

Bio Medical Waste Management

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What is BIO MEDICAL WASTE (BMW)?

Any waste, which is generated during diagnosis, treatment or immunization of human beings or animals or in research activities pertaining there to or in production or testing of biological or in health camps

Source: Schedule I appended to BMWM Rules, 2016

Purpose of BMW Management

- **To prevent the environment from being a reservoir and vehicle for the spread of micro-organisms involved in HAIs (Hospital Acquired Infections)**
- **To guide the handling of contaminated solid and liquid waste material.**

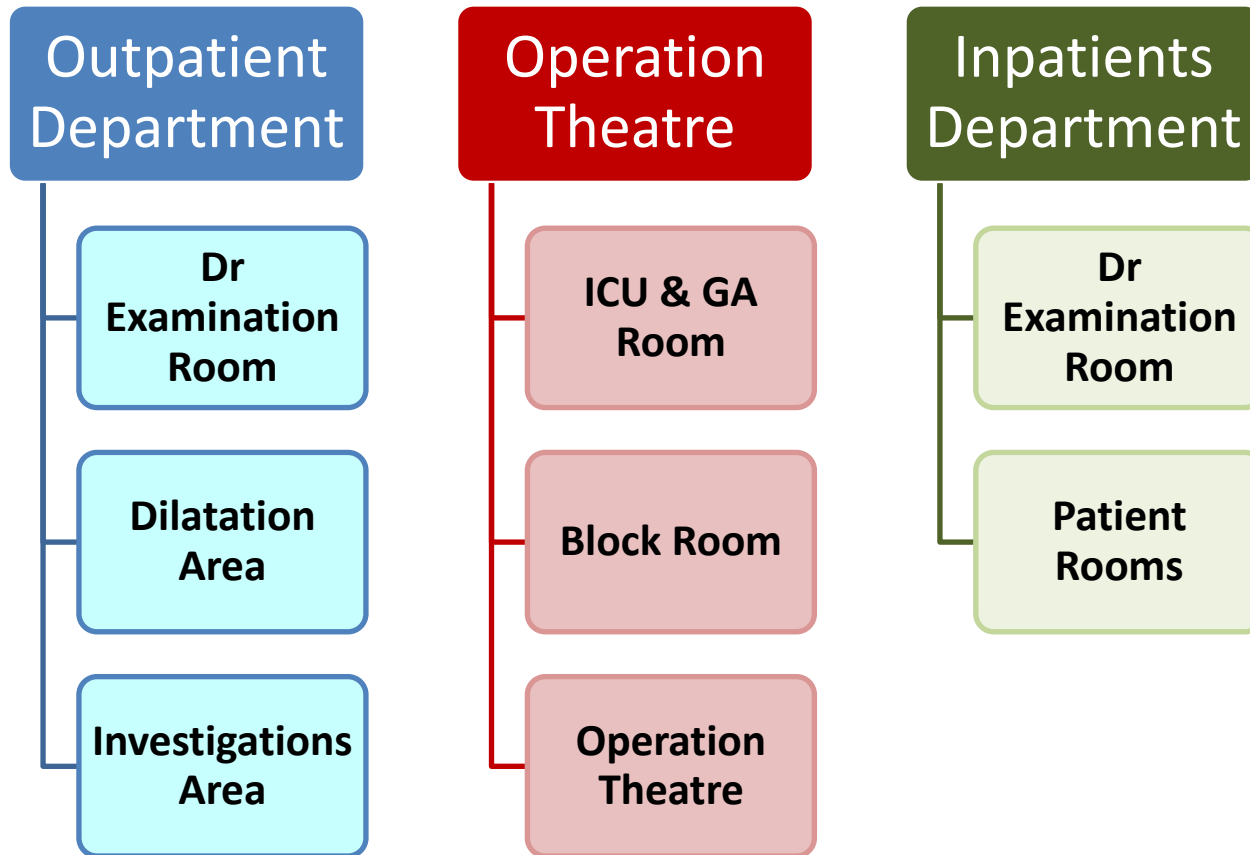
Steps involved in BMW MANAGEMENT

- **Survey** the waste generating areas
- **Segregation** and packaging
- **Collection** of waste
- **Transportation** to storage area
- **Storage** of waste (not beyond 48 hrs.)
- **Transportation** of waste from storage
- **Treatment** of waste
- **Disposal**

