



EXPLORING THE AWARENESS LEVEL OF BIO-MEDICAL WASTE MANAGEMENT

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Abstract:

In this study, we discussed Tamilnadu state pollution control Board guidelines, classification of waste, Biomedical segregation policy, color coding, and its types of container for disposal of Biomedical waste. The below details were undertaken among Healthcare employees.

Key Words: Biomedical Waste Management, TNPCB, Color Coding, Color-Coded Bins, Segregation, Mous And BMW., Biomedical Waste Disposal & Biomedical Waste

Introduction:

Bio-medical waste (BMW) is a term used in the Bio-medical Waste (Handling and Management) Rules, 1998. It is defined as any waste, which is generated during the diagnosis, treatment, or immunization of human beings or animals or in research laboratory origin. Based on the type we can easily able to separate the waste into different color-coded bins. Every Hospital should get a license from Tamil Nadu Pollution Control Board form-3. Based on their bed strength they will give the quantity permitted for the waste handling process and also we have to maintain proper outsource BMW collection agencies MoU.

Scope of the Study:

To assess knowledge, attitude, and practice about biomedical waste management and associated factors among healthcare professionals and normal people.

Review of Literature:

Pramod Kumar explained the classification of waste in their Slideshare which was published in September.28,2016 "He said Something which is not put into proper usage at a given time" is called waste. <https://itsmeinkpen.blogspot.com/> explains that Bio-medicals waste should be properly disposed of under the guidelines of the Injection Control Team. Tamilnadu state pollution control Board. The hospital should always ensure that the non-Biomedical wastes may not be mixed with Bio-medical waste under any circumstances.

Tamilnadu State Pollution Control Board:

Some Terms and Conditions authorization in Form-3 are listed below-The authorization shall comply with the provisions of the Environment (Protection) Act, 1986 and the rules made thereunder. The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the Tamil Nadu State Pollution Control Board. The person authorized shall not rent, lend, sell, transfer or otherwise transport the Bio-Medical wastes without obtaining prior permission of Tamil Nadu State Pollution Control Board. Any unauthorized change in personnel, equipment, or working conditions as mentioned in the application by the person authorized shall constitute a breach of this authorization. The authorized person must take prior permission of the Tamil Nadu Pollution Control Board to close down the facility and such other terms and conditions may be stipulated by Tamil Nadu Pollution Control Board. Any other conditions for compliance as per the Guidelines issued by the MoEF & CC or CPCB from time to time. All the biomedical wastes generated in the Hospital should be properly segregated and collected in color-coded bags and should be sent to the common facility. The unit should maintain proper records for the Biomedical wastes generated and sent to the common facility. The unit should provide sufficient numbers of needle cutters for destroyers/needle cutters for destroying the needles before handing over the same to the common facility. The hospital should always ensure that the entire quantity of liquid waste generated in the hospital is disinfected by chemical treatment using at least 1% hypochlorite solution or any other chemical reagent before discharging into drains/septic tanks. The hospital should ensure that the un-segregated Biomedical wastes are not sent to the common facility under any circumstances. The Biomedical waste should always be stored temporarily in a separate area specifically marked for temporary storage only, before handing over the same to the common facility. The hospital should always ensure that the non-Biomedical wastes may not be mixed with Bio-medical waste under any circumstances. The hospital should provide a separate digital weighing machine to quantify the Biomedical waste generated in the hospital.

Classification of Waste:

The waste materials generated at healthcare facilities, such as hospitals, clinics, physician's offices, dental practices, blood banks, veterinary hospitals, and medical research facilities are said to be Medical waste.

The waste comes from hospitals or medical care establishments. Known as Clinical waste and Municipal Solid waste includes commercial and residential wastes generated by a community. Waste that arises during storage and spillage of solids, drugs, and chemicals that may be toxic or contaminated such as Laboratory waste. Tissue, organs, body parts, and human fetuses are Pathological waste. The portion of medical waste that could transmit an infectious waste is said to be Infectious waste

Biomedical Segregation Policy:

Bio-medical waste segregation as per the 2016 reviewed policy:-Based on the following color-coded bins, we have to dispose of the BMW. Human Anatomical waste, soiled waste, Expired (or) Discarded medicines, Chemical waste, Chemical liquid waste, Discarded linen are comes under the color Yellow and Contaminated waste (Recyclable) are in Red. Glassware, metallic body implants are in Blue and sharp waste is in a Puncture-proof container, and as we known General waste is in Green. Because of non-proper BMW segregation, we are facing lots of problems like carbon emissions, Incineration, Chemical disinfectants, Plastic, Improper Disposal. This may cause more health issues like meningitis, parasitic infections, Blood poisoning, Hepatitis, Candida albicans, Infections of the skin, Diseases from vaccines, MRSA, Sexual infections, Bloodstream infection, Radioactive toxicity, health problems associated with air and water pollution, HIV, Ebola and also environmental impact.

Colour Coding & Types of Container for Disposal Of BMW:

S.No	Colour Coding	Type of Containers
1.	Yellow	Plastic bag
2.	Red	Disinfected container/plastic bag
3.	Blue/white translucent	Plastic bag/Puncture-proof Container
4.	Black	Plastic bag

Control Measures:

To control this, the healthcare industry has to take steps like Minimize medical waste, Raise more awareness around proper medical waste disposal, select safe and environmentally friendly disposal options, reducing excessive transportation that occurs with third-party haulers, adequate care in handling to prevent healthcare-associated infections, Appropriate disposal of medical waste, Avoid medical waste, Government regulations, subsidies Research, Education, Work together. Have to include more BMW topics in Nursing and also have to conduct a training class for all the staff who are dealing with the hospital, Need more awareness about HIC (Hospital Infection Control).

Limitation:

Since this study was conducted for giving some basic knowledge about BMW, it will not fully cover all the Biomedical waste disposal processes.

Suggestions:

- Have to include more BMW topics in their subject for nursing.
- Have to conduct more training classes for nursing students.
- Have to create more awareness about HIC (Hospital inspection Control)

Conclusion:

In this covid pandemic, we are all dealing with hospitals, so it is necessary to have some basic knowledge about Biomedical waste management. Lack of segregation practices results in the mixing of hospital wastes with general waste making the whole waste stream hazardous.

Scope of Further Study:

My next article will be based on “Effects of Biomedical waste management” on Tiruppur District.

References:

1. Bio-medical waste Management manual
2. <https://itsmeinkpen.blogspot.com/>
3. Tamilnadu pollution control website
4. Guidebook for Pre-Accreditation Entry-Level Standards for Small Healthcare Organisation (SHCOs)