

To Assess the Knowledge, Attitude and Practices of Bio-Medical Waste Management Among Medical and Housekeeping Staff

By

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*Dissertation submitted for the partial fulfillment of the
MBA Hospital and Health Management*

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Internship Training

At

Aster Medcity, Kochi

**To assess the Knowledge, Attitude and Practices of Bio-medical Waste
Management among Medical and Housekeeping staff.**

By

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Under the guidance of

Dr. P.R. Sodani

**MBAHospital and Health Management
2014-2016**



The IIHMR University, Jaipur

TO WHOMSOEVER MAY CONCERN

This is to certify that **Dr. Sahil Thakur** student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at **Aster Medcity, Kochi** from **15th February to 15th May 2016**.

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.



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The certificate is awarded to

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In recognition of having successfully completed his
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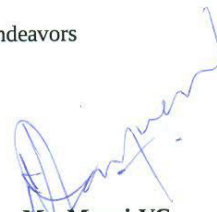
From 15th February, 2016 to 15th May, 2016

He comes across as a committed, sincere & diligent person who has a
strong drive and zeal for learning

We wish him all the best for future endeavors



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CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **“To Assess the Knowledge, Attitude and Practices of Bio-medical Waste Management among Medical and Housekeeping Staff”** and submitted by **Dr. Sahil Thakur** Enrollment No **IIHMR-U/MBA-HM/2014-16/19-0205** under the supervision of **Dr. P.R. Sodani** for award of MBA in Hospital and Health Management of the University carried out during the period from 15th February to 15th May, 2016 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.



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ABSTRACT

TITLE: TO ASSESS THE KNOWLEDGE, ATTITUDE AND PRACTICES OF BIO-MEDICAL WASTE MANAGEMENT AMONG MEDICAL AND HOUSEKEEPING STAFF

AUTHOR: Dr. Sahil Thakur

ADVISOR: Dr. P.R. Sodani

BACKGROUND:

In the persuasion of the aim of reducing health problems, eliminating potential risks, and treating sick people, healthcare services inevitably create which itself may be hazardous to health. The waste produced in the course of healthcare activities carries a higher potential for infection and injury than any other type of waste. Inadequate and inappropriate knowledge of handling of healthcare waste may have serious health consequences and a significant impact on the environment as well. It is estimated that annually about 0.33 million tons of hospital waste is generated in India and the waste generation rate ranges from 0.5 to 2.0 kg per bed per day. Wherever, generated, a safe and reliable method for handling of biomedical waste is essential. Effective management of biomedical waste is not only a legal necessity but also a social responsibility.

OBJECTIVES:

- To assess the KAP of BMW management among medical and housekeeping staff.
- To identify the existing lacunae and problems in management of Biomedical Waste.

METHODOLOGY:

Study Setting: Aster Medcity, Kochi.

Study Design: Descriptive and Analytical

Study Duration: 1st March 2016 – 15th May 2016

Sampling Size:

- **25 Housekeeping staff, 46 nursing staff and 20 doctors** feedback was taken through Questionnaire and interview(Kochi).

Sampling Technique: Convenience sampling (non-probability sampling)

Tools: Structured Questionnaire, One to one interviews, Comparative analysis and Statistical analysis.

RESULT:

- Regarding the current practices of bio-medical waste management that 92.7% of staff got training for biomedical waste management but only 80% are interested in attending the training sessions again.
- 97.33% of the staff is aware about the risks associated with bio-medical waste.
- As far as the plan for BMW is concerned 100% staff are aware about it; but only 44.6% of the staff knows about the proper segregation of the bio-medical waste.
- In general about 86% staff is aware about the legislature associated with BMW but only 23.3% of the environment pollution law.
- Only 51% of the staff were aware about the different categories of waste.
- The best part is that more than 97.66% staff of the staff is aware about the storage of the biomedical waste but only 35.4% are aware about the end treatment of the waste.
- According to 68.33% of the staff safe management is not issue at all and 81.66% of the staff thinks safety of waste handlers is a must.
- When asked that is handling the waste an extra burden to work only 11.6% felt so and rest consider it as daily routine practice that should be followed.
- 100% of the staff is aware about the registers and color codes maintained for the daily biomedical waste entry and disposal.
- 54% staff is aware about the equipment used for destroying needles after use.
- 100% of staff are aware about the biohazard symbol labelled on bags. On the other hand about 86% knows about the discarding of the waste in color coded bags.

- Regarding the categories only 69.4% gave right answer that means the whole staff are not aware about different categories of BMW management.
- Only 71.7% of the staff believe that by immunization they can be protected against the bio-medical hazard.

RECOMMENDATIONS:

- High visibility could be achieved through hoardings near the biomedical waste disposable bins.
- There should be proper display of posters regarding the right way of disposing, storing and transporting the biomedical waste.
- A regular audit should be done on how feedback calls are answered and recorded.
- Strict implementation of biomedical waste management rules is the need of the hour.
- It should be made compulsory for healthcare facilities to get their healthcare personnel trained from accredited training centres, These training sessions should not become merely a one-day activity but should be a continuous process depending upon the patient input in different healthcare facilities.
- Training of housekeeping staff should be specially emphasized as they carry the biomedical waste.
- It should be ensured that the injuries happening to the healthcare personnel are reported to the person in charge of biomedical waste management or to the biomedical waste management committee, and they report it in the prescribed format to the pollution control board.

ACKNOWLEDGEMENT

I take this opportunity to express my profound sense of gratitude and indebtedness to all those who helped me throughout the duration of the project.

I would like to acknowledge, First and foremost Mr. Ramesh Kumar (COO of Aster Hospital) for showing confidence in me and providing me an opportunity during dissertation, without his support and guidance it would not have been possible. He has been a great source of knowledge, information and inspiration to do work with utmost diligence and sincerity.

I would also like to thank Dr. Harish Pillai (CEO-Cluster Kerala) Mr. Manoj (Head HR) without whose permission I would not get this golden opportunity to do my dissertation from Aster Medcity, Kochi.

I would like to thank all the others at Aster Medcity who left their mark in the project and helped me in spite of their busy schedule and hectic work hours, for giving me all the information and support required to complete my project.

I would like to express my heartiest gratitude to Dr. P.R. Sodani for their guidance and help throughout my work. I would not have been able to get so much knowledge and experience about the work, analyzing the data preparing the report without her kind support and guidance.

I would like to special thanks to Dr. S D Gupta sir, Dr. Ashok Kaushik sir for guiding me throughout my project and providing me the required information.

Last and not least, I acknowledge the moral support of my parents and friends. Being beehive of activities, it is a great experience as management trainee at Aster Medcity.

Dr. Sahil Thakur

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1. INTRODUCTION

In the persuasion of the aim of reducing health problems, eliminating potential risks, and treating sick people, healthcare services inevitably create which itself may be hazardous to health. The waste produced in the course of healthcare activities carries a higher potential for infection and injury than any other type of waste. Inadequate and inappropriate knowledge of handling of healthcare waste may have serious health consequences and a significant impact on the environment as well. It is estimated that annually about 0.33 million tons of hospital waste is generated in India and the waste generation rate ranges from 0.5 to 2.0 kg per bed per day. (1)Wherever, generated, a safe and reliable method for handling of biomedical waste is essential. Effective management of biomedical waste is not only a legal necessity but also a social responsibility.

Though legal provisions [Biomedical Waste (management and handling) Rules 1998] (2) exist to mitigate the impact of hazardous and infectious hospital waste on the community, still these provisions are yet to be fully implemented. The absence of proper waste management, still these provisions are yet to be fully implemented. The absence of proper waste management, lack of awareness about the health hazards from biomedical wastes, insufficient financial and human resources and poor control of waste disposal are the most critical problems connected with healthcare waste. (3) The hazardous impact of medical waste on the public and environment is enhanced manifold if adequate and appropriate handling of these wastes is not adopted. The hospital waste management had diverse ramifications as it not only affects the health of patients bit also of healthcare workers (doctors, nurses, sanitary staff, etc.) and general public.

Although. There is an increased global awareness among health professionals about the hazards and also appropriate management techniques but the level of awareness in India is found to be unsatisfactory (4-6)

The rule makes it mandatory for the health care establishment to segregate, disinfect and dispose their waste in eco-friendly manner. Clearly, statutory safeguards for biomedical waste management practice in Indian hospitals have still not achieved the desired standards (Hegde *et al.*, [7] 2007). Literature search show poor knowledge, attitude and practices of

biomedical waste management among staff and have reported that there is urgent need to train and educate all the staff in order to adopt an effective waste management practice (Saini *et al.*, [8] 2005) Safe management of health care waste becomes very important when it comes to environment conservation and health of the community (Pruss *et al.*, [10] 1999).