Inside
the
hospital

Outside
of
hospital

BMW Generating Areas



BMW Segregation in OPD | OT | WARD



BMW Segregation 1

Colour Coding

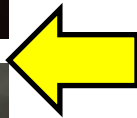
YELLOW

Items

Treatment option

ANATOMICAL WASTE, Cotton, Bandage, Wiper, Face mask, expired, discarded medicine, infected tissue paper

Incineration / Deep Burial



BMW segregation 2

Colour Coding

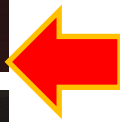
RED

Items

Any kind of **PLASTIC or RUBBER** items like bags, Gloves, Syringe, Tubes, empty drops plastic containers...

Treatment option

Shredding after Autoclaving



BMW segregation 3

Colour Coding

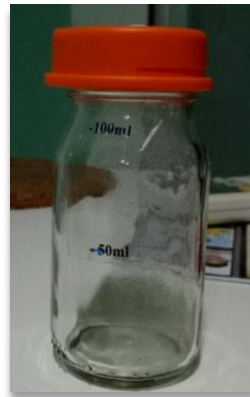
BLUE

Items

Broken or empty **GLASS** items like bottles, syringes, vials

Treatment option

Destruction & Shredding after autoclaving /Chemical treatment



BMW segregation 4

Colour Coding

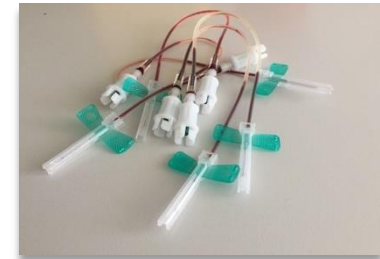
WHITE
PLASTIC CONTAINER

Items

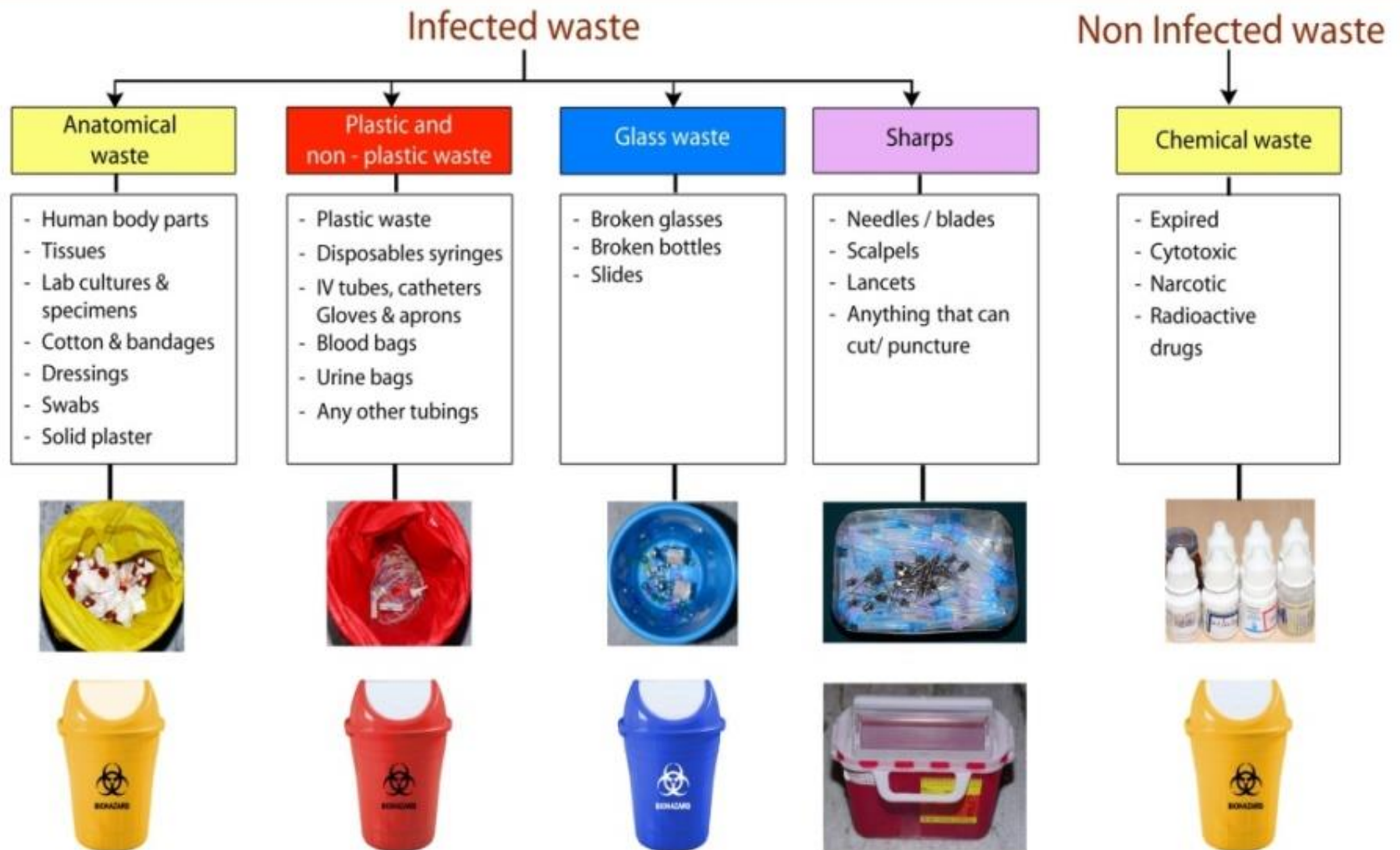
Needle, Knife, Blade, Lancet and any other
SHARP items

