

RESEARCH PAPER:

Biomedical waste management in a large teaching hospital

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SUMMARY

The methodical "Hospital waste Management" is of critical significance as its inappropriate management poses risks to health care workers, waste handlers, patients, community in common and mainly the environment. Keeping this in view, bio-medical waste management was studied at "J.A. Group of Hospitals, Gwalior" for a period of three months. Quantity of solid waste generated per bed per day was found to be 2.02 Kg. Inpatient area generated maximum solid waste (69.09 %) followed by supportive services (14.70%). Other areas like operation theatre, Emergency and OPD together produced lesser amounts (16.09 %). In the waste management processes, segregation and storage were not properly followed in J.A. Group of Hospitals, Gwalior. However, collection and transportation activities to final disposal are being practiced. The policy of quality control system in waste management needs to be improvised.

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Biomedical waste,
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The biomedical waste management and handling rules of 1998 of Govt. of India requires every occupier of an establishment generating bio-medical waste, which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank by whatever name called to take all steps to make sure that such waste is handled without any adverse effect to human health and environment.

The biomedical waste by its definition includes solids or fluids, their containers and any intermediate product generated during diagnosis, treatment or immunization, in research pertaining there to or in the production of testing of biological and animal waste. Hospital waste generated from different units of hospitals can cause serious health hazards like spread of HIV infection, Hepatitis B and C etc. According to WHO, around 85 % of the hospital waste is non-hazardous, 10 % infective and remaining 5 % non-infective but hazardous.

Management of hospital waste is a main challenge to the hospitals. This waste has become a risk factor to the health of the patients, hospital staff extending beyond the restrictions of the medical establishments to the general population and to the environment, hence the management of hospital waste at

this tertiary care hospital was studied.

A study has been conducted at about 1200 bedded teaching hospital (J.A. Group of hospitals) including J.A. Hospital and Kamla Raja Hospital to find out the quantity of waste generated and the methods of disposal.

MATERIALS AND METHODS

Bio-medical waste management was studied at J.A. Group of hospitals and the average bio medical waste was calculated by recording bio medical waste accumulation fortnightly from each study site randomly from September 2008 to November 2008. A study of the various hospital areas was done to study the process of collection, segregation, storage, transportation, treatment and disposal of hospital waste. Through personal observations, the area-wise generation of waste from inpatients, accident and emergency, operation theatre, OPD, laboratories, kitchen, CSSD and pharmacy was recorded. The actual type and amount of waste was physically inspected to record different types of waste and their collection in different containers. These wastes were subjected to weighing by a balance and the weight was recorded. The emphasis was laid on separate collection of bio-medical waste. Separate containers were used for collection of such waste. Most of the officials

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