Categories of Waste

The Bio-medical Waste management and handling rules 1998 have been revised in year 2000 and draft gazette for amendment of the rules has been published on August 24, 2011. The new rules on BMW are elaborate, stringent and several new provisions have been added to it. The rules are not applicable for the radioactive waste, hazardous waste, municipal solid waste and battery waste which could be dealt under the respective rules. Suggested norms have clarified that all functional units have to comply with the rules while in previous rules only the facilities handling more than 1000 patients per year were covered.

Bio-medical Waste management and handling rules 1998 as amended in 2000 there are 10 categories of bio-medical waste which are given as under, however draft gazette notification of 2011 proposes 8 categories of bio-medical waste.

Option	Treatment & Disposal	Waste Category
Cat. No. 1	Incineration / deep burial	Human Anatomical Waste (human tissues, organs, body parts)
Cat. No. 2	Incineration / deep burial	Animal Waste Animal tissues, organs, Body parts carcasses, bleeding parts, fluid, blood and experimental animals used in research, waste generated by veterinary hospitals/colleges, discharge from hospitals, animal houses)
Cat. No. 3	Local autoclaving/micro waving/incineration	Microbiology & Biotechnology waste (wastes from laboratory cultures, stocks or specimens of microorganisms live or

		attenuated vaccines, human and animal cell culture used in research and infections agents from research and industrial laboratories, wastes from production of biological, toxins, dishes and devices used for transfer of cultures.
Cat. No. 4	Disinfections (chemical treatment)	Waste Sharps (needles, Syringes, scalpels blades, glass etc. that may cause puncture and cuts.
Cat. No. 5	Incineration / destruction & drugs disposal in secured landfills.	Discarded Medicines and Cytotoxic drugs (wastes comprising of outdated, contaminated and discarded medicines)
Cat. No. 6	Incineration, autoclaving/microwaving	Solid Waste (Items contaminated with blood and body fluids including cotton, dressings, soiled plaster casts, line beddings, other material contaminated with blood)
Cat. No. 7	Disinfections by chemical treatment autoclaving/microwaving & mutilation shredding	Solid Waste (waste generated from disposable items other than the waste sharps such as tubing, catheters, intravenous sets etc.)
Cat. No. 8	Disinfections by chemical treatment and discharge into drain.	Liquid waste (waste generated from laboratory & washing, cleaning, housekeeping and

		disinfecting activities)
Cat. No. 9	Disposal in municipal landfill	Incineration Ash(ash from incineration of any bio-medical waste)
Cat. No. 10	Chemical treatment & discharge into drain for liquid & secured landfill for solids	Chemical waste (Chemicals used in production of biological, chemicals, used in disinfect ion, as insecticides, etc.)

Color coding of waste As listed by Bio-medical Waste management and handling rules 1998 as amended in 2000 the color coding of biomedical waste which is given as under, however draft gazette notification of 2011 proposes that Category 7 and Category 3 to be included in red color and Category 8 in blue color whereas black color for general and municipal waste.

Colour Coding	Type of Containers	Waste Category	Treatment Options as per Schedule 1
Yellow	Plastic Bag	1,2,3,6	Incineration / Deep Burial
Red	Disinfected Container / Plastic Bag	3,6,7	Autoclaving/Micro waving/ Chemical Treatment
Blue/White translucent	Plastic bag/puncture proof container	4,7	Autoclaving / Microwaving/chemical treatment and destruction/shredding
Black	Plastic Bag	5,9,10(Solid)	Disposal in secured landfill

Problem Statement:

Biomedical waste management has emerged as an issue of major concern not only to hospitals, nursing home authorities but also to the environmental and law enforcement agencies, media and the general public. Biomedical waste is forming approximately 1 to 2

percent of the total municipal solid waste stream. Some of these wastes are potential threat to the human health and environment. The greatest risk of biomedical waste is from the infections and sharp components of the waste because health care workers (HCW) and people associated with handling waste are often getting needle prick injuries and can contract HIV or AIDS, Hepatitis B and . Risks in hospitals or health care settings are very high.

1.1 Objectives

1. To assess the KAP of BMW management among medical, paramedical and housekeeping staff.
2. To assess the current status of solid waste management in the hospital.
3. To identify the existing lacunae and problems in management of Biomedical Waste.

2. LITERATURE REVIEW

1. S Saini, SS Nagarajan, Rk Sarma – J Acad Hosp Administration, 2005 –
indmedica.com

In the field of medical practice statutory public health guidelines for biomedical waste Management and close monitoring of its compliance alone cannot achieve the ultimate goal, if it is not accompanied with social science approach of mass education motivation and change of mind set in all strata of medical practice. Continuous logistic support and user friendly approach is equally important while implementing in the process of any rules, regulations concerning the medical practice other than the core mandate they area are assigned to.

2. S Mani, N Sinha, S Rana – Waste management, 2008 – Elsevier – The management of biomedical waste is a crucial issue in health and environmental management. Rules in India were promulgated in 1998, originally with a deadline of December 2000 and extended to December 2002; however, the actual situation remains far from satisfactory.

3. SKM Rao, RK Ranyal, SS Bhatia, VR Sharma – MJAFI, - laico.org—After analyzing the results of study it was felt that there is an urgent need to standardize the infrastructural requirement so that hospitals following BMW rules strictly do not suffer additional costs.

4. Niraj Pandit Associate Professor, Department of Community, Biomedical waste management - situation analysis and rule update 2011, ISSN 2229-337X Volume 3 Issue 1 January-June 2012. The revised rule has reduced the categories of waste from 10 to 8 as categories 9 and 10 are removed. It is clearly mentioned that the liquid waste generated from laboratory washing, cleaning, housekeeping and disinfecting activities should be treated properly and should meet the prescribed discharge standards before final drainage. Incinerated ash should be disposed with secure land filling.

The color code for BMW is more specific and clear in the new regulations. Yellow color container with non-chlorinated plastic bag is for human anatomical waste (Cat-1), Animal waste (Cat-2), discarded and out dated medicine (Cat-5) and soiled waste contaminated with blood, material like cotton, dressing materials, soiled plaster linen other material which could be incinerated (cat-6). The red color container should be preferably non-plastic, (if plastic, it should be non-chlorinated bags) and should be puncture proof. In this container, microbiological and laboratory wastes (Cat-3), sharp waste (Cat-4) and infectious contaminated solid waste like blood bags, catheters, tubing, saline bottles, IV tubes, and other contaminated plastic (Cat-7) will be collected. Blue color container is for chemical waste (Cat-8) and the black color container is meant for municipal and kitchen waste i.e. general waste.

3. METHODOLOGY

3.1 Research Design

- A research design will be Descriptive (cross sectional) research.

3.2 Study Setting

Aster Medcity, Kochi

3.3 Research Duration

1st March 2016 – 15th May 2016

3.4 Sampling Size

- **91** Staff members were given Questionnaire and interviewed. Among the staff 21 were Doctors, 46 Nurses and 25 Housekeeping Staff.

3.5 Sampling Technique

Convenience sampling (non-probability sampling)

3.6 Data Collection

- Primary Data: collected in form of Questionnaire, Interview

3.7 Tools

Structured questionnaires, one to one interviews were used.

