Nurses' Compliance with Waste Management Procedures in Kidney Hospital

Thesis

Submitted in Partial Fulfillment of Master Degree

in Nursing Sciences (Nursing Administration)

By

Marwa Ramadan Saied Ahmed

(B.Sc. Nursing, 2006)
Faculty of Nursing- Ain Shams University

Faculty of Nursing
Ain Shams University
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Supervised by

Prof. Dr. Samah Faisal Fakhry

Professor of Nursing Administration
Faculty of Nursing-Ain Shams University

Dr. Heba Ali Hassan Ali Omar

Lecturer of Nursing Administration
Faculty of Nursing-Ain Shams University

Faculty of Nursing
Ain Shams University
2018

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Marwa Ramadan Saied Ahmed

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List of Abbreviations

Abb.	Full term
BCRC	Basel Convention Regional Centre
BMW	Bio Medical Waste.
CDC	Center for Disease Control and Prevention
CUH	Cairo University Hospital
DOH	Department Of Health
DSDHE	Department of Sustainable Development and Healthy Environments
EGSSAA	Environmental Guidelines for Small Scale Activities in Africa
EPTRI	Environment Protection Training and Research Institute
HCF	Healthcare Facility.
HCGW	Healthcare Generation Waste.
HCRW	Healthcare Risk Waste.
HCW	Health Care Waste
HCWM	Healthcare Waste Management.
HPCSA	Health Professions Council of South Africa
ICN	International Council of Nurses
ICO	Infection Control Officer.
IVB	Immunization Vaccines and Biologicals
MMISP	Making Medical Injection Safer Project
MOH	Ministry Of Health
NHMRC	National Health and Medical Research Council
NIOSH	National Institute for Occupational Safety and Health

Abb.	Full term
PPE	Personal Protective Equipment.
SBC	Secretariat of the Basel Convention
UNEP	United Nations Environment Program
WHO	World Health Organization

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Abstract

Background: Management of healthcare waste has great importance due to its potential environmental hazards and public health risks. Hence, it is the ethical responsibility of health care providers especially nurses to carefully and safely manage those waste. **Aim**: The aim of this study was to assess nurses' compliance with waste management procedures in kidney hospital at Metghamr. **Subject and methods:** the study carried at kidney hospital at Metghamr using descriptive/ correlational design on a sample of 60 nurses. Data collectiontools were a waste management knowledge questionnaire and an observational checklist for practice. **Results**: slightly more than half of nurses in the study sample (55%) had bachelor degree, high percentage of them (73.3%) had satisfactory knowledge regarding health care waste management, and (82.3%) had adequate practices of waste management procedures, there was statistically significant relationship between total nurses' practice and their total knowledge ($p<0.001$). **Conclusion**: majority of nurses who had adequate practice also had satisfactory knowledge. There was statistically significant moderate to strong correlation between nurses' total knowledge, practice and their demographic characteristics. **Recommendation**: Periodical training programs for nurses are needed to educate them about the work hazards such as needle stick injuries. Further researches are needed to assess the effect of improving nurses' compliance with health care waste management on quality of health care.

Key words: Compliance, Knowledge, Nurses, Practice, Waste, Waste Management procedures.

Introduction

Hospital is one of the complex institutions, which is frequented by all categories of personnel in the society without any distinction between age, sex, race, and religion. This is over and above the normal inhabitants of hospital i.e. patient and staff. All of them produce waste, which is increasing in its amount and type due to advances in scientific knowledge and is creating its impact. The hospital waste, in the risk of patients and personnel who handle these wastes poses a threat to public Further, in the past few years, there has been an increase in public concern about the health care waste management (HCWM) on a global basis and a significant effort has been directed to word proper and safe management of hazardous health care waste **(Patil and Pokhrel, 2012).**

Health care wastes (HCW) are including all the waste generated by health-care, health research facilities and associated laboratories related to medical procedures. They include potentially dangerous" hazardous waste", such as sharps (needles, blades, broken glass) and waste with infectious, hazardous, radioactive, and genotoxic properties that endanger human health and environment and kitchen

waste; Managing HCW safely is essential, but not easy **(Onursal, 2011; Sreegiri and Babu, 2009).**

Hospital waste is a special category of waste, which is highly hazardous due to its infectious and/or toxic characteristics. Furthermore, in health care units the direct exposure of waste management workers and members of the public for this type of waste increases the hazard that emerges from their treatment. Despite the fact that current medical waste management practices differ from hospital to hospital, the problematic areas are approximately the same for all health care units and at all stages of management, including segregation, collection, packaging, storage, transport, treatment and disposal **(Fluke, 2009).**

Biomedical waste management has recently emerged as an issue of major concern not only to hospitals, nursing home authorities but also to the environment. The bio-medical wastes generated from health care units depend upon a number of factors such as waste management methods, type of health care units, occupancy of health care units, specialization of healthcare units, ratio of reusable items in use, availability of infrastructure and resources **(Dude, 2016).**

Nurses are considered the first line of defense to face the risks of health care waste. If these risks passed the first

line of defense, the results become disastrous. Therefore, the hospital administration will not be able to face the hazard of health care waste successfully without the cooperation of the nurses. Where the segregation system of HCW starts at the point of generations. In this context, the nurses must be fully aware of all the types and risks of medical waste and how to deal with it. There is a concept that the medical waste management limited to the existence of incinerators and different processing methods. But this concept is wrong; HCWM depends on the fundamental basis and working to create a medical waste treatment. The risk of the medical waste is not limited to accumulation and poor-treatment only, but also related to the infection and the risk of these wastes may occur before the arrival of this waste incinerators and different treatment methods **(Mohammed, 2011).**

The safe management of hospital waste involves, as a first step, a correct identification and segregation of hazardous waste from non-hazardous waste, to avoid risks to staff patients and the environment. It is essential not to mix general waste with risk-waste, to avoid incurring extra costs of treatment and special disposal unnecessary. Additionally, HCWM comprises seven key stages: segregation, collection, storage, handling, transportation, treatment and disposal. It is important that hospitals segregate HCW into designated