

## PROJECT PRAKASH

### KEY LEARNING POINTS

**Training:** Hepatitis Induction Program

**Topic:** Biomedical Waste Management

**Faculty:** Dr Ashish Maheshwari, Assistant Professor, Transfusion Medicine, ILBS

**Period:** 2021 - 2022

**Attendees:** In-Service Nurses

- ✚ **Bio-medical waste (BMW):** According to BMW (Management and Handling) Rules, 1998 of India, "Bio-medical waste" means any waste produced during the diagnosis, treatment, or immunization of human or animal research activities pertaining thereto or in the production or testing of biological.
- ✚ **Steps in Bio-Medical Waste Management**
  - Segregation & pre-treatment at the site of generation as per colour coding
  - Collection of segregated waste from all areas of the hospital. Emergencies (3 times/day), OPDs and Labs (2 times/day), Wards and offices (Once a day).
  - Transportation from various areas of the hospital to storage site.
  - Barcoding and weighing of bags at storage site.
  - Transportation for final disposal at common biomedical waste treatment facility (CBMWTF).
- ✚ Segregation/Separation of entire waste generated in a hospital should be done in defined waste categories.
- ✚ Segregation helps in the recycling of waste.

### Disposal of BMW as per colour-coded bins



- ✚ No Health Care Facility shall establish an on-site BMW treatment and disposal facility if CBMWTF is present within 75 km.
- ✚ BMW is can only be stored for a period varying from two to twelve hours and then must be sent for treatment & disposal.
- ✚ **Cleaning agents and disinfectants**
  - 1% freshly prepared Sodium Hypochlorite can be used as a disinfectant for cleaning and disinfection
  - Leaving the solution for a contact time of at least 10 minutes is recommended.
  - Alcohol (e.g. isopropyl 70% or ethyl alcohol 70%) can be used to wipe down surfaces where Sodium Hypochlorite /bleach is not suitable, e.g. metals.
- ✚ High touch surface areas should be cleaned every 3 – 4 hours, whereas low touch surfaces can be cleaned at least once daily.
- ✚ **Safety measures for BMW Disposal**
  - All healthcare workers generating biomedical waste should adopt universal precautions and appropriate safety measures while handling bio-medical waste.
  - It should be ensured that: drivers, collectors and other handlers are aware of the nature and risk of the waste.
  - Written instructions should be provided regarding the procedures to be adopted in the event of spillage/ accidents.
  - Protective gears to be provided and instructions regarding their uses to given.
  - Workers are protected by vaccination against tetanus and hepatitis B.
  - Regular and updated training of healthcare staff must be ensured.
- ✚ **Sterilization of BMW**
  - **Autoclave:** An autoclave is a machine that uses steam under pressure to kill harmful bacteria, viruses, fungi, and spores on items that are placed inside a pressure vessel.
- ✚ **Incineration of BMW**
  - Destruction of waste material by burning- In incinerators or combustion chambers.
  - It is high-temperature dry oxidation process that reduces organic and combustible waste to inorganic incombustible matter and results in a very significant reduction of waste volume and weight. The method is usually selected to treat wastes that cannot be recycled, reused or disposed of in a landfill site.

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