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Research Article

A STUDY ON KNOWLEDGE ATTITUDE AND PRACTECIE RELATED TO BIOMEDICAL WASTE AND ITS MANAGEMENT

Fatma, Shaheen

Medical Officer in NHM Health Department, Surankote, India

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ABSTRACT

Health care waste is the type of Biomedical waste which is generated in hospitals and pathological labs during diagnosis and treatment. Mismangement of this type of waste is very concerning for the health of handling person from the point of generation of the waste to the disposal of the waste site. For the proper management of this waste, knowledge, attitude and practice among the staff members and handling person is must including protection by using apron, masks, gloves and immonization.

For the study different 10 hospitals and health care centers surveyed in Dehradun city.

All ten hospital and health care centers categorized in different five groups.

A questionnaire was formulated to get the information.

The obtained data was tabulated and result compared with Chi-square test.

The selected questions were asked to total of 330 doctors and 2749 supporting staff members belonging to various level in 10 hospitals and health care centers to check the knowledge, attitude and practice among them with precautionary protections.

INTRODUCTION

Health care waste is a special category of waste, which need to be handled appropiatly with precautions because it carries a higher potential for infection and injury than any other type of waste. Currently it is being managed causally.(ISHWMCon *et,al,*2001). The health care industry over the last decade has shifted from a mainly reusable product supply system (eg; disposable syringes and needles, disposable hospital lines etc;) which has caused an increase in health care waste generation and managing the same has become a problem (MSRMC , *et,al,* 2003; EMPRI, *et, al,* 2004; Acharya D.B and Singh Meeta, *et,al,* 2000). Untreated infectious waste dumped on the land can contaminated surfaces and ground water supplies and even incomplete combustion of health care waste can lead to toxic emission, thus exposing the entire population to the risk of diseases(Akhter Nasima, Hussain Zakir, Trankler Josef and Parkpian Preeda *et, al,* 2002).

World health organization has estimated that the incidence of hospital acquired infections to be about 10% in south east region.(Aggarwal K. K eds and IJCP *et, al, 1995;* ISHWMCon *et, al, 2001).* Even after the implementation of biomedical waste rules (management and handling) in july 1998, the contribution remains more or less unchanged. It can be attributed to lack of knowledge, resources and enforcement of the regulation (Acharya D.B, and Singh Meeta *et, al,* 2000). 60% to 70% of hospitals employees, knowingly or unknowingly, sustaines injuries from sharps. The group most vulnerable include medical care workers, specially nurses and ward boys and waste handlers inside and outsides health care facilities (Acharya D. B and Singh Meeta *et, al,* 2000). The risk of certain infection has been estimated as follows (HCWMC and MSRMC *et,al, 2003).*

Infection Risk of Transmission

Hepatitis B 3%
Hepatitis C 3.5%
HIV 0.3%

Precaution is better than cure. For the protection and safety measurement every member connected to waste management use the apron, masks, gloves, and immunization is must at the point of generation to disposal of waste site.

MATERIAL AND METHOD

Identification and Selection of Site

Dehradun city (utterakhand) was the best site for us because it is tourist place and hub for research scholars. Different hospitals and health care centers near about 10 were surveyed.

Corresponding author:* **Fatma, Shaheen
Medical Officer in NHM Health Department, Surankote, India

Prepation for Questionarrie

1. Ask about the pprecautionary protections.
2. asked about knowledge, attitude and practice towards the health care waste management.

RESULT AND DISCUSSION

Table 1 Personal protective measures used by per doctor and staff, memeber the various groups of health care centres/units

Group of the hospitals	Personal protective measures						
	Apron	Boots	Masks	glaves	Goggles	Soap/water	Immunization (TT/HEPATITIS –B)
Group1	1	0	1	1	0	1	1
Group3	1	0	1	1		1	Not aware
Group4	0	0	1	1	0	1	Not aware

In group 1 proper protection during the treatment of patient by doctor and nursing by the staff members and during the handling of waste management was satisfactory other than the group 3 and 4 in which lack of awareness related to infections and harm by bio-medical waste.

Table 2 Distribution of doctors supporting staff members of various Groups giving correctresponses for *KAP questionnaire regarding health care waste management

Group of hospitals/units	Knowledge		Attitude		Practices	
	Doctors	Staff membes	Doctors	Staff members	Doctors	Staff members
GROUP1	N=26 96%	N=300 75%	N=26 94%	N=300 70%	N=26 94%	N=300 70%
GROUP2	No information					
GROUP3	N=6 80%	N=40 60%	N=6 75%	N=40 50%	N=6 74%	N=40 49%
GROUP4	N=3 70%	N=9 50%	N=3 60%	N=9 48%	N=3 58%	N=9 45%

NOTE:* KAP: Means-
K-Knowledge, A-Attitude, & P-Practice

In group 1 96-94% doctors had full KAP realted to waste management and only 75-70% staff members had full KAP related to biomedical waste management.

In group 2 there was no information gather due to Inco-operation of hospital. In group 3 80-74% doctors and in group 5 70-58% doctor had full KAP related to waste management. In group 4 60-49% staff members and in group 5 50-45% staff members had full KAP related to waste management. Though the KAP regarding health care waste management among the various Groups of health care centres / units was not statistically significant, but the knowledge, Attitude and practice regarding health care waste management among the doctors were high when compared to the other staff members

CONCLUSION

In group 1 and group 2 , proper protection during the treatment of patient by doctor and nursing by the staff members and during the handling of waste management was satisfactory other than group 4 and 5 in which lack of awareness related to infections and harm by bio-medical waste.

In only group 1 proper knowledge among doctors was satisfactory and 98% doctor had the proper knowledge out which only 95% doctor had KAP related to waste management. And only 80-74% staff members had proper KAP related to waste management.

In group 2 96-94% doctors had full KAP realted to waste management and only 75-70% staff members have full KAP related to biomedical waste management. In group 3 there was no information gathe due to non co-operation of hospital.
In group 4 80-74% doctors and in group 5 70-58% doctor had full KAP relatd to waste management. In group 4 60-49% staff members and in group 5 50-45% staff members had full KAP related to waste management. Though the KAP regarding health care waste management among the various groups of health care centres/ units was not statistically significant , but the knowledge, attitude and practice regarding health care waste management among the doctors were high when compared to the other staff members.

Recommendation

1. Proper training and awareness among the members is must.
2. Implementation of biomedical waste (management and handling) rule 1998 in proper manner.

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