

A Study to Assess the Knowledge Regarding Body Fluid Spill Management Among Class 4th Workers at Era Lucknow Medical College & Hospital, Lucknow

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Abstract

A spill of any hazardous substance on your site can pollute the environment if it is not dealt with properly. A spill outdoors may run straight into the storm water system and pollute the nearest stream, river, beach or groundwater - unless you know what to do and do it immediately. Body fluid spills such as blood, urine, and vomitus pose significant risks for the transmission of infections in healthcare settings. Proper management of these spills is essential for preventing healthcare-associated infections and ensuring occupational safety. Class IV workers play a crucial role in maintaining hospital hygiene and are often the first responders to such spills; however, their knowledge regarding appropriate spill management practices is often overlooked.

The findings revealed that 81% of the participants had adequate knowledge regarding body fluid spill management, while 19% had moderate knowledge. None of the participants demonstrated inadequate knowledge. A significant association was found between knowledge level and clinical experience ($p < 0.05$), whereas age, gender, and educational status showed no significant association with knowledge level.

Keywords: Assess, Knowledge, Body fluid spill management, Class IV workers, Infection control, Personal protective equipment, Hospital safety

Introduction

Infection prevention and control are fundamental responsibilities in any healthcare setting. Among the various risks faced by healthcare workers, exposure to body fluids poses a significant threat due to the potential transmission of infectious agents such as Hepatitis, and Human Immunodeficiency Virus (HIV) Herpes Simple Virus (HSV), Norovirus, Influenza virus, Ebola Virus, Mycobacterium tuberculosis, Escherichia coli (E.coli), Salmonella. Effective body fluid spill management is therefore essential to maintain a safe environment for both patients and healthcare professionals. In healthcare settings, maintaining hygiene and preventing infections is a critical responsibility shared by all categories of

health personnel. Among them, Class 4th workers play a vital role in maintaining cleanliness and handling bio-hazardous waste. One of the key infection control concerns in hospital is the proper management of body fluid spills. Improper handling of these spills can lead to the transmission of serious infections like Hepatitis B, Hepatitis C, and HIV to both healthcare workers and patients. Therefore, it is essential that Class 4th workers possess adequate knowledge regarding the appropriate use of personal protective equipment (PPE), correct cleaning techniques, and biomedical waste segregation protocols.

Background

Healthcare settings are environments where the risk of exposure to infectious agents is high due to the frequent handling of blood and other body fluids. Body fluid spills, including blood, urine, vomitus, and other secretions, are common occurrences in hospitals and pose a significant risk for the transmission of blood-borne and infectious diseases such as Hepatitis B, Hepatitis C, Human Immunodeficiency Virus (HIV), and other pathogenic microorganisms. If not managed promptly and appropriately, such spills can lead to contamination of the hospital environment and contribute to healthcare-associated infections. Infection prevention and control are fundamental responsibilities of all healthcare personnel. Among them, Class IV workers—including housekeeping and sanitation staff—play a vital role in maintaining cleanliness and ensuring a safe healthcare environment. These workers are often the first to respond to body fluid spills; therefore, their knowledge and practices regarding spill management are crucial in minimizing occupational hazards and protecting patients, healthcare workers, and visitors.

Methodology

A quantitative, descriptive survey design was adopted for the study. The research was conducted at Era Lucknow Medical College and Hospital, Lucknow. A total of 100 Class IV workers were selected using a non-probability convenience sampling technique. Data were collected using a structured knowledge questionnaire covering aspects of standard precautions, use of personal protective equipment (PPE), disinfection procedures, and biomedical waste disposal.

SECTION - A

DESCRIPTION REGARDING DEMOGRAPHIC VARIBALE

This section describes the demographic characteristics of the sample under study. The data obtained describes the characteristics pertaining

Table: Demographic Profile Of The Subjects

Table-1 N=100

B	Demographic Variable & options	Frequency	Percentage
Age	25-34 yrs	25	25%
	35-45 yrs	67	67%
	45-54 yrs	8	8%
	55 years and above	0	0%
Gender	Female	57	57%

	Male	43	43%
Education	Illiterate	0	0%
	Primary education up to 5th standards	80	80%
	Secondary education up to 10th standards	20	20%
	Higher education (12 th pass & graduate)	0	0%
Clinical Experience	Less than 1 years	0	0%
	1-5yrs	68	68%
	6-10yrs	32	32%
	More than 10 years	0	0%