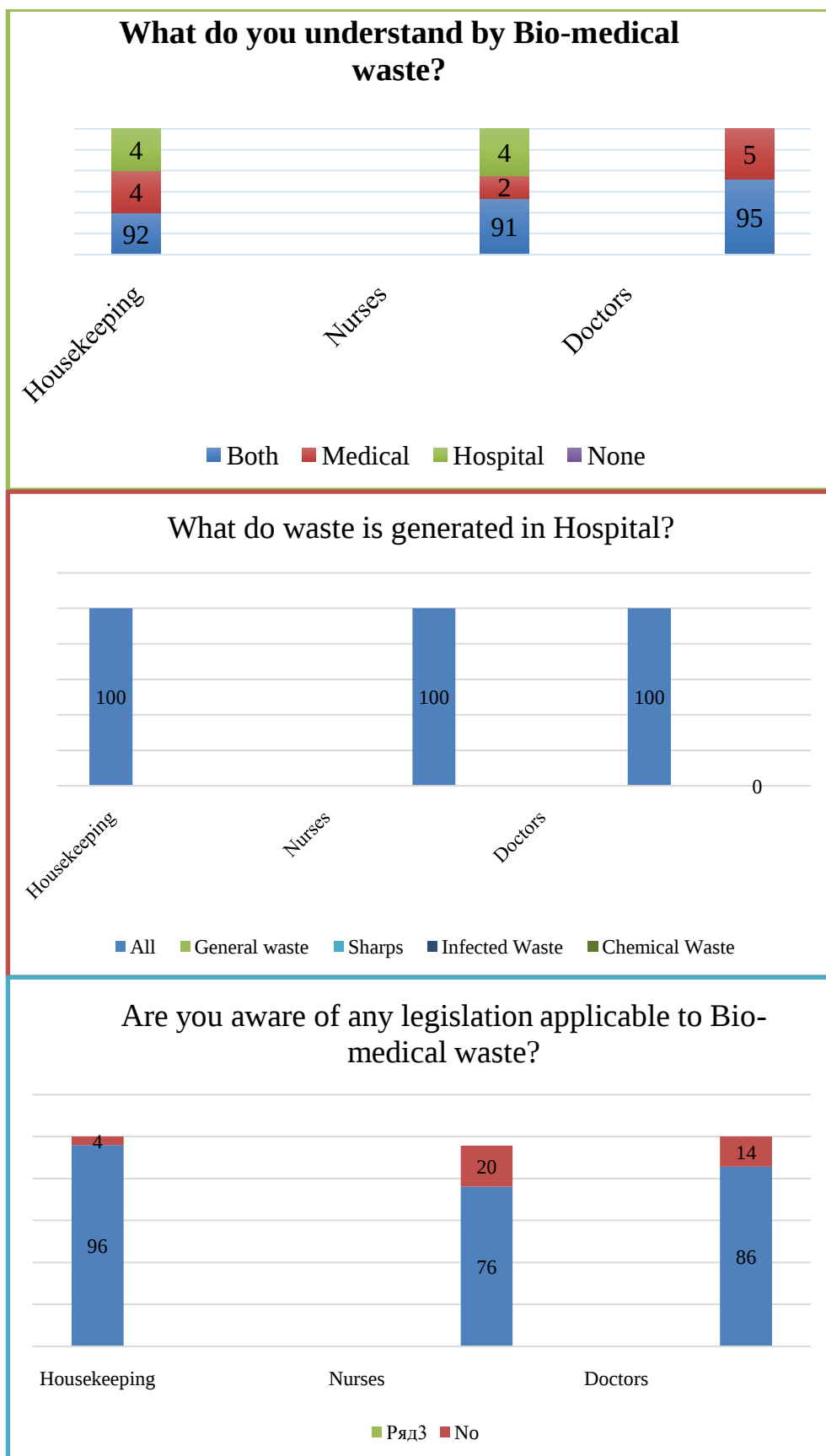
3.8 Ethical Considerations

The necessary explanation about the purpose of the study and verbal consent was obtained from each respondent. It was assured that confidentiality of their responses will be maintained and information will be solely for research purposes.

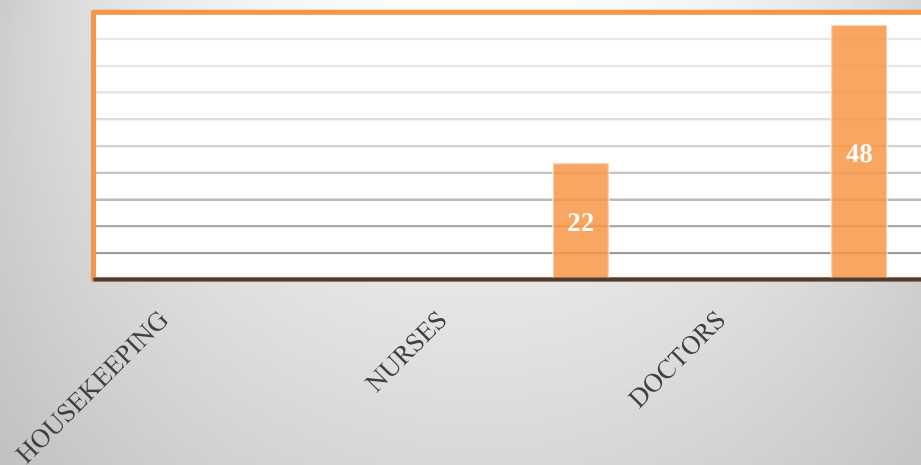
4. RESULTS AND DISCUSSIONS

4.1 Analysis of Patient Feedback

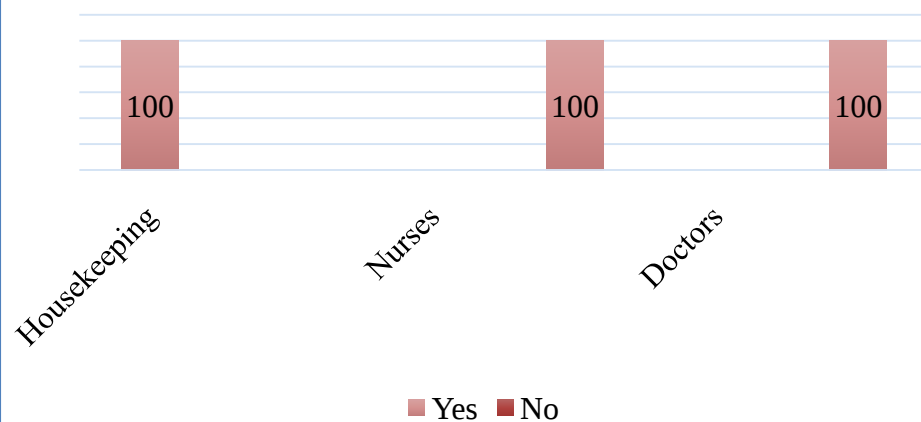
91 Staff were interviewed for feedback using a structure questionnaire.



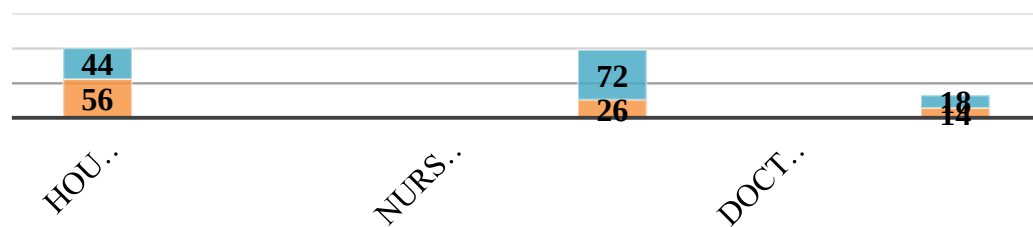
If yes, then write the name of act applicable ?



Do your hospital has any waste management plan?

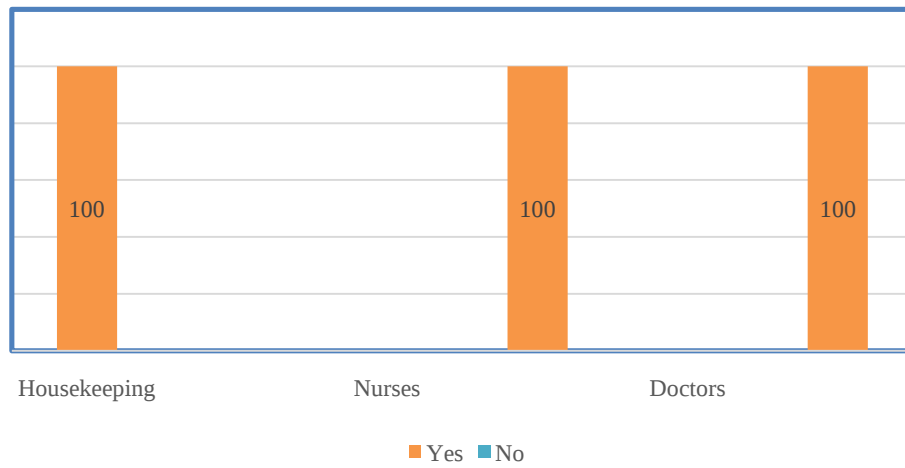


Find out the correct sequence of waste management Program?

