

Knowledge and Reported Practices Regarding Biomedical Waste Management among Nursing Staffs Posted at a Government Hospital in Mumbai

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Abstract: *Objectives:* To assess the knowledge and reported practices regarding biomedical waste management among nursing staffs posted at a government hospital. *Materials and methods:* A descriptive survey was undertaken to assess the knowledge and reported practices of biomedical waste management among nursing staffs. 100 nursing staffs were recruited in the study who were posted to various wards and departments of the hospital by non - probability convenient sampling. Data analysis was done using descriptive statistics. *Results:* The present study results revealed that maximum i. e., 56 (56 %) of samples had excellent knowledge, 24 (24%) had good knowledge, 16 (16 %) had average knowledge and only 04 (4%) had poor knowledge regarding biomedical waste management measures. It was also extrapolated that 52 (52%) respondents followed excellent practice, 42 (42%) had good practice, 6 (6%) had average practices and no one had poor practice regarding infection control measures. *Conclusion:* The study results emphasizes that majority has excellent knowledge regarding biomedical waste management, the practice needs to be emphasised upon and in - service education on this subject should be adopted for the nursing staffs.

Keywords: Knowledge, Reported practices, Biomedical waste management

1. Introduction

Bio Medical Waste is more dangerous which contains infectious or other hazardous materials, unless carefully managed, if not can cause serious pollution to soil, water and air. Any waste generated in hospitals, clinics, laboratories or similar establishments during healthcare, research, testing or related procedures on human beings or animals conducted. Medical Waste Management rules has promulgated by Government of India in 1998 and was came into effect from January 2003. The rules are about to guide others regarding collection, segregation and proper disposal of waste. The amount Bio Medical Waste production ranges from 1 - 2 kg/bed/day in developing countries, which is as high as 4.5kg in developed countries. 10 - 25% is estimated to be hazardous waste which has potential to injure, infect or harm to patients, visitors, health care personnel and to the public, which is more dangerous than other type of wastes. Hazards results by Bio medical waste are environmental burden and another important risk is problems encountered by individuals who handles the waste.

The objectives of Bio Medical Waste Management are to effective reduction of waste volume, proper collection, segregation, transport, and economical disposal of waste to prevent harm resulting from it, retrieve reusable materials. In hospital settings main concern is about Bio Medical Waste Management, so healthcare personnel should stick to the rules related to management of Biomedical waste. Nurses and Paramedics are mostly involved in activities related to Bio Medical Waste management such as collection, segregation, transport, and proper disposal. As nurses and paramedics are the backbone of BMW management, it is important to assess the knowledge and reported practices about BMW. Nurses plays important role in preventing hospital - acquired infections, not only by ensuring that all aspects of their nursing practice are properly conducted, but

also through nursing research, patient education and implementation of infection control practices.

2. Review of Literature

- Riyaz A Shaik et al in his study conducted to assess the knowledge of staff nurses on health hazards related to biomedical waste disposal at a tertiary care hospital, revealed that maximum number of nurses had adequate knowledge regarding the subject while nil had inadequate knowledge. The study results suggested that though the nurses possess adequate knowledge mandatory training at all levels should be undertaken on a regular basis.
- The results of a study done by Sukanya Panneerselvam in 2016 on Knowledge on Biomedical Waste Management among Nurses Working in Hospital at Madurai revealed that majority of the nurses possess good knowledge by virtue of the training and staff development program conducted by the hospital on a regular basis.

3. Materials & Methods

A cross sectional descriptive survey was conducted among 100 nursing staffs working at a government hospital in Mumbai. A non - probability convenient sampling techniques were used to recruit samples. A self - administered questionnaire was prepared which consists of two sections to assess demographic profile, knowledge regarding biomedical waste management whereas a checklist was prepared for data collection of reported practices. Data analysis was done by descriptive statistics

4. Results

- 60 (60%) of the samples were between the age group of 25 - 45 years whereas 40 (40%) belong to age group above 45 years
- 54 (54%) of the samples were male whereas 46 (46%) of the samples were females
- 67 (67%) belong to nuclear family, 20 (20 %) were from joint family & 13 (13%) belonged to mixed family
- 85 (85%) of the samples were married, 12 (12%) were unmarried and 03 (3%) were widow.
- 80 (80%) of the samples had undergone formal training in biomedical waste management measures
- 56 % of samples had excellent knowledge whereas 24%, 16% & 4% revealed good, average & poor knowledge regarding biomedical waste management.
- 67% of samples possessed good knowledge regarding the use of colour code for disposal of waste

- 76 % were able to demonstrate biomedical waste management practices whereas 82% of the samples were aware of standard precautions.
- 52 % of samples followed excellent practices whereas 42% & 6% revealed good & average practices regarding biomedical waste management.
- 68 % of samples reported good practices regarding disposal of anatomical waste
- 62 % revealed average practices regarding spill management
- 75% of the samples practiced effective handwashing techniques
- Significant relationship was established between years of experience of the samples and knowledge regarding biomedical waste management.
- Significant relationship between knowledge and reported practices of biomedical waste management was revealed by this study.

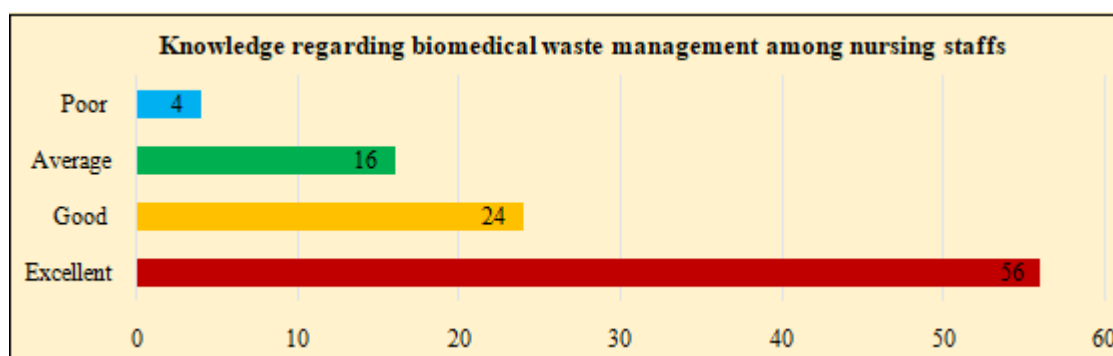


Figure 1: Distribution of samples as per their knowledge regarding biomedical waste management among nursing staffs, n=100

Fig No 1 reveals that majority of the samples i. e. 56 (56%) of nursing staffs possess excellent knowledge regarding biomedical waste management while 04 (4%) had poor knowledge



Figure 2: Distribution of samples as per their Reported Practices, n=100

Fig 2 shows that only 52 (52%) respondents had excellent practice whereas 42 (42%) had good reported practices & 06 (06%) had average practices regarding biomedical waste management.

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