Table No. 01: Demographic Profile of the Subjects

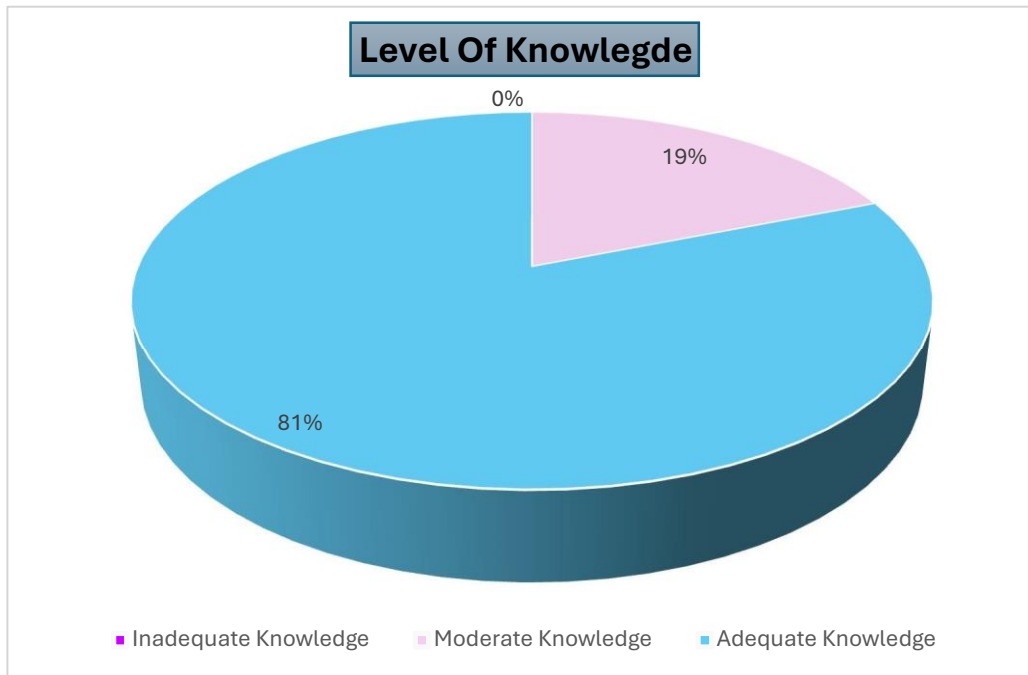
Most participants (67%) were aged 35–45 years, followed by 25% aged 25–34 years and 8% aged 45–54 years. The sample had a female majority, with 43% male participants. In terms of education, 80% had completed primary education up to 5th standard, while 20% had secondary education up to 10th standard, indicating a generally low educational level. Regarding clinical experience, 68% of participants had 1–5 years of experience, whereas 32% had 6–10 years of experience.

SECTION-B

KNOWLEDGE REGARDING SPILL MANAGEMENT

CRITERIA MEASURE OF KNOWLEDGE SCORE		
LEVEL OF SCORES	PERCENTAGE	FREQUENCY
INADEQUATE KNOWLEDGE (0-5)	0%	0
MODERATE KNOWLEDGE (6-10)	19%	19
ADEQUATE KNOWLEDGE (11-15)	81%	81

Table No. 02: Frequency and Percentage distribution of level of knowledge



The findings reveal that the majority of participants (81%) had adequate knowledge regarding spill management, while 19% had moderate knowledge. None of the participants were found to have inadequate knowledge. This indicates that most participants possess good understanding and awareness about spill management practices. However, the presence of participants with moderate knowledge suggests the need for continuous education, training programs, and regular updates to further improve their knowledge and ensure effective spill management and patient safety.

SECTION-C

ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND KNOWLEDGE LEVEL

Demographic Variable		Moderate Knowledge	Good Knowledge	Chi-square	d f	p-value
Age	25-34 yrs	6	19	1.935	2	0.42
	35-45 yrs	13	54			
	45-54 yrs	0	8			
Gender	Female	12	45	0.363	1	0.55
	Male	7	36			
Education	Primary education up to 5th standards	14	66	0.585	1	0.44
	Illiterate	0	0			
	Higher education (12 th pass & graduate)	0	0			
	Secondary education up to 10th standards	5	15			

Clinical Experience	1-5yrs	17	51	4.971	1	0.03
	Less than 1 years	0	0			
	More than 10 years	0	0			
	6-10yrs	2	30			

Table No. 03: Table showing Association of Scores and Demographic Variables

Discussion

The findings indicate that most Class IV workers possess satisfactory knowledge regarding body fluid spill management. However, moderate gaps exist in procedural and reporting aspects, highlighting the need for regular training and reinforcement. A significant association was found between knowledge level and clinical experience, indicating that workers with more years of experience had better understanding of body fluid spill management procedures. This suggests that practical exposure plays a vital role in enhancing knowledge.

Conclusion

The study concluded that the majority of Class IV workers possessed adequate knowledge regarding body fluid spill management. However, regular training programs and refresher sessions are recommended to further strengthen safe practices and enhance infection prevention and control in hospital settings. The majority of participants (81%) demonstrated good knowledge regarding body fluid spill management, while 19% showed a moderate 40 level of knowledge. None of the participants fell under the poor knowledge category, indicating an overall satisfactory awareness among Class IV workers.

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References

1. World Health Organization. Decontamination and Spill Management in Health-Care Facilities. WHO; 2016.
2. Pramila D’Souza et al. A study on knowledge regarding hospital protocols on biomedical waste and spillage management among nurses. International Journal of Nursing Education. 2015.
3. Krishna Kishore et al. Knowledge on spill management among trained and untrained healthcare workers in a government hospital. Journal of Infection Control. 2019.