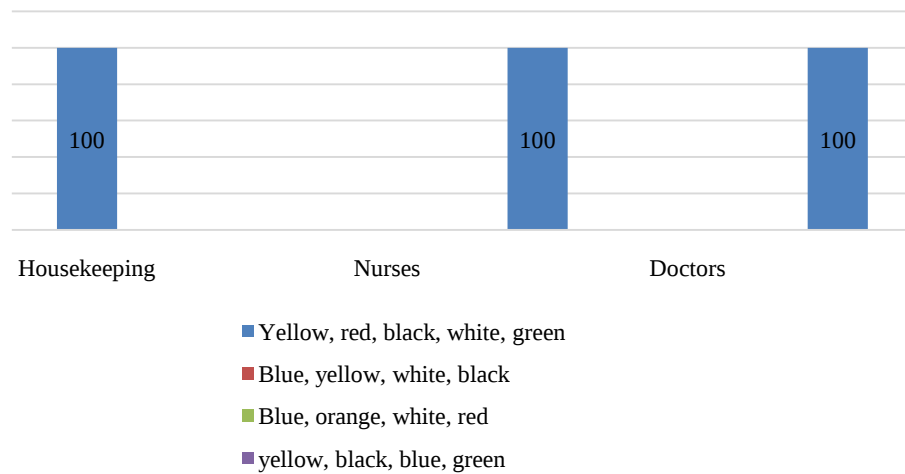


- Collection-Treatment- Storage- Transport- Disposal
- Generation- Segregation- Collection – Storage – Transport – Treatment – Disposal
- Segregation- Collection –Treatment -Transport – Disposal

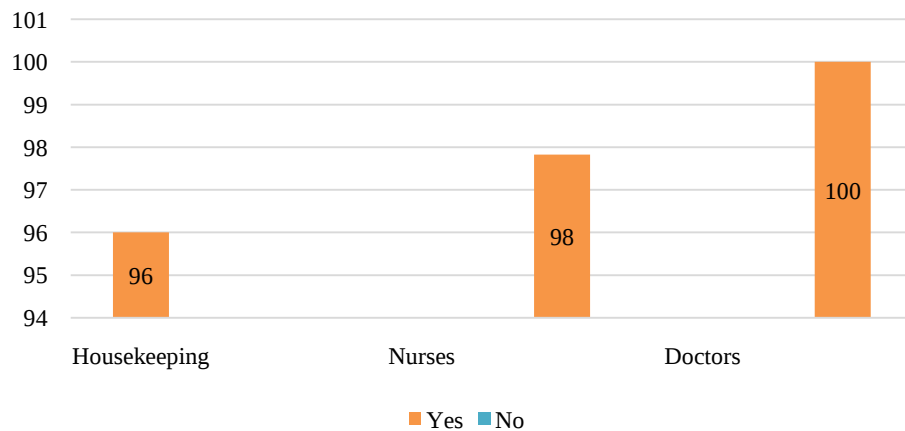
Do you color code the waste?

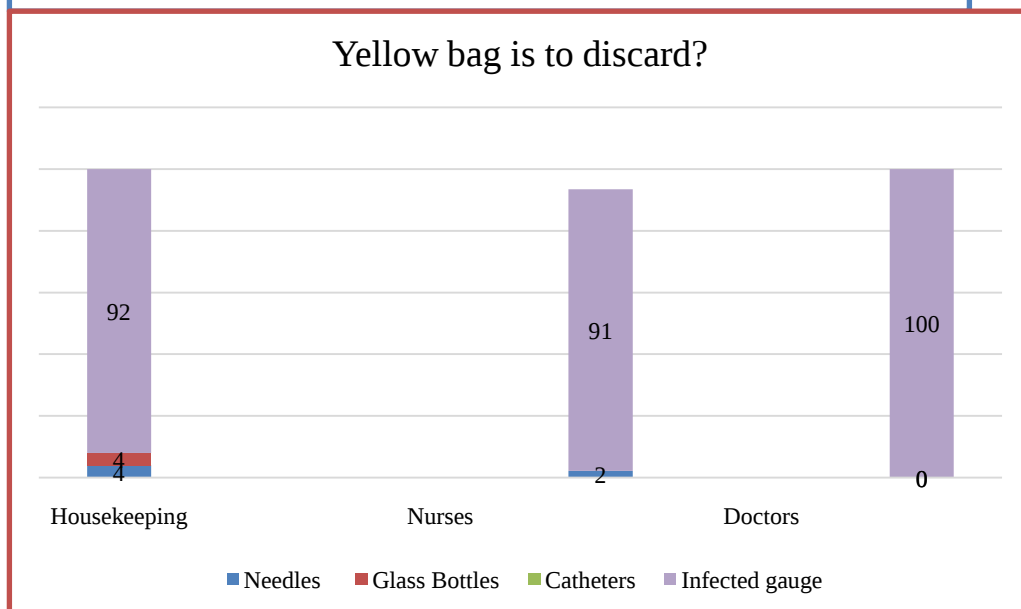
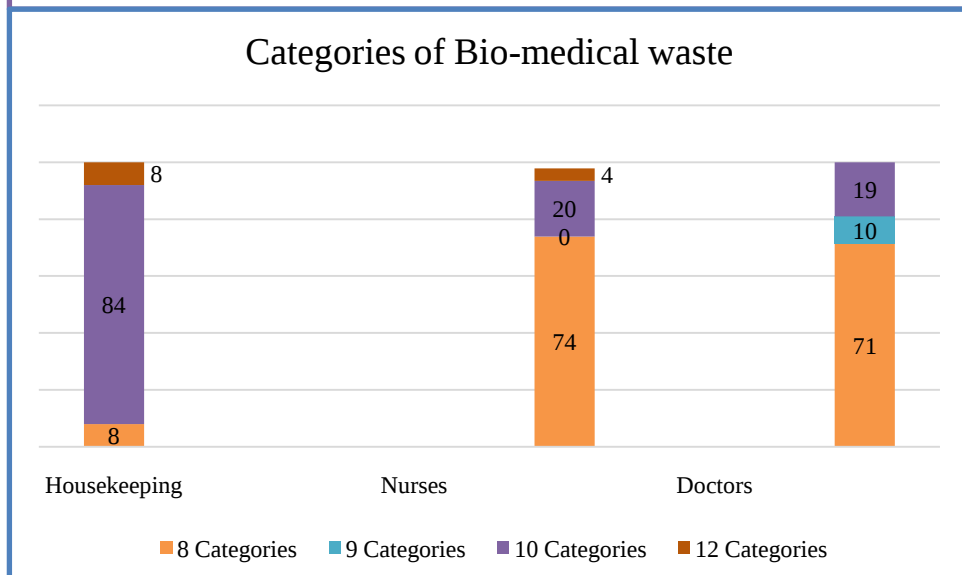
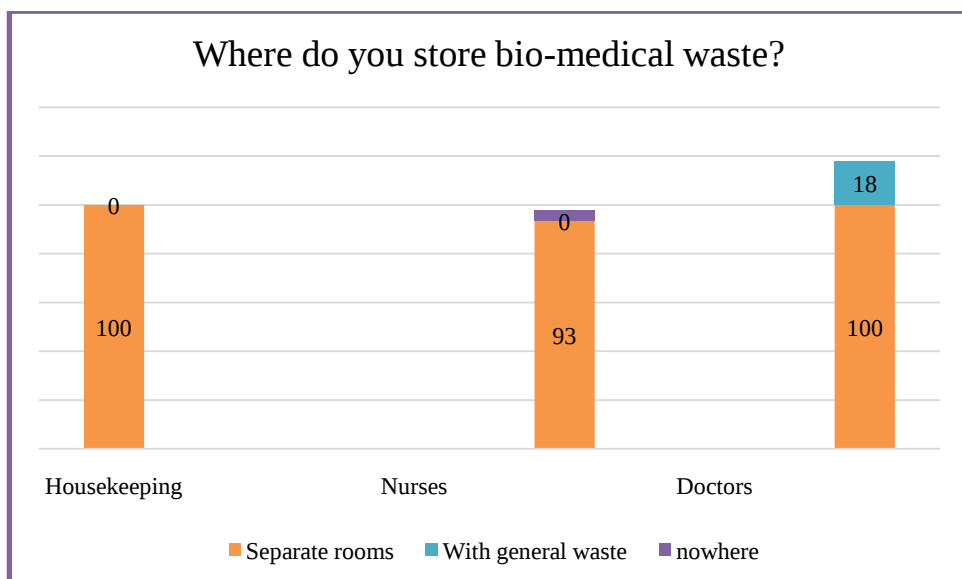


