

Knowledge and Attitude of Nurses Regarding Healthcare Waste Management Practices in a Tertiary care Hospitals of Lahore

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ABSTRACT

Background: Healthcare waste is considered infectious and hazardous. It requires specific handling prior to its disposal and poses a stern dangers to ecological, occupational and public health if not managed with caution. Hazardous waste management is a concern for every health care organization and for every healthcare professional. As nurses are the primary members of healthcare team and during provision of care to the patients they are the primary people dealing with the healthcare waste.

Aim: To assess knowledge and attitude of nurses regarding healthcare waste management practices.

Methodology: A quantitative descriptive cross-sectional Study design was used. Data was collected by a self-administered modified questionnaire, containing 20 questions, from 50 staff nurses of Shalamar Hospital Lahore, using a convenience sampling. The study was carried for the period of October 2011 to December 2011. The collected data was then analyzed and frequencies and percentages were calculated.

Result and conclusion: Study revealed that that most of the nurses were not having satisfactory knowledge regarding healthcare waste management practices. Majority of staff nurses were conscious of the measures for safe collection and final disposal of health care and were having positive attitude toward healthcare waste management practices.

Keywords: Attitude, knowledge, waste management practice

INTRODUCTION

Health care waste is produced by the health care establishments during their functioning (Ilyas, 2004). The management of healthcare waste has become a major public health and humanitarian issue globally today (Sharma & Chauhan, 2008). With the passage of time there have been fabulous innovations in the health care system. However, we cannot deny from the fact that the health care organizations, which treat the ill and maintain our health, are also posing a serious danger to our wellbeing. The health care facilities that provide various healthcare services which includes diagnostic, curative, rehabilitation and preventive. In process of provision of these services, they also produce wastes both from medical and non-medical activities (Chaerul, Tanaka, & Shekdar, 2008).

Hospital waste is a special type of waste carrying a high potential of infection and injury. Hospital waste includes hazardous or risk waste and non-risk waste. The different types of risk wastes are:

infectious waste, pathological waste, sharps, pharmaceutical waste, geotaxis waste, chemical waste and radioactive waste. The non-risk waste comprises of other types of garbage like foodstuff leftovers, cardboards and packages (Ilyas, 2004)

Derisory and improper management of healthcare waste may results in severe public health consequences and pose a substantial influence on the environment (Lee, Ellenbecker, & Moure-Ersaso, 2004). Negligence concerning healthcare waste management can considerably contribute to environmental pollution and hence affects the health of individuals (Oweis, Al-Widyan, & Al-Limoon, 2005). Poor waste management practices pose a higher risk to the health of public, patients and to the health of health care professionals as well and contribute to the environmental degradation (Jang, Lee, Yoon, & Kim, 2006).

Knowledge and attitude regarding healthcare waste management practices, among various members of healthcare team of developing countries is deficient (Hageman, 2002; Uysal & Tinmaz, 2004). Studies from Pakistan states that about 2kg of health care waste/bed/day is produced out of which 0.1-0.5 kg waste/bed/day is calculated as hazardous (Rasheed, Iqbal, Baig, & Mufti, 2005). Many infectious diseases including Human immunodeficiency virus (HIV), hepatitis B and C and many more can spread through improper dealing of health care waste (Ahmed, 2004).

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Awareness regarding hospital waste management in terms of its segregation, collection, storage, transportation and disposal is lacking in nurses who are involved in patient care primarily (Shafee, Kasturwar, & Nirupama, 2010). Health care workers especially nurses have avitalchance to manage the environmental effects of their practice. Their efforts may seem small, but each step builds a base of sound behavior and thinking that are necessary for the success of the whole. This paper is an attempt to provide with a review of knowledge and attitude regarding health care waste management practices of nurses, who are considered as the integral part of health care and are the focal members of health care team dealing with health care waste.

METHODOLOGY

This quantitative descriptive cross-sectional study was carried out to identify the knowledge and attitude of nurses regarding healthcare waste management practices. Study population of this research includes staff nurses of Shalamar teaching hospital. The study was conducted in Shalamar nursing college while data was collected from the nurses of Shalamar hospital, Lahore. The research was carried for the period of three months from October 2011 to December 2011. Sample for this study was selected by mean of convenience sampling method. A sample of 50 staff nurses was selected out of total strength of 100 staff nurses of Shalamar hospital from the morning, evening and night shifts on the bases of availability of the nurses in clinical units of Shalamar hospital. Staff nurses having more than 1 year of clinical experience were included in the study while head nurses, nursing assistants and nursing students were excluded from the study. The data for the study was collected by using the self-administered and specially designed and modified questionnaire. The questionnaire was very simple in nature; it consisted of 20 questions. It was having questions for knowledge and attitude assessment about healthcare waste. Data collection was completed in 1 month. The respondents were cooperatives and took interest in filling the questionnaire. Data was analyzed by using SPSS18, frequencies and percentages of the responses of participants were calculated.

