

# **CHAPTER: 02**

## **STUDY ON KNOWLEDGE, AWARENESS AND PRACTICES OF BIOMEDICAL WASTE MANAGEMENT AND INFECTION CONTROL AMONG HOSPITAL STAFF AT CIVIL HOSPITAL, ROPAR (GOVERNMENT OF PUNJAB)**

**Jashanmeet K Hans**

*Student, IIHMR University*

**Dr. P.R. Sodani**

*Professor, IIHMR University*

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## **INTRODUCTION**

Waste produced during the diagnosis, treatment, or immunisation of humans or animals, as well as during related research, the creation and testing of biological products, or health camps, is all included in the category of biomedical waste. This has an impact on the environment in addition to being a major burden for hospitals. In order to reduce negative consequences on the environment and public health arising from waste generated during patient care, hospitals must manage biomedical waste effectively. Hospital waste management, which includes operations like collection, transportation, operation or treatment of processing systems, and waste disposal, is an essential component of hospital hygiene and maintenance activities, according to a 1998 notification from the Government of India[1,2].

The WHO estimates that 85% of hospital waste is not harmful, 10% is infectious, and 5% is not infectious but is nevertheless categorised as hazardous. Depending on the total amount of garbage created, infectious waste might make up anywhere from 15% to 35% of hospital waste [3].

## **RESEARCH OBJECTIVES**

1. To assess the understanding and familiarity of hospital staff with the policy and execution of biomedical waste management.
2. To gauge the level of awareness regarding needle-stick injuries and their occurrence among different groups of healthcare providers.
3. To scrutinize the existing practices associated with biomedical waste management within the hospital.
4. To evaluate the implementation of infection control practices in the hospital.

## **RESEARCH METHODOLOGY**

A three-month cross-sectional study was conducted at Civil Hospital, Ropar, Government of Punjab. The sample size comprised 100

staff members, including 20 doctors, 25 nursing staff, 30 student nurses in training, 10 housekeeping staff, and 15 laboratory technical staff. The study encompassed all healthcare professionals available at the hospital, such as doctors, nurses, technical staff, and housekeeping staff, who were both present and willing to participate. Those who opted not to participate were excluded from the study. Specific tools were developed by the researchers to assess Knowledge, Attitude, and Practices (KAP) related to biomedical waste management and infection control: 1) Questionnaire for Doctors, 2) Questionnaire for Nursing and Technical Staff, 3) Questionnaire for Housekeeping Staff, and 4) Observation Checklist. Data collection involved interactions and observations of hospital staff across different departments and wards, utilizing a self-structured questionnaire and checklist.

## **RESULTS & DISCUSSION**

Approximately 70% of physicians, 80% of staff nurses, 57% of nursing students, 73% of lab technicians, and 20% of housekeeping staff demonstrated adequate knowledge and awareness of biomedical waste management. Regarding needle stick injuries, 100% of doctors, 100% of staff nurses, 100% of nursing students, 100% of lab technicians, and 60% of housekeeping staff exhibited appropriate knowledge. Upon observation, significant disparities were noted when comparing the current practices of biomedical waste management with the assessment. Despite the healthcare facility (HCF) employing needle shredders to prevent syringe reuse, an ineffective needle shredder was discovered in one ward. The hospital does not adhere to the practice of cutting gloves and glucose bottles before disposal into color-coded bins. Furthermore, the hospital lacks provisions for treating liquid waste from the operation theatre, labor room, dialysis section, and laboratory. All liquid waste is discharged into the sewer without undergoing any treatment. Additionally, color-coded bins are not available in the final storage room.

## **CONCLUSION**

After assessing infection control practices, it was found that doctors, nurses, and other healthcare professionals were well-informed

about all infection control measures. However, during observation, it was noticed that a smaller percentage of the staff were actively putting these measures into practice. When comparing the Observation checklist with the assessment of practices, it was noted that gloves and glucose bottles were not being cut before disposal. Further observation revealed that primarily nursing students undergoing training in various departments and wards were not cutting the gloves before disposal.

## **REFERENCES**

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