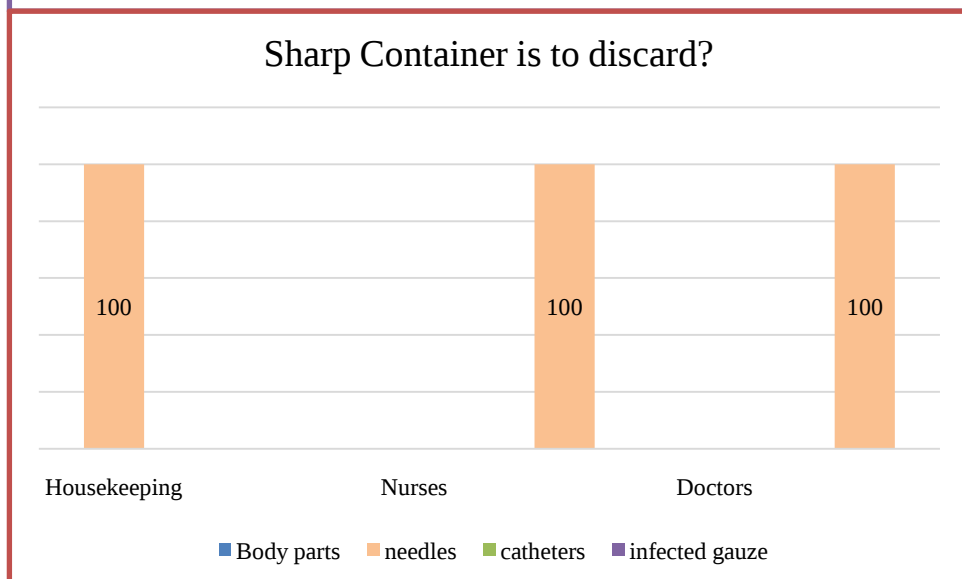
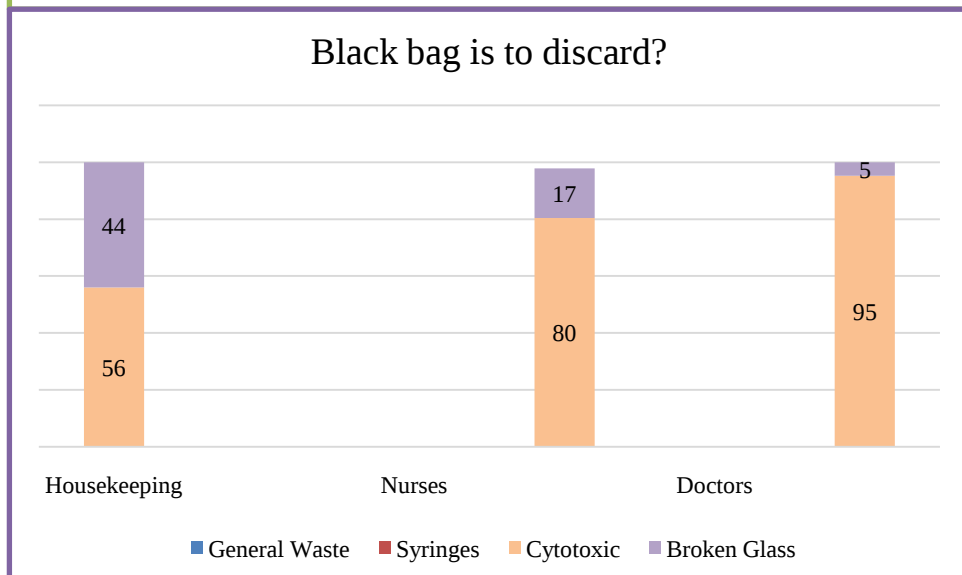
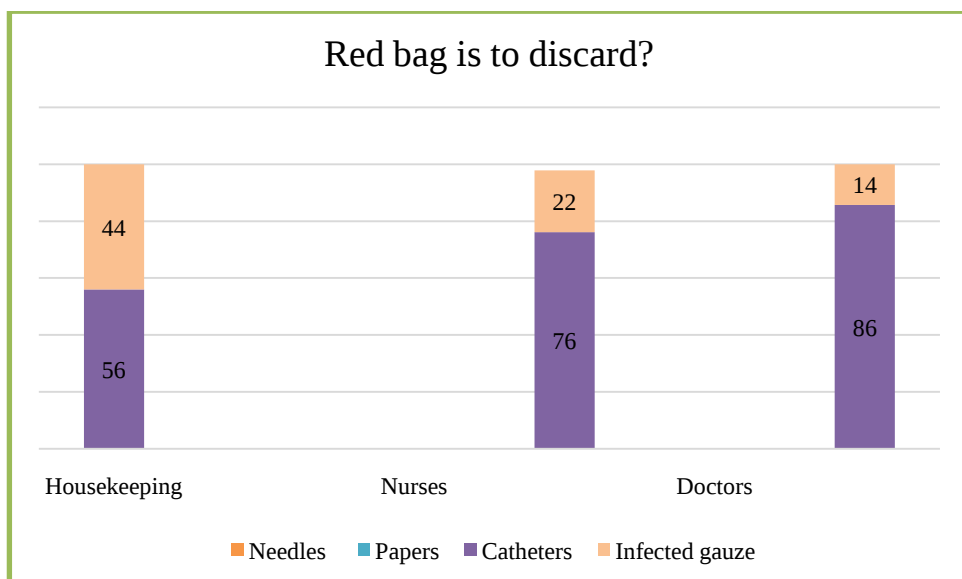
Color Codes used are ?



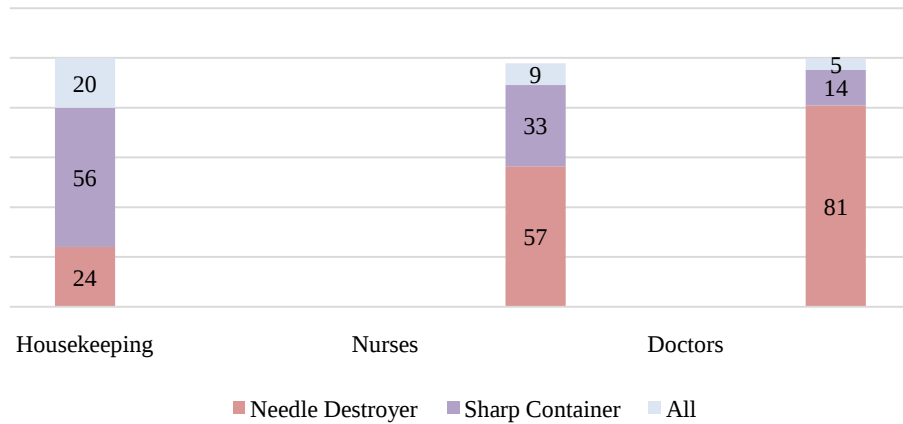
Does infectious waste bag labeled with bio-hazard symbol?



