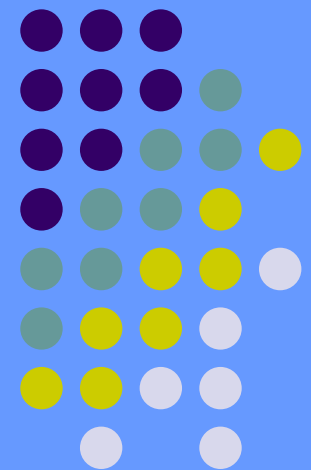


# BASIC CONCEPTS OF INFECTION CONTROL

## Healthcare Waste Management

International Federation of  
Infection Control

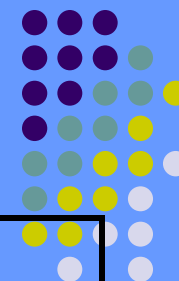


# Waste

- Healthcare activities inevitably generate health care waste
- Proper management creates a safer environment for staff, solid waste workers, and the public
- Management is dictated by professional standards, local laws and national legislation, and available resources



# Definitions



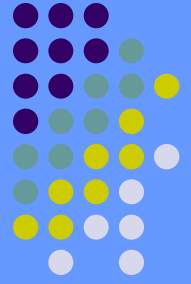
<b>Waste category</b>	<b>Description and examples</b>
Infectious waste	Suspected to contain pathogens, i.e., laboratory cultures, waste from isolation wards. Also includes pathological and sharps waste.
Pharmaceutical waste	Contains pharmaceuticals
Genotoxic waste	Contains substances that are capable of causing damage to DNA
Chemical waste	Contains chemical substances, i.e., laboratory reagents, film developer, disinfectants
Radioactive waste	Contains radioactive substances



# Infectious Waste

- Microbiological - culture plates, growth media, etc.
- Sharps – any object that can cause percutaneous injury
- Pathological – human tissues
- Swabs, dressings, contaminated with potentially infectious fluids
- Blood – tubes of blood, units of blood, blood and blood products, and other containers used to collect blood



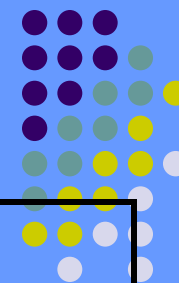


# Collection of Waste

- Label with the international biohazard symbol
- Do not overfill
- Segregate from regular garbage



# Collection Containers



Type of Waste	Specifications for Container or Bag	Examples
Sharps	<ul style="list-style-type: none"><li>● Be puncture resistant, leak-proof, and durable.</li><li>● Be closable if used to transport sharps waste.</li></ul>	<ul style="list-style-type: none"><li>● Empty bleach bottle</li><li>● Thick rigid cardboard box</li><li>● Rigid plastic container</li></ul>
Non-sharps biomedical solid and semi-liquid	Plastic bag that is leak-proof	Red or yellow plastic bags
Non-sharps biomedical liquid waste	Leak proof container	Bottles, vials, plastic containers, canisters, pails





# In-house Transport

- Waste transporters should wear gloves
- Carts used within the facility should be
  - Fully enclosed
  - Used only for that purpose and not for regular garbage
  - Cleaned and disinfected regularly





# Storage

- Storage area protected from the weather
- Minimise the impact of odours
- Do not store longer than 3 days
- Protect from animals
- Kept clean



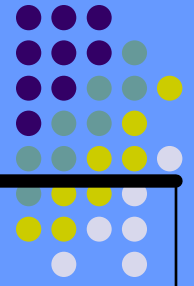


# Treatment

- Do not use campfire-style open-pit burning, burning in a cement firebox, burning in drums, or open-burn cement-block incinerators
- The use of a small in-house incinerator, the local crematorium, and newer large-scale medical waste incinerator should be replaced where possible



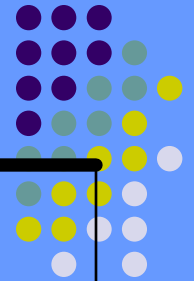
# Treatment



TYPE OF WASTE	METHODS	NOTES
All infectious wastes	Packaging, transport, and burial in special landfill trenches	Used by large facilities (hospitals)
<i>except</i> cultures and anatomical parts	Small on-site burial pits	Used in centres away from coastal areas/wells, in areas that do not flood, and where the water table is > 1.5 metres deeper than bottom of the pit
	Cement encasings	Used in health centres near coastal areas or in areas with a shallow water table
Cultures	Small on-site autoclave	Preferably in the laboratory



# Treatment



TYPE OF WASTE	METHODS	NOTES
Anatomical parts	Interment at burial grounds or cemeteries	For body parts
	Cremation	? use a local crematorium
Placenta waste and	Small on-site burial pits or interment	These are acceptable methods
small-tissue waste	Composting method	This is an acceptable method
Free-flowing blood and body fluids	Sanitary sewer	Applies to health facilities with sanitary sewers





# Management

- Have a person or group responsible for healthcare waste and waste management plans
- Waste management can be incorporated into policies, procedures, and programmes to minimize the risk of spreading infection in and from the hospital, thereby protecting patients, health-care workers, and the public



# Training

- Initiate a training programme to present the elements of a plan and begin its implementation.
- Initial training could emphasise safe waste management practices and address issues
- Practical training should be provided to all those involved in handling, packaging, transporting, and disposing of waste





# Key Points

- Sharps are the most likely healthcare waste to cause injury and/or exposure. Therefore, a waste management program must focus on sharps handling
- Proper segregation will reduce the risk of disease transmission and minimise the amount of potentially infectious health care waste generated





# Key Points

- A range of treatment options for waste are available
- Consideration should be given to those that reduce the opportunity for exposure and not necessarily inactivation of microorganisms
- Education and regular reinforcement of practices are the keys to success



# References and Further Reading



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