Study of Hospital Waste Management in Nayati Multi Super Specialty Hospital

Presented By
Dr.Naveen Kumar
Assistant Manager (Operations)
Nayati Multi Super Specialty Hospital , Mathura

Background

- Hospital waste is a special category of waste, which needs to be handled appropriately with precautions because it carries a higher potential for infection and injury than any other type of waste.
- With a rapid increase in the number of hospitals, clinics and laboratories in the country, the generation of health care waste has been increasing considerably.

Rationale

- Management of hospital generated waste continues to be an issue of public health concern even after the notification of the Bio-Medical Waste (Management and Handling) Rules.
- The present study was undertaken to assess the knowledge, attitude and practice among the hospital staff regarding healthcare waste management.

Research Question

What are the gaps in knowledge, attitude and practice among the various level of hospital staff regarding healthcare waste management?

Objectives

- To study the present state of health care waste management.
- To assess Knowledge, Attitude and Practices regarding health care waste management among various levels of staff in the hospital.
- To provide recommendations for proper health care waste management.

Methodology

- The present study was undertaken in Nayati Multi super specialty hospital, Mathura. Checklist and KAP questionnaire were used to conduct the study. A total of 100 staff members belonging to various departments of the hospital were surveyed for the study.

- The obtained data was tabulated and the results were interpreted using comparing obtained marks in percentage.

Health care personnel of various departments of the hospital:

Sl. No	Department	Number of staff
1	ICU Ward	22
2	Sample Collection Room Laboratory	6
3	Cath Lab/ Operation Theatre	12
4	OPD	4
5	Surgical Ward	23
6	Dental clinic	3
7	Male/Female Ward	30
Total		**100**

Staff pattern in the various groups of departments/units included in the study:

Departments of hospital studied	Total Staff in the hospital	No. of Doctors	No. of Nursing staff	No. of Technicians	No. of Pharmacists	No. of Other Staffs	Participant in the study
1 Dental	10	1	1	1	0	0	3
2 OT/CATH LAB	46	2	3	3	0	4	12
3 Gen.Wards	95	4	20	0	0	6	30
4 Lab/sample room	22	1	0	3	0	2	6
5 ICU	80	2	14	0	0	6	22
6 Surgical Ward	76	3	15	0	0	5	23
7 OPD	15	1	1	0	0	2	4
Total	344	14	54	7	0	25	100
Percentage		14%	54%	7%	0%	25%	100%

Descriptions of containers/ bin used by the various units of the hospital:

Groups /units	Colour coded bin		No. of containers /bins	Nature of container / bins			Lid of container / Bin	
	Present	Absent		Plastic bin	Cardboard box	Metal Bin	Present	Absent
dental	Y	N	4	(100%)	0	0	Y	N
O.T/Cath	Y	N	58	(100%)	0	0	Y	N
Gen ward	Y	N	20	(100%)	0	0	Y	N
Lab	Y	N	10	(100%)	0	0	Y	N
ICU	Y	N	15	100%	0	0	Y	N
SurgicalWard	Y	N	15	(100%)	0	0	Y	N
OPD	Y	N	30	20 (66%)	0	10 (34%)	Y	N

Personal protective measures used by the various departments of the hospital:

Groups of health care hospital	Personal protective measures						
	Apron	Boots	Masks	Goggles	Gloves	Soap & water	Immunization (TT & Hepatitis B)
1 (n = 1)	1	0	1	0	1	1	1
2 (n = 12)	12	12	12	4	12	12	12
3 (n =16)	16	0	16	0	16	16	8
4 (n = 4)	3	0	4	1	4	4	3
5 (n = 8)	8	8	8	0	8	8	8
6 (n = 7)	7	7	7	0	7	7	5
7 (n = 2)	2	0	2	0	2	2	0
Total (n = 50)	49 (98%)	27 (54%)	50 (100%)	5 (10%)	50 (100%)	50 (100%)	37 (74%)

Distribution of various levels of staff members of Group 1(Dental Clinic) giving correct responses for KAP questionnaire :