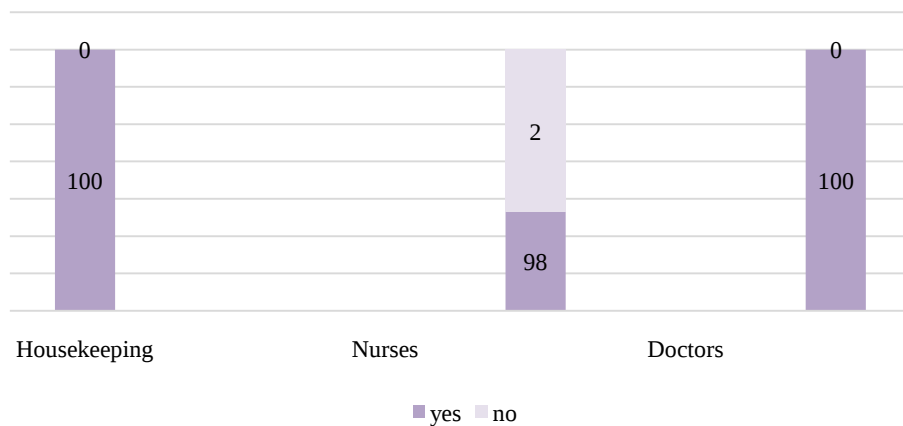




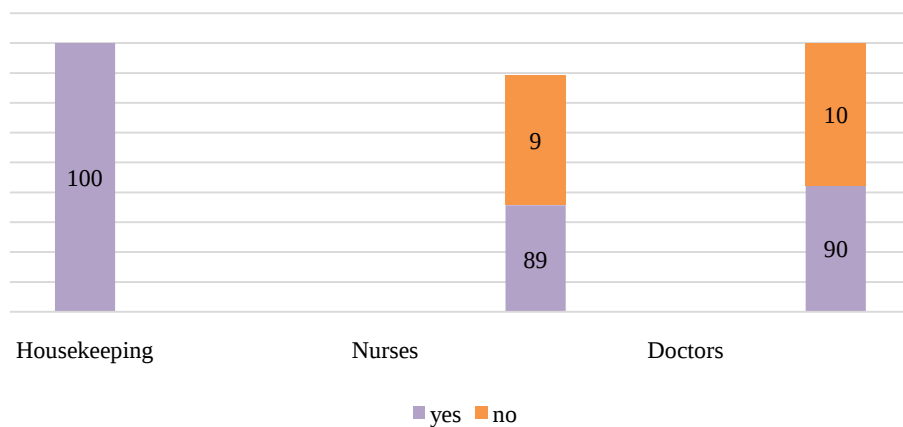
Equipment used for destroying needles and syringes?



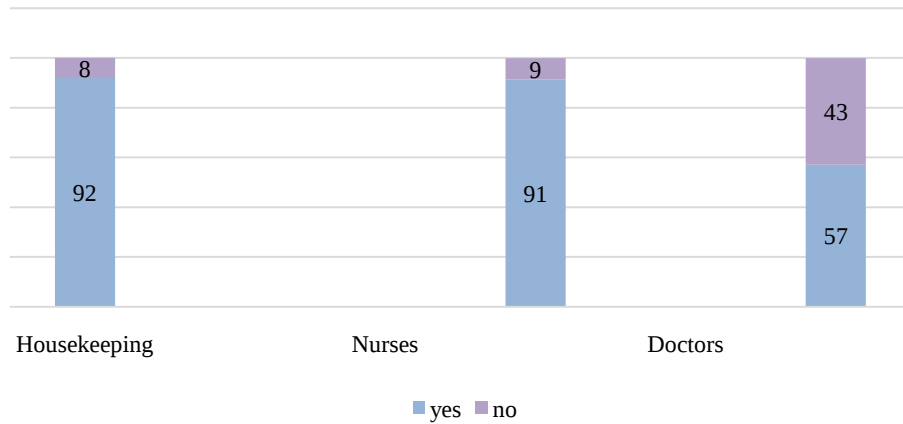
Do our hospital maintain register for waste disposal?



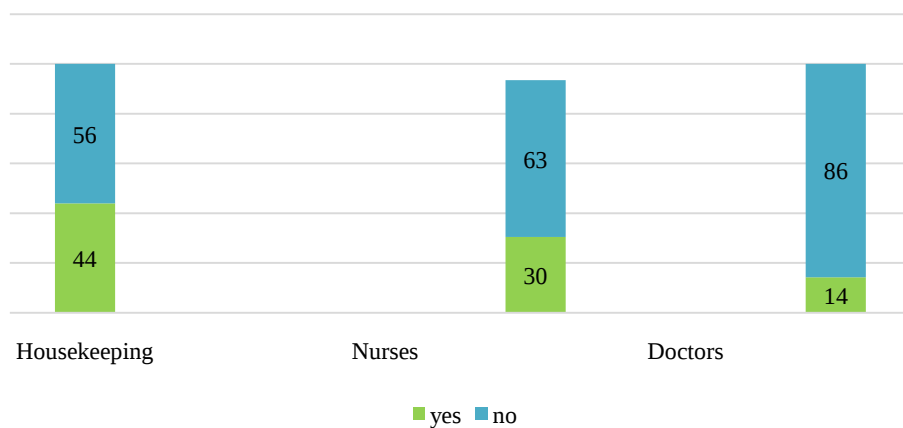
Have you undergone any training program on hospital waste management?



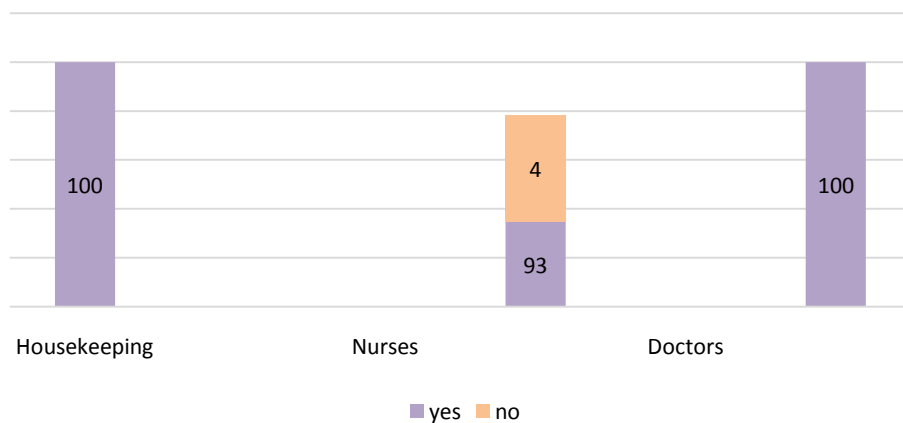
Would you like to attend a program on hospital waste management?



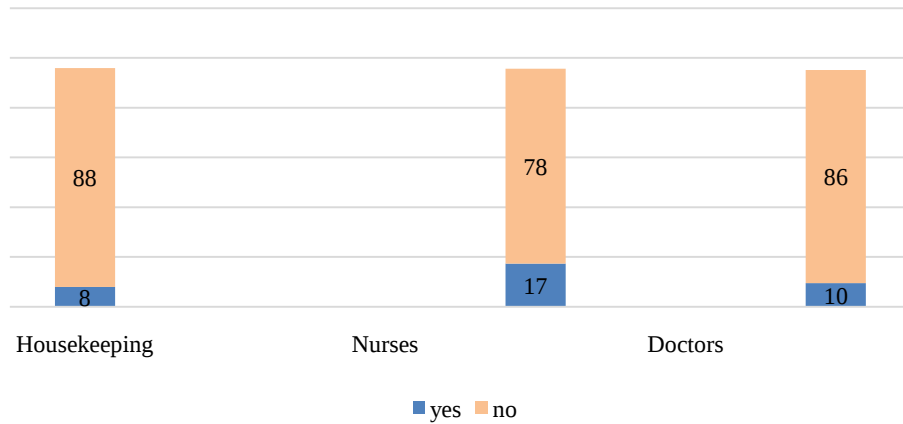
Safe management of health care waste is not an issue to all?



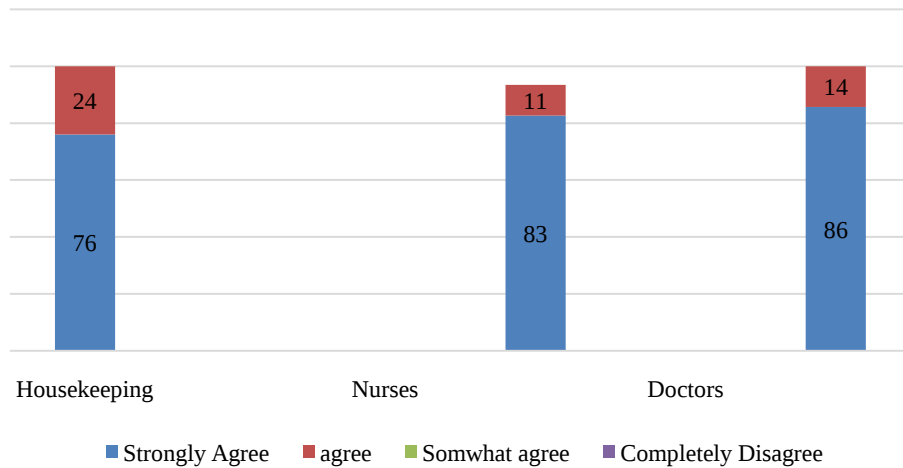
Waste management is a team work/no single class of people is responsible for safe management?



