pasteur
pipettes



Scalpel and
razor blades



Blood vials



Microscope slides
and coverslips



Glassware
contaminated with
infectious agents

Not on the list? Leave it out!

Don't throw the following items into the sharps containers: plastic items, beverage containers, laboratory glassware, solvent/chemical bottles, light bulbs, any paper materials, silicon wafers, plastic pipettes and pipette tips, aerosol cans or cans of any type, scintillation vials, and liquids (except for blood in vials).

SHARPS CONTAINERS

Sharps containers are commonly used across the health care industry to dispose sharp waste.

These containers are also commonly used in the homes and workplaces of individuals who require them for disease management.

Between 1995 and 2007, the Centers for Disease Control and Prevention (CDC) calculated that 41% of all needlestick injuries occur after use, and 22% occur due to improper disposal or during the disposal process.

For this reason, appropriate sharps disposal containers are essential to maintain the safety of health care workers, patients and others.



WHAT IS A SHARPS CONTAINER?

A sharps container is a hard plastic bin used in medical facilities to dispose of sharp medical instruments safely. According to the Food and Drug Administration (FDA), sharps disposal containers must have the following characteristics to ensure safety:

- Made with heavy-duty plastic
- Leak-resistant
- Closed with a fitted, puncture-resistant lid
- Upright and stable
- Properly labeled with a hazard warning

Most sharps disposal containers come with a marked line or another indicator system that shows when the container is full.

Typically, a sharps container is full when it reaches three-quarters of its capacity. Once the bin reaches this limit, it is time to follow guidelines for proper disposal.



WHEN DISPOSING SHARPS IN A CONTAINER

Place the sharp end in first i.e. pointing it away from the body;

Drop the item in rather than push;

Do not place hands inside the container.

Sharps containers should be replaced when 75% full.

Sharps containers should be sealed after use.

Ensure that the sharps container is closed for disposal.



ALTERNATIVE SHARPS DISPOSAL CONTAINERS

If you cannot find a designated sharps disposal container, you can use a heavy-duty plastic household container as a substitute.

The best recommendation is a liquid laundry softener or laundry detergent bottle with a lid. It must have a lid that can avoid leaks, and it should be able to sit upright without falling over.

Do not use other household containers like milk jugs, water bottles, clear plastic or glass containers or soda cans, as these are prone to puncture or shatter.

If you need to use an alternative sharps disposal container, always dispose of the sharp point-first and close the container immediately afterward. If the container becomes full, seal it with duct tape and label it clearly as a sharps disposal container so it is not put in with the normal trash or recycling.



SAFE HANDLING PROCEDURES

If you use sharps during the course of your work, there are some basic procedures for safe handling:

- Do not recap / re-sheath needles or lancets.
- Scalpel blades should be removed and disposed of using artery forceps.
- Do not ask for a sharp item to be taken from you or to be disposed of by someone else.
- Do not walk unnecessary distances with a sharp in hand.
- Dispose of sharps in an appropriate sharps container; never in a waste bin or plastic bag.
- Dispose of sharps immediately after use – not later – to avoid needlestick injuries.



WHAT TO DO WHEN A SHARPS INJURY OCCURS

Locate your nearest first aid officer, appropriate action should include:

Calming the injured person.

- If there is no foreign body lodged, the wound should be cleaned with antiseptic.
- If bleeding occurs a dressing would also be applied.
- If part of a hypodermic needle is lodged, it should not be removed and treated accordingly to avoid further penetration.
- The injured should be advised to go immediately to a doctor or attend the Accident and Emergency section at your nearest Hospital for further treatment. If necessary, an ambulance would be called.
- If the sharp is a hypodermic needle it should be collected using gloves, tongs and a sharps container.
- An Accident/Injury/Incident Report form should be completed and forwarded to your Occupational Health and Safety Coordinator.



CONCLUSION

Medical waste is a sort of hazardous wastes generated by hospitals, clinics, health-care centers and laboratories etc

They are 7 types of waste: Radioactive waste, solid waste, liquid waste, sharp waste, infectious waste, pathological waste, chemical waste, pharmaceutical waste, cytotoxic waste, non-hazardous or general waste

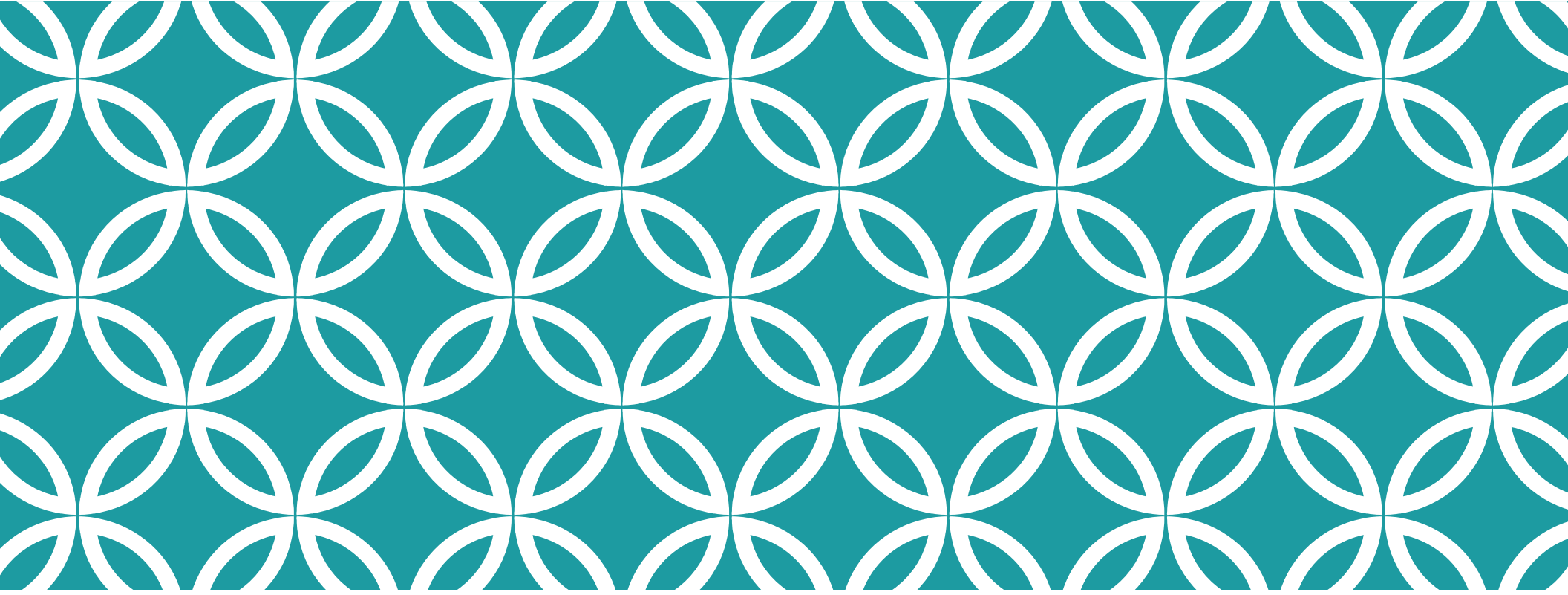
The term “sharps” more broadly refers to any object or device with sharp points or edges that could potentially puncture the skin.

Sharp container is the best solution how to manage sharp waste

Sharps containers should be replaced when 75% full

Once sharp injury occur please find your first aid officer





THANK YOU FOR
YOUR ATTENTION

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