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Estimation of Biomedical Waste Generated in a Tertiary Care Hospital in New Delhi

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Abstract : Introduction: As much as the Health Care is necessary for the population, so is the management of the Biomedical waste produced. Biomedical waste is a wide terminology used for the waste material produced during the diagnosis, treatment or immunization of human beings and animals, in research or in the production or testing of biological products. Biomedical waste management is a chain of processes from the point of generation of Biomedical waste to its final disposal in the correct and proper way, assigned for that particular type of waste. Any deviation from the said processes leads to improper disposal of Biomedical waste which itself is a major health hazard. Proper segregation of Biomedical waste is the key for Biomedical Waste management. Improper disposal of BMW can cause sharp injuries which may lead to HIV, Hepatitis-B virus, Hepatitis-C virus infections. Therefore, proper disposal of BMW is of upmost importance. Health care establishments segregate the Biomedical waste and dispose it as per the Biomedical waste management rules in India. Objectives: This study was done to observe the current trends of Biomedical waste generated in a tertiary care Hospital in Delhi. Methodology: Biomedical waste management rounds were conducted in the hospital wards. Relevant details were collected and analysed and sites with maximum Biomedical waste generation were identified. All the data was cross checked with the commons collection site. Results: The total amount of waste generated in the hospital during January 2014 till December 2014 was 6,39,547 kg, of which 70.5% was General (non-hazardous) waste and the rest 29.5% was BMW which consisted highly infectious waste (12.2%), disposable plastic waste (16.3%) and sharps (1%). The maximum quantity of Biomedical waste producing sites were Obstetrics and Gynaecology wards with a total Biomedical waste production of 45.8%, followed by Paediatrics, Surgery and Medicine wards with 21.2 %, 4.6% and 4.3% respectively. The maximum average Biomedical waste generated was by Obstetrics and Gynaecology ward with 0.7 kg/bed/day, followed by Paediatrics, Surgery and Medicine wards with 0.29, 0.28 and 0.18 kg/bed/day respectively. Conclusions: Hospitals should pay attention to the sites which produce a large amount of BMW to avoid improper segregation of Biomedical waste. Also, induction and refresher training Program of Biomedical waste management should be conducted to avoid improper management of Biomedical waste. Healthcare workers should be made aware of risks of poor Biomedical waste management.

Keywords : biomedical waste, biomedical waste management, hospital-tertiary care, New Delhi
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