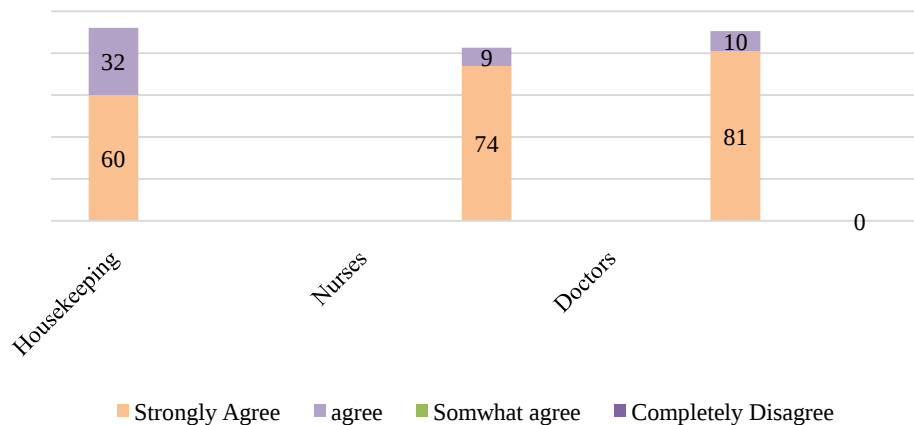
Safe management of healthcare waste is an extra burden on work?



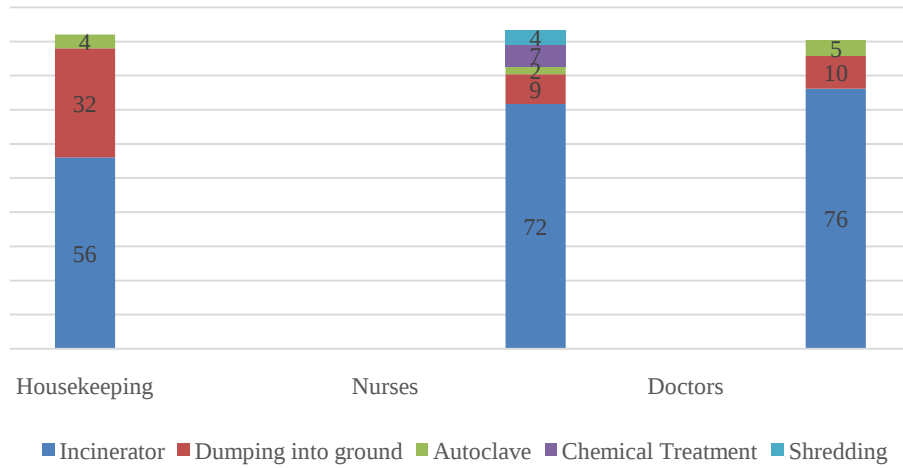
Occupational safety of waste handlers is must?



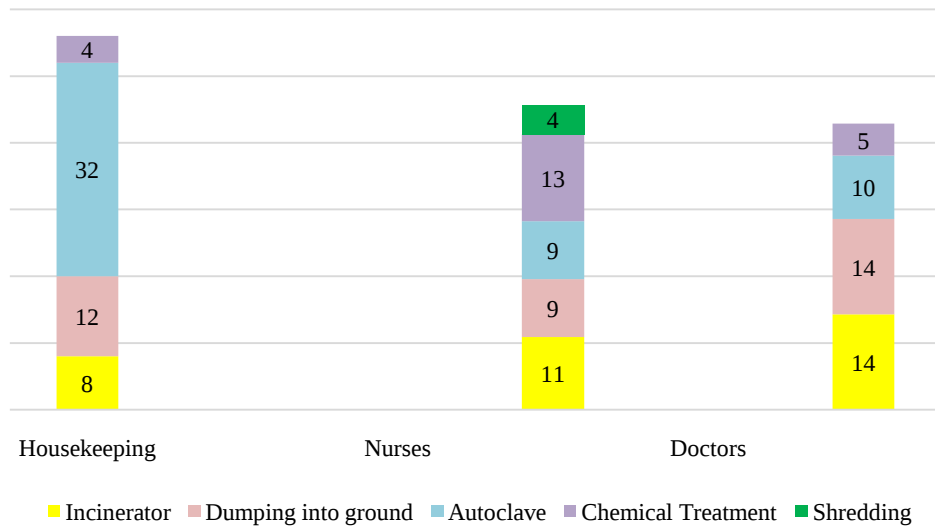
Help immunization prevents transmission of Hospital Acquired Infections?



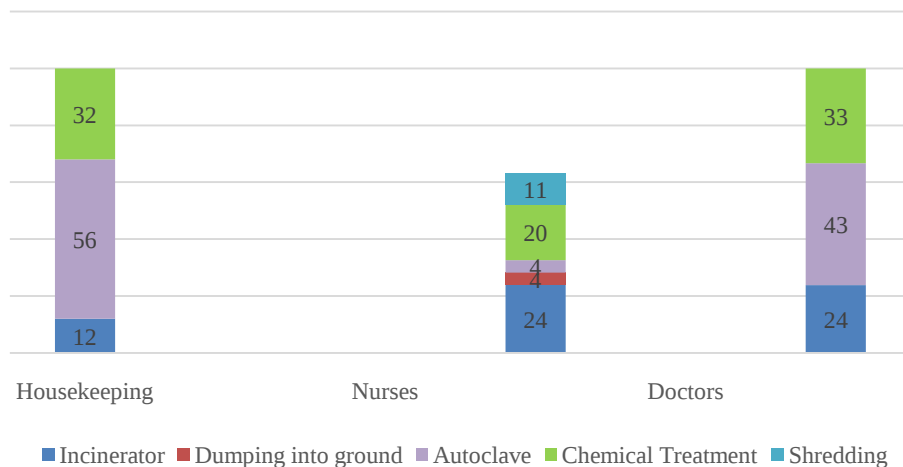
Yellow bag Waste will be disposed by?

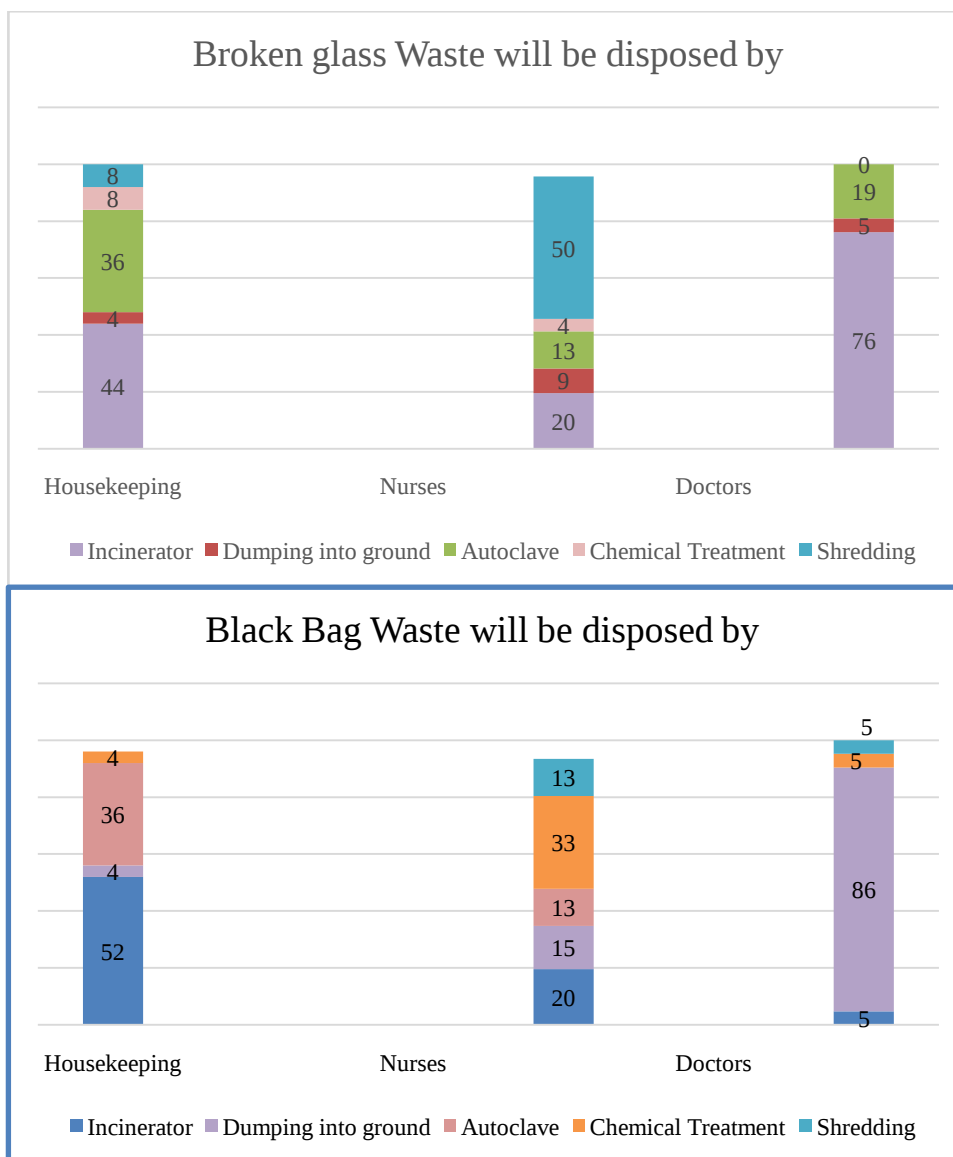


Red bag Waste will be disposed by ?



