
Study to Assess the Knowledge of Hospital Waste Management among Healthcare Personnel at Medical College in Haryana

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Abstract

Background: Hospital Waste collection and proper disposal has become a significant concern for both the medical and general community. It is estimated that 10-25% of healthcare waste is hazardous, with the potential to create a variety of health problems. Handling, segregation, mutilation, disinfection, storage, transportation and final disposal are vital steps for safe and scientific management of Hospital waste in any establishment.

Objectives: To assess the knowledge of hospital Waste management among healthcare personnel working in a tertiary care centre.

Methods: To assess the knowledge of hospital Waste management among healthcare personnel working in a tertiary care hospital. A hospital based cross sectional study was conducted. The Study participants included nursing staff, ward boys and cleaning staff working in the institute who deal with Medical waste and were selected randomly to make the sample size of 250 with equal representation in both categories. A pretested semi-structured questionnaire was used.

Results: The study showed gaps in the knowledge of categories of respondents. The knowledge of the existence of Medical waste management in nurses was (79%), as well as in cleaning staff was (37%). The knowledge in practical aspects of Medical waste management was better in nurses, as compare to cleaning staff.

Keywords: Hospital waste, Knowledge, Management

Introduction

General waste is the waste that does not pose an immediate hazard or to the environment pollution or threat to health. Waste management activities include collection, transportation, treatment and disposal of wastes. Academic institutions produce wastes, which are not disposed of effectively or economically, which cause pollution. According to the Basel convention, "Wastes are substances or objects which are disposed

or are intended to be disposed or are required to be disposed of by the provisions of national laws". Hospital Waste divided into two classes based on the risk it poses - General waste and Hazardous waste. "General waste" means waste that does not pose an immediate hazard or threat to health or to the environment, and includes non-hazardous substances, materials or objects. "Hazardous waste" means any waste that contains organic or

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inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment and includes hazardous substances or materials. The knowledge of the existence of biomedical waste management was better among doctors (96%) as compared to nurses (88%), paramedical staff (70.9%) or the cleaning staff (16.9%). The knowledge of practical aspects of BMW management was better in nurses, paramedical staff and cleaning staff.^[1] The total amount of waste generated by health-care activities, about 85% is general, non-hazardous waste. The remaining 15% is considered hazardous material that may be infectious, toxic or radioactive.^[3] There are a number of legislations to enforce proper disposal of BMW in India, for example Biomedical Waste (Management & Handling) Rules 1998, and Solid Waste (Management & Handling) Rules 2000, Hazardous Wastes (Management & Handling) Rules 1989.^[2,3] Studies

carried out in India showed that the awareness and practices on biomedical waste management among health care personnel is far below than the acceptable level.^[8,9]

Methodology

A hospital based cross sectional study was conducted. The Study participants included nursing staff, ward boys and cleaning staff working in the institute who deal with Medical waste and were selected randomly to make the total sample size of 250 with equal representation in both category i.e 125 in each. A pretested semi-structured questionnaire was used. Only those healthcare workers were included in the study who had been working in the institution for >6 months. A pretested semi-structured questionnaire was used for collected the data from the tertiary care hospital, Microsoft excel & SPSS(ver. 20) was used for data analysis.

Table 1: Distribution of health care personnel on the basis of knowledge regarding Medical waste

Sr. No.	Knowledge regarding Medical waste management	Nursing Staff n=125 (%)	Ward boys and Cleaning staff n=125 (%)
1.	waste is hazardous	98(78)	80(64)
2.	Medical waste is segregated at source	90(72)	86(69)
3.	Storage time for BMW as per BMW rules (48 hours)	80(64)	28(22)
4.	Awareness of separate colour coding containers	104(83)	80(64)
5.	Diseases transmitted through Medical waste	96 (77)	52 (42)
6.	Understanding of colour coding		
	Yellow Bag	100(80)	26 (21)
	Red Bag	98(78)	32 (26)
	Black Bag	107(86)	28 (22)
	Blue Bag (Sealed pack container)	108(86.4)	32 (26)
7.	Awareness about discarding objects causing punctures or cuts	96 (77)	64 (51)
8	Awareness about discarding of needles	109 (87)	24 (19)
9	Identification of bio-hazard symbol	92 (74)	30 (24)
10	Awareness about universal precautions	90 (72)	80 (64)
11	There is incinerator facility in our hospital	116 (92)	44 (35)

Results

The study showed gaps in the knowledge of categories of respondents. The knowledge of the existence of Medical waste management in nurses

was (79%), as well as in cleaning staff was (37%). The knowledge in practical aspects of Medical waste management was better in nurses, as compare to cleaning staff.

Conclusion

The present study highlighted the lack of knowledge at every level. Waste management is everybody's concern. The need of a comprehensive training for all the categories of hospital staff is highly recommended

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Ethical Clearance: not required, written informed consent was obtained from all participants.

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