Ethical Consideration: Written Consent from participants was taken before including them in study. The data collected from the nurses has been kept purely confidential and only used for statistical analysis about study. Autonomy and beneficence of the participants were considered.

RESULTS AND DISCUSSION

Fifty five percent nurses were able to define healthcare waste management. 50% staff nurses were aware about the hospital waste management policy of the hospital. 55% staff nurses knew about health care waste management plan of hospital while 40% nurses have attended any prior training program or workshop on healthcare waste management while 60% nurses have not attended any prior training program or workshop on healthcare waste management. Only 22% nurses said that the hospital provide continuing educational programs or workshops on healthcare waste management while 78% nurses said that hospital do not provide any continuing education program on healthcare waste management. 58% nurses have knowledge about the incineration process. Only 30% nurses were aware that infectious waste should be labeled with biohazard symbol while 60% nurses were not aware of this fact. 84% nurses know about the protective measures while handling the waste. 78% nurses said that waste is carried via secure puncture proof bags while 22% were not aware.

From the above percentages it can be inferred that most of the nurses working in hospital do not have satisfactory knowledge regarding healthcare waste management practices that contradicts with a study conducted in Agra by (Sharma, 2010) which states that nurses have satisfactory knowledge, it can be because of the fact that most of the study participants in our study responded that they have never attended any continual education or refresher session on healthcare waste management practices. Eighty two percent nurses were disagreeing that safe management of healthcare waste is not an issue at all. 72% nurses were Disagree that safe management of health care waste is the responsibility of government only. 68% nurses are Disagree that safe management of healthcare waste efforts by hospital increases financial burden on hospital management hence it is not needed. 88% nurses are Disagree that safe management of healthcare waste is an extra burden of work. 98% nurses like to attend a program or workshop on healthcare waste Management. 66% nurses make sure for color coding the waste for disposal. 60% nurses agree that maintaining documentation for waste disposal is necessary in clinical units. 86% nurses take protective measures while handling the healthcare waste. Seventy percent nurses said that waste is carried from the point of generation to the final disposal site via polythene bags. 84% nurses show positive attitude toward waste segregation and 90% nurses were agree with the fact that waste should be segregated at the point of generation. It

can be seen that most of the staff nurses are showing positive attitude toward the healthcare waste management practices and are interested in improving their knowledge regarding issue under discussion by participating in continual education programs on healthcare waste management practices. Same result is seen in a study conducted by (Mathur, Dwivedi, Hassan, & Misra, 2011)(Rasheed et al., 2005).

Table of frequency and percentage of attitude of nurses regarding healthcare waste management practices

Question	Agree	Disagree
Safe management of health care waste is not an issue at all.	9(18%)	41(82%)
Safe management of health care waste is the responsibility of government only.	14(28%)	36(72%)
Safe management of health care waste efforts by hospital increases financial burden on management thus it is not needed	16(32%)	34(68%)
Safe management of Health Care waste is an extra burden of work	6(12%)	44(88%)
Would you like to attend a continual education program on healthcare Waste Management?	49(98%)	1(2%)
While disposing off the health care waste, I make sure for color coding system of waste.	33(66%)	17(34%)
Documentation for waste disposal should be maintained in the clinical unit.	30(60%)	20(40%)
Protective measures should be taken while dealing with health care waste.	43(86%)	7(14%)
While dealing with healthcare waste, I segregate the waste in different categories.	42(84%)	8(16%)
The healthcare waste should be segregated at the point of generation.	45(90%)	5(10%)

The producer of healthcare waste is having a responsibility of ensure its proper disposal. Hospitals are having a social obligation to maintain a hazard free clean environment. Nurses being the primary provider of care are the focal persons dealing with the healthcare waste. They are at great risk regarding hazards related to this type of waste and are the one responsible for careful handling and management of the healthcare waste (Hayashi & Shigemitsu, 2000).

CONCLUSION

Participants involved in this study were assessed knowledge and attitude about health care waste management. During the course of this study, the study revealed that most of the nurses were not having satisfactory knowledge regarding healthcare waste management practices. Majority of staff nurses were conscious of the measures for safe collection

and final disposal of health care waste. It was also interesting concluded in this study that most of nurses were showing positive attitude regarding healthcare waste management practices. Nurses are interested to attend continuing education programs on health care waste management. Hence it is recommended that special continual education programs should be conducted in healthcare settings to improve the knowledge of nurses regarding healthcare waste management practices which in turn will improve the healthcare waste management practices. It is also recommended to conduct studies on this important topic on large scale to find out the magnitude of the gaps.

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