



A STUDY OF HOSPITAL WASTE MANAGEMENT STATUS IN HEALTH FACILITIES OF AN URBAN AREA

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ABSTRACT

Medical waste unlike other ordinary waste possess serious health risk to the handlers health staff, patients and the community¹. The purpose of study was to highlight certain aspects of hospital waste management status in health facilities providing health care in an urban area². To assess the existing knowledge and practice of bio medical waste management among the general practitioners in ANAKAPALLI Town, a descriptive cross sectional study was conducted using pre tested structured questioner. The study showed that 98% of the practitioners have undergone training in BMW Management.

KEYWORDS: Bio medical wastes, Waste disposal, Environment, India



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INTRODUCTION

According to Bio Medical Waste Management rules, 1998 of India, bio medical waste is the waste generated in the diagnosis, treatment, immunization of human beings, animals, in research, in the production of testing of biological products. All waste arising from health care facilities is labeled as health care waste¹. Hospital waste comprises of hazardous and non hazardous waste². About 75% to 90% is non hazardous general health care waste comparable to domestic use³. Medical and health care wastes have sharply increased in recent years due to increased population, number of health care facilities as well as the use of disposal medical products. The present study provides the information about the management, segregation, storage and disposal of medical waste in public as well as private hospital. WHO estimated that 80% of the total care waste is not infectious and only 20% is infectious. The waste generated in hospitals in addition to the risk for patients, doctors, nursing staff and personnel who handle these wastes. The risk associated with the bio medical waste is gastro enteritis, respiratory and skin infections, HIV, Hepatitis. In developing countries like India the waste is carried out to the outskirts of the city and dumped indiscriminately in a most insanitary way.

TYPES OF BAGS

YELLOW BAG : Infectious wastage, bandages, cotton or any objects in contact with body fluids, human body parts.

RED BAG : plastic waste such as catheters, injections, syringes, IV bottles.

BLUE BAG : All types of glass bottles and broken glass, articles, outdated and discarded medicines.

BLACK BAGS : Needles without syringes, sharps and all metal articles.

BIO MEDICAL WASTE CATEGORIES: 8 Types

1. General waste
2. pathological waste
3. Radioactive waste
4. chemical waste
5. infectious to potentially infectious waste
6. sharps
7. pharmaceuticals
8. pressurized containers

BIO MEDICAL WASTE MANAGEMENT PROCESS

1. Waste collection
2. segregation
3. transportation and storage
4. Treatment and disposal
5. transport to final disposal site
6. final disposal

BIO MEDICAL WASTE TREATMENT

1. Incineration technology
2. Non incineration technology

MATERIALS AND METHODS

The present study was carried out on health care facilities of ANAKAPALLI. It is located in the state of Andhra Pradesh. A descriptive cross sectional study was undertaken among the medical practitioners in ANAKAPALLI Town. After the pilot study a questionnaire consisting of 20 items was framed⁴. 1 week training program was conducted for graduates regarding data collection. Four graduates each collected data for one week during Feb-2016 from 96 medical practitioners. The BMW rules applied to all those who generate, collect, receive, store, transport, treat, disposal are handled.

DISCUSSION

The present study was conducted among health care personnel of different level working at a primary hospital. The study participant includes resident and intern doctors, nursing staff, laboratory technicians and sanitary staff. In our study 85% were aware that some acts and rules are in existence for Biomedical waste management. 80% of medical practitioners were using closed containers for collection of biomedical waste management. When compared to the practice among health care personnel at tertiary care hospital in Rajkot⁴, the study included 123 resident doctors and interns and 92 nurses, 13 lab technicians and 54 sanitary staff. More than 2/3 of study participants working in hospitals from 1-5 years only 44.3% receive training for biomedical waste management. In our study 90% of the practitioners in Anakapalle had undergone training on biomedical waste management.