Questionnaire	Various levels of staff members of Group 1 (Dental Clinic)			
	Doctors (n = 1)	Nursing Staff (n = 1)	Lab technicians (n = 1)	Other staffs (n = 0)
Knowledge	(80%)	(66.2%)	(58.3%)	0
Attitude	(77%)	(74.3%)	(66.6%)	0
Practice	(70.1%)	(64.8%)	(58.3%)	0

Distribution of various levels of staff members of Group 2(OT and CATH LAB) giving correct responses for KAP questionnaire:

Questionnaire	Various levels of staff members of Group 2				
	Doctors (n = 2)	**Nursing Staff (n = 3)**	**Lab technicians (n = 3)**	**Pharmacists (n = 0)**	**Other staffs (n = 4)**
Knowledge	(73.6%)	(70%)	(70%)	0	(52.5%)
Attitude	(68.4%)	(70%)	(60%)	0	(40.2%)
Practice	(65.1%)	(66%)	(70%)	0	(51.4%)

Distribution of various levels of staff members of Group 3 (Male/Female Gen.Wards) giving correct responses for KAP questionnaire:

Questionnaire	Various levels of staff members of Group 3 (Male/Female Gen.Wards)		
	Doctors (n = 4)	**Nursing Staffs (n = 20)**	**Other staff (n = 6)**
Knowledge	73.7%	(70.2%)	42%
Attitude	80%	(64.1%)	63%
Practice	71.2%	71.1%	54%

Distribution of various levels of staff members of Group 4(Lab and Sample collection Room) giving correct responses for KAP questionnaire:

Questionnaire	Various levels of staff members of Group 4(Lab)		
	Doctors (n = 1)	**Lab Technicians (n =3)**	**Other Staffs (n = 2)**
Knowledge	62.3%	56% NA	33.3%
Attitude	60%	62%	33.3%
Practice	54.2%	58%	23%

Distribution of various levels of staff members of Group 5 (ICU) giving correct responses for KAP questionnaire:

Questionnaire	Various levels of staff members of Group 5(ICU)		
	Doctors (n =2)	**Nursing Staff (n=14)**	**Other Staffs (n = 6)**
Knowledge	78%	73.5%	59%
Attitude	80%	69%	52%
Practice	71%	72%	63%

Distribution of various levels of staff members of Group 6(surgical ward) giving correct responses for KAP questionnaire:

Questionnaire	Various levels of staff members of Group 6(surgical ward)		
	Doctors (n= 3)	**Nursing Staff (n = 15)**	**Other Staffs (n = 5)**
Knowledge	76%	85%	33.3%
Attitude	73%	80%	33.3%
Practice	75%	82.5%	40%

Distribution of various levels of staff members of Group7 (OPD) giving correct responses for KAP questionnaire:

Questionnaire	Various levels of staff members of Group 7(OPD)	
	Doctors (n = 2)	Other Staffs (n = 2)
Knowledge	64.2%	32%
Attitude	58.3%	56%
Practice	60%	40%

Conclusion

- There is no significant difference in knowledge, attitude and practice regarding healthcare waste management in the same skill group but compared to other groups it is low in the other staff (HKS and GDA)which requires more training based practice for proper handling of hospital generated waste.
- The colour coded container/bins as recommended by Biomedical waste management rules were observed with lids in all the departments.

Count...

- Chemical disinfection is used for sharp objects at source.It is observed that almost all the staff used aprons, masks gloves as personal protective measures.
- The soap and water were provided in all locations liberally by hospital. Immunization (against TT and Hepatitis B) was observed in 74% health care workers of the hospital.

Suggestions:

- All the head of the departments, health care personnel and other staff must undergo periodic training and awareness programme to keep abreast with the current knowledge of scientific waste management system and its importance and benefits to the patients, staff and the community as a whole.
- Establishment of waste management and infection control committees would be helpful in overseeing the day to day activities concerning waste management and infection control respectively.

- Periodic monitoring and evaluation of the practices concerning safe management of health care waste should be done in different hospital departments.

THANKS