

MEDICAL AND SHARP WASTE MANAGEMENT

1. PURPOSE

To provide a process governing the management of infectious and non-infectious medical waste including monitoring and control methods for safe handling, storage, labeling, segregation, reporting, transportation, safe disposal and treatment processing in accordance with the health and safety guidelines, laws and regulations.

2. APPLICABILITY

To all employees, patients and visitors at all health care facilities in the Kingdom of Saudi Arabia.

3. RELATED REFERENCES

- 3.1. OSHA Technical Manual - Section VI: Chapter 2
- 3.2. Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) National Hospital Standards, 3rd Edition (2015) - LD.3.2, MM.13, FMS.1, FMS. 1.1.3, FMS.4.3, FMS.14, FMS.15, HR.13.4.7 and IPC.26.
- 3.3. Joint Commission International Accreditation Standards for Hospitals, 6th Edition (2017) - FMS.5 ME 1-5, FMS 5.1 ME 1-4, PCI.7.2 ME 1 & 2 and PCI 7.3 ME 2 &3.4
- 3.4. WHO, Safe management of wastes from health-care activities, 2nd edition.2014.
- 3.5. Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC), Guidelines for Environmental Infection Control in Health-Care Facilities. 2003.
- 3.6. The unified law for managing the healthcare waste in the Cooperation Council for the Arab States of the Gulf (CCASG) and Implementing regulations. 2006.

4. DEFINITIONS

- 4.1. **Competent Authority** refers to the environmental body, organization or any other party named by the State such as Presidency of Meteorology and Environment (PME) and King Abdulaziz City for Science and Technology (for Radiation Safety).
- 4.2. **Container** refers to a receptacle used to retain liquids, solids or gaseous substances (e.g. bottles, pipelines, bags, barrels, boxes, cans, cylinders, drums, cartons, vessels, vats, and stationary or mobile storage tanks).
- 4.3. **Generator**, for the purpose of this document, refers to any legal individual or body (such as healthcare facilities and its departments), who generates medical waste.
- 4.4. **Cytotoxic** Agents refer to substances used in the treatment of malignant and other diseases which are known to be potentially carcinogenic, genotoxic, mutagenic, teratogenic or in any way hazardous or lethal to cell DNA growth and synthesis. It is commonly used in the treatment of cancer in the form of chemotherapy.
- 4.5. **Healthcare Waste (Medical Waste)** refers to any waste generated by facilities that provide various healthcare services (hospitals, home healthcare services, laboratories, pharmacies, vaccine manufacturers, veterinary and research centers).

These are divided into hazardous and non-hazardous medical waste.

4.5.1. **Hazardous Medical Waste** refers to any hazardous material no longer in use that represents a threat to human life, health or the environment.

4.5.1.1. **Cytotoxic Waste** refers to any residual cytotoxic agents that remains following patient treatment and any materials or equipment (considered as waste) potentially contaminated with cytotoxic agents (not including contaminated body fluids/secretions).

4.5.1.2. **Human and Animal Body Parts and Organs**, for the purpose of this document, refers to waste which contain human or animal tissues (e.g. organs or their parts, fetal and placental tissues and animal carcasses), blood, blood components and body fluids.

4.5.1.3. **Infectious Waste**, refers to waste which contains biological agents (e.g. bacteria, viruses, parasites, fungi) in quantities or at concentrations sufficient to cause infectious disease to individuals susceptible to infection (**Appendix C**). Any items contaminated (i.e. Dripping) with blood or body fluid is considered to be to be infectious.

4.5.1.4. **Sharps Waste** refers to waste which contains sharp items such as vaccine glass vials, needles, syringes with needles, scalpels, lancets, razors, broken glass or any other sharp object that has the potential to cut or puncture the body or skin.

4.5.2. **Non-hazardous Medical Waste** refers to waste similar to that found in municipal waste generated by administrative departments, general cleaning work within healthcare facilities and items not contaminated (i.e. not Dripping) with blood or body fluid. This waste constitutes the larger portion of healthcare waste and is treated in a way similar to general/municipal waste.