Table 1
Basic profile of health care study population

CHARACTERISTICS	NUMBER[N=96]	PERCENTAGE
AGE: 21-25yrs	30	31.25%
26-30yrs	15	15.62%
31-35yrs	16	16.66%
36-40yrs	15	15.62%
>40yrs	16	16.66%
SEX:		
Male	35	36.45%
Female	61	63.54%
WORKING STATUS: Doctors(Residents ,Interns)		
Laboratory Technician	15	15.62%
Nurses	20	20.83%
Sanitary staff	30	31.25%
ARD staff	16	16.66%
WORKING IN HOSPITAL SINCE:	15	15.62%
<1yrs		
1-5 yrs	1	1.04%
6-10yrs	5	5.20%
>10 yrs	25	26.40%
RECEIVED ANY TRAINING FOR BMW MANAGEMENT:	65	67.70%
Yes	90	93.75%
No	6	6.25%

Table 2
Awareness about bio medical waste and itsmanagement among health care personal

S.NO.	AWARENESS	YES NUMBER	YES %	NO NUMBER	NO %
1	Heard about bio medical waste (BMW)	96	100	0	0
2	Received any training for BMWM	85	88.54	11	11.45
3	Know about bio hazard symbol	96	100	0	0
4	Is present hospital generates BMW	96	100	0	0
5	Know all BMWM categories	96	100	0	0
6	Is any BMWM disposal policy is there in present hospital	82	85.41	14	14.58
7	Any health hazard associated with BMW	70	72.91	26	27.08
8	Are different colored bags used to dispose BMW	90	93.75	6	6.25
9	Regular educational program / Training needed to BMW	85	88.54	11	11.45
10	Identified methods to BMW	93	96.87	3	3.12

TYPES OF BIO MEDICAL WASTE

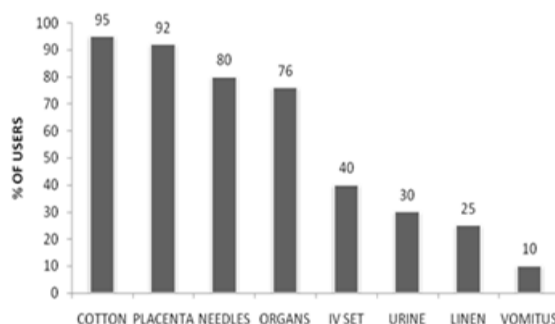


Figure 1
Types of biomedical waste

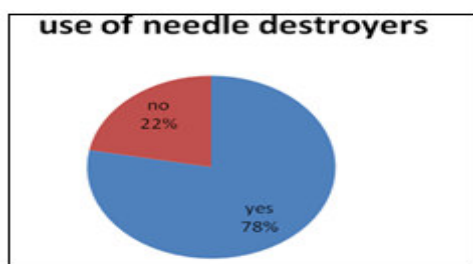


Figure 2
Use of needle destroyer

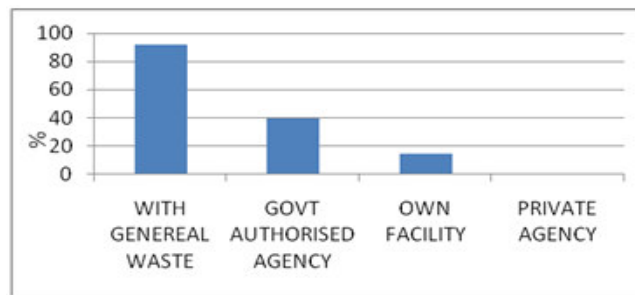


Figure 3
Waste disposal policy

CONCLUSION

Medical waste should be classified according to their source, typology, risk factor associated with their handling, storage, ultimate disposal⁵. The segregation of waste at source is the key step and reduction, reuse and recycling⁶. It should be considered in proper perspective. Based on the observation, the importance of training regarding BMWWM cannot be over emphasized, lack of proper and complete knowledge about bio

medical waste management impacts practices of appropriate waste disposal⁷.

RECOMMENDATIONS

BMWWM rules should be followed in our hospitals and clinics. The act and rules should be accompanied by social science approach of motivation and change of attitude among practitioners. All medical practitioners should be trained on BMWWM at accredited training centers.

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