Sharp Containers Waste will be disposed by ?





- Regarding the current practices of bio-medical waste management that 92.7% of staff got training for biomedical waste management but only 80% are interested in attending the training sessions again.
- 97.33% of the staff is aware about the risks associated with bio-medical waste.
- As far as the plan for BMW is concerned 100% staff are aware about it; but only 44.6% of the staff knows about the proper segregation of the bio-medical waste.
- In general about 86% staff is aware about the legislature associated with BMW but only 23.3% of the environment pollution law.
- Only 51% of the staff were aware about the different categories of waste.

- The best part is that more than 97.66% staff of the staff is aware about the storage of the biomedical waste but only 35.4% are aware about the end treatment of the waste.
- According to 68.33% of the staff safe management is not issue at all and 81.66% of the staff thinks safety of waste handlers is a must.
- When asked that is handling the waste an extra burden to work only 11.6% felt so and rest consider it as daily routine practice that should be followed.
- 100% of the staff is aware about the registers and color codes maintained for the daily biomedical waste entry and disposal.
- 54% staff is aware about the equipment used for destroying needles after use.
- 100% of staff are aware about the biohazard symbol labelled on bags. On the other hand about 86% knows about the discarding of the waste in color coded bags.
- Regarding the categories only 69.4% gave right answer that means the whole staff are not aware about different categories of BMW management.
- Only 71.7% of the staff believe that by immunization they can be protected against the bio-medical hazard.

5. SUGGESTIONS

1. High visibility could be achieved through hoardings near the biomedical waste disposable bins.
2. There should be proper display of posters regarding the right way of disposing, storing and transporting the biomedical waste.
3. A regular audit should be done on how feedback calls are answered and recorded.
4. Training of housekeeping staff should be specially emphasized as they carry the biomedical waste.

5. It should be made compulsory for healthcare facilities to get their healthcare personnel trained from accredited training centres, These training sessions should not become merely a one-day activity but should be a continuous process depending upon the patient input in different healthcare facilities.
6. It should be ensured that the injuries happening to the healthcare personnel are reported to the person in charge of biomedical waste management or to the biomedical waste management committee, and they report it in the prescribed format to the pollution control board.
7. The need is to change the attitude of the staff regarding the biomedical waste. They should be made aware that their fault can lead to other staff's death or cause them infectious disease's.

6. CONCLUSION

Concluding from the results, the importance of training regarding biomedical waste management cannot be overemphasized; lack of proper and complete knowledge about biomedical waste management impacts practices of appropriate waste disposal.

More emphasis should be laid on attitude change of the staff depicting their concern for their co-staff which may lead to fatal infectious diseases and can also cause death.

Lack of proper and periodic training schedule was absent because of which new staff was deprived of training for long duration of time which is serious concern.

While handling the biomedical waste non usage of gloves is also an immediate concern.

Non-reporting of needle stick injuries was also there.

REFERENCES

1. Patil Ad, Shekdar AV. Healthcare waste management in India.J Environment Manage.2001;63:211-[PubMed]

2. Ministry of Environment and forest notification on the Bio-Medical Waste (Management and Handling) Rules.1998
3. Plianbangchang PH. W.H.O. Publication; “A Report on Alternative Treatment and Non-Burn Disposal Practices”; Safe Management of Bio-medical Sharps Waste in India.
4. Pandit NB, Mehta HK, Kartha GO, Choudhary SK. Management of bio-medical waste: Awareness and practices in a district of Gujrat. Indian J Public Health.2005;49:245-7[PubMed]
5. Hegde V, Kulkani RD, Ajantha GS. Bio medical waste management. J Oral Maxillofacial Pathol.2007;11(1):5-9.

APPENDIX

Bio-medical waste management Questionnaire

Q1: What do you understand by Bio-medical waste?

1. Hospital Waste 2. Medical Waste 3. Both 4. None

Q2: What do waste is generated in Hospital?

1. General Waste 2. Sharps 3. Infected waste 4. Chemical Waste 5.All

Q3: What is the average quantity of waste generated in your hospital?

1. 10kg 2. 20kg 3. 30kg 4. 40kg

Q4: Are you aware of any legislation applicable to biomedical waste?

Yes

/ No

Q5: If yes, then write the name of act applicable:

.....

Q6: Do your hospital has any waste management plan?

Yes /

No

Q7: Find out the correct sequence of waste management Program?

1. Collection-Treatment- Storage- Transport- Disposal
2. Generation- Segregation- Collection – Storage – Transport – Treatment – Disposal
3. Segregation- Collection –Treatment -Transport – Disposal

Q8: a) Should waste be segregated?

Yes /

No

b) If yes, who does the segregation?

1. Sisters 2.Doctors 3.Housekeeping 4. Professional 5. All 6. None

Q9: a) Do you color code the waste?

Yes /

No

b) Color codes used are?

- | | |
|------------------------------|-------------------------------|
| 1. Yellow, red, black, white | 2. Blue, yellow, white, black |
| 3. Blue, orange, white, red | 4. yellow, black, blue, green |

Q10: Does infectious waste bag labeled with bio-hazard symbol?

Yes /

No

Q11: Where do you store bio-medical waste?

1. Separate drums
2. With general waste
3. Nowhere

Q12: What are the risks associated with mismanagement of bio-medical waste?

1. HIV AIDS 2. Hep B 3. Hep C 4. None 5. All

Q13: Categories of Bio-medical waste:

- | | | | |
|------|------|-------|-------|
| 1. 8 | 2. 9 | 3. 10 | 4. 12 |
|------|------|-------|-------|

Q14: Yellow bag is to discard?

1. Needles 2. Glass Bottles 3. Catheters 4. Infected gauge

Q15: Blue bag is to discard?

1. Needles 2. Papers 3. Catheters 4. Broken Glass

Q16: Sharp Container is to discard?

1. Body Parts 2. Needles 3. Catheters 4. Infected gauge

Q17: Black bag is to discard?

1. General waste 2. Syringes 3. Catheters 4. Needles

Q18: Equipment used for destroying needles and syringes:

1. Sharp Container 2. Needle Destroyer 3. Syringe Pump 4. All

Q19: In which solution we discard infected fluid and blood samples

1. 1% Savlon 2. 1% Hypochlorite 3. Alcohol 70% 4. All

Q20: a) Yellow bag

1. Autoclave

b) Blue bag

2. Dumping into ground

c) Sharp Containers

3. Shredding

d) Black bag

4. Incinerator

e) Broken glass

5. Chemical treatment.

Q21: Do our hospital maintain register for waste disposal?

Q22: Have you undergone any training program on hospital waste management?

Q23: Would you like to attend a program on hospital waste management?

Q24: Safe management of health care waste is not an issue to all?

Q25: Safe management of health care waste is the responsibility of government?

Q26: Waste management is a team work/no single class of people is responsible for safe management> **Yes / No**

Q27: Safe management of healthcare waste is an extra burden on work. **Yes / No**

Q28: Mark the suitable one:

		Strongly Agree	Agree	Somewhat Disagree	Completely Agree
a)	Occupational safety of waste handlers is must				

b)	Hep.B immunization prevents transmission of Hospital Acquired Infections				
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