4.6. **Label** refers to a warning sign, emblem, sticker or marker affixed to or stenciled onto a container or plastic waste bag for identification and listing of contents sealed within as applicable to this policy.

4.7. **Personal Protective Equipment (PPE)** refers to protective clothing, helmets, goggles or other garments or equipment designed to protect an employee's body from injury or exposure to hazardous environment.

4.8. **Transportation Document (Manifest)** refers to a form that contains all data, duly completed and signed by the generator, transporter/carrier and the clearance agent. It is made up of several copies that accompany medical waste shipments being transported from generating facilities to the Waste Treatment and Disposal Facility.

4.9. **Transporter/Carrier** refers to the legal individual or body (company, public/private establishment) contracted to transport hazardous medical waste to a Waste Treatment and Disposal Facility.

4.10. **Waste Incineration** refers to the disposal process of solid, liquid and gas waste by burning waste at high temperatures. Its generated gas or other materials/components have no impact on the environment and its new components contain no hazardous materials.

4.11. **Waste Segregation** refers to the separation of a group of healthcare waste (by the generator) at the site of their generator within the facility and during stages of collection, storage and transportation within the facility.



- 4.12. **Waste Storage** refers to temporary storage for hazardous medical waste at a specific collection site.
- 4.13. **Waste Treatment and Disposal Facilities** refer to facilities in which the operations of changing biological, chemical or physical characteristics of healthcare waste are carried out for elimination of hazards, for safe use in the environment and to health.

5. PROCEDURE

5.1. Infectious Waste Management

5.1.1. Requirements from the Generators of Infectious Medical Waste

- 5.1.1.1. Infectious medical waste generators will make efforts to reduce the level of generation of this waste, both in quantity and quality.
- 5.1.1.2. **Empty Glass Medicine Bottles** will be disposed of in yellow sharp containers.
- 5.1.1.3. **Empty Non-Contaminated Unbroken Glass Bottles** (e.g. beverage bottles) will be disposed of in a separate container until collected in cardboard boxes by housekeeping staff for disposal and to be considered as non-regulated waste.
- 5.1.1.4. **Empty Vaccine and Antibiotic Containers or Bottles** will be disposed of in a biohazard sharps container.
- 5.1.1.5. **Broken Glass** will be disposed of in a sharp container.
- 5.1.1.6. **IV Tubing and syringes** will be disposed as per (Appendix D)
- 5.1.1.7. **Wastes from patients on isolation will be disposed as per (Appendix C)**
- 5.1.1.8. **List of patients care related waste items and where to dispose are provided in (Appendix E).**

5.1.2. Segregation and Disposal of Infectious Medical Waste:

- 5.1.2.1. Each Infectious medical waste generator will segregate Infectious from non-Infectious waste at the generation site. The waste generator will be responsible for segregation and collection of waste in containers specially made for this purpose within Program facilities and departments.
- 5.1.2.2. **Infectious Waste** will be collected in yellow plastic bags bearing the phrase **Hazardous Medical Waste** (in Arabic and English) along with the Bio-Hazard logo.
- 5.1.2.3. **Sharps Waste** will be disposed of in yellow thick, leak proof, puncture proof containers, bearing the phrase **Hazard-Sharp Items** (in Arabic and English) and the Bio-Hazard logo.
- 5.1.2.4. **Body Parts and Organs** will be placed in red plastic bags bearing the phrase **Bio-Hazard** (in Arabic and English) and the Bio-Hazard logo, and will be stored in the mortuary until dealt in accordance to Sharia Law (Islamic Law) or as deemed necessary by the relevant country.
- 5.1.2.5. **Highly Infectious Waste** (microbial cultures, viruses, TB, Brucella, Fungi) will be collected in plastic bags suitable for pre-treatment with autoclave within the generation site; these bags will bear the phrase **Highly Infectious Waste** and the Bio-Hazard logo. Following treatment, waste will be placed in yellow bags bearing the phrase **Hazardous Medical Waste** (in Arabic and English) and the Biohazard logo. (Appendix A) and (Appendix B).

5.1.3. Sticker Labeling and Biohazard Logo