Treatment option

Destruction & Shredding after
autoclaving/Chemical treatment



Bio Medical Waste Segregation



Note : Use **green coloured bin** for other general waste like paper, food, etc. For clarifications contact the Infection control team.

General Waste (Non Infected Waste)

Colour coding	Items	Usage	Treatment option
Green color Bag	plastic materials & papers, disposables, cardboards, metal containers, office waste, food waste	This container is used in the OT, OP, Ward and all common areas for paper and food waste	Deep Burial in the pit



Packaging & Transporting

Packaging & Transporting

- Bags 3/4th filled should be tied
- Packed and removed from the generating area



BMW storage and disposal

- Stored in the storage area
- Weighing & Recording in a separate register
- Handed over to the outsourced agency - RAMKY everyday



Disposal to the treatment area



General Waste Disposal



BMW Treatment (outside of hospital)

Disposal of Waste in Yellow Bag

Incineration is a waste treatment **process** that involves the combustion of organic substances contained in waste materials. **Incineration** and other high-temperature waste treatment systems are described as "thermal treatment". **Incineration** of waste materials converts the waste into ash, flue gas and heat.



Disposal of Waste in Red Bag

Autoclaving: Autoclaves are used 90% of the time to treat medical waste. They are closed chambers that apply heat, pressure and steam to sterilize the medical waste and to kill all the microorganisms.

Shredding: A **plastic shredder** is a machine used to cut **plastic** into smaller pieces for granulation. In the process, large **plastic** items are fed into the **shredder**. Moving at a slower speed than a granulator, blades break the **plastic** down into smaller chunks.



Autoclave Machine

Shredder



Disposal of Waste in Blue Bag/White container

Secured land fill: The incinerator ash, discarded medicines, cytotoxic substances, Sharps, Glasses and solid chemical waste should be treated by this option. The shredded particles could be sent to recycling plants



Consequences of Poor Segregation

- May lead to penalty and legal action
- Affect the recognition of organization
- It has become more rigorous due to COVID-19
- High risk for infection
- Re-segregation may not be possible after transportation
- Appropriate Treatment will not be possible

