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ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICE OF HEALTH CARE WORKERS ON INFECTION PREVENTION IN HEALTH INSTITUTION IN LUCKNOW, INDIA

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ABSTRACT

Background: Nosocomial infections also known as health care-associated and hospital-acquired infections (HAIs) , are infections which results from treatment in a hospital or a healthcare service unit, but secondary to the patient's original condition. Any breach in infection control practices can lead to transmission of infection from patients to health care workers, other patients and attendants. Proper knowledge and practice can reduce the incidence of HAIs significantly. **Aim and objectives:** To assess the knowledge, attitude and practice of health care workers on infection prevention in health institution in Lucknow, India. **Material and methods:** A cross-sectional observational study conducted among 5 hospitals of Lucknow city. Total of 360 healthcare workers were enrolled in the study. Data was assessed on the basis of a standard questionnaire. **Result:** Majority of the respondent knew about diseases transmitted by sharp injury and body fluid. 96.7 % HCWs have the knowledge of hand hygiene. 95 % had knowledge about personal protective equipments. But despite having good knowledge about HAIs and methods to prevent them, practice of these safety measures were found relatively low. **Conclusion:** HAIs can be prevented to a much greater extent if the knowledge about the preventing methods are applied more stringently

KEYWORDS: HAIs (Hospital acquired infections), hand hygiene, needle prick, HBV, HIV, knowledge, practice.

INTRODUCTION

Infection in hospitals and other healthcare settings is a major problem for health services throughout the world.[1] The problems related to this are very serious as it causes major health risks that lead to burden in terms of morbidity, mortality and cost.[2] Nosocomial infections (NIs) are infections which results from treatment in a hospital or a healthcare service unit, but secondary to the patient's original condition.[3] Infections are considered nosocomial if they first appear 48 hours or more after hospital admission or after discharge. These are also known as health care-associated and hospital-acquired infections (HAIs). The most common type of NIs are surgical wound infections, respiratory infections, genitourinary infections, as well as gastrointestinal infections. Any breach in infection control practices can lead to transmission of infection from patients to health care workers, other patients and attendants.[4] It is therefore important for all health care workers, patients, their family members, friends and close contacts to adhere to the infection control guidelines strictly. Infection prevention and control measures aim to ensure the protection of those who might be vulnerable to acquire an infection while receiving care due to health problems in the range of settings.[5] Infection control refers to all policies, procedures and activities which aim to prevent or minimize the risk of transmission of infectious disease at health care facilities. According to World health organization data, 2000 reuse of injection devices in developing countries accounts for 22 million new infections with hepatitis (HBV), 2 million infections of HCV and 260,000 HIV.[6] HAIs occur worldwide. In the last decade the incidence has increased significantly. According to studies, around 1.5 million people worldwide are affected by HAIs. 15%-40% of patient admitted to critical care unit are thought to be affected.[7] HAI is the fifth leading cause of death in acute care hospitals .Four specific infections together account for more than 80% of all HAIs.

According to World Health Organization (WHO) estimate, two billion people in the world have serological evidence of prior HBV infection, and up to 3% (170 million) are infected with HCV. According to UNAIDS, worldwide around 39 million people are living with HIV.[9,10]

HCAI is a major problem. It needs attention and action to improve the prevalent conditions and to develop knowledge, attitude and practice about HAIs.

It is the responsibility of government and health authorities to develop a national (or regional) program which can help in reducing the risk of health-care-associated HAIs or nosocomial infections NIs.

MATERIAL AND METHODS

The study is a cross-sectional observational study conducted among 5 hospitals of Lucknow city. A total of 360 healthcare workers were interviewed. Data was collected using a standard questionnaire designed to obtain relevant information about knowledge, attitude and practice of health care workers on infection prevention in health institution. Consent was taken from each health institutions and study participants. Study was started after ethical clearance.

RESULT

Socio Demographic characteristics of respondents

Variable	Value	Percentage
Level of health institution		
Government hospital	**240**	**66.7**
Private hospital	**120**	**33.3**
Age of the respondent		
≤ 30 years	**218**	**60.6**
≥ 30 years	**142**	**39.4**
Sex		
Male	**172**	**47.8**
Female	**188**	**52.2**
Level of profession		
Physician	**32**	**8.9**
Nurse and Mid wives	**260**	**72.2**
Others	**68**	**18.9**
Service year	**195**	**54.2**
< 5 years	**165**	**45.8**
≥ 5years		

A total of 360 healthcare workers were interviewed. Out of them 66.7 % were from government hospitals while 33.3 % were from private hospitals. Nurses and midwives constitute 260 (72.2%) of study participants. The age of respondents above 30 years were around 39.4 % while below 30 years was 60.6 %. Regarding their serving years 54.2 % had served less than 5 years while 45.8 % had served more than 5 years.

Knowledge of respondents about mode of transmission of HCAIs

Variables	Values	Percentage
Ever heard of infection prevention		
yes	**358**	**99.4**
No	**2**	**0.6**
Heard of health care associated infection		
Yes	**350**	**97.2**
No	**10**	**2.8**
Ever got infection prevention training		
Yes	**122**	**33.9**
No	**238**	**66.1**
Heard of infection through blood and body fluid contact		
Yes	**306**	**85.0**
No	**54**	**15.0**
Through contaminated needles and sharps		
Yes	**312**	**86.7**
No	**48**	**13.3**
Disinfecting site of injection prevent infection		
Yes	**268**	**74.4**
No	**92**	**25.6**

Knowledge of respondents regarding to prevention methods of health care associated infections

Variables	Values	Percentage
Hand hygiene		
Yes	**348**	**96.7**
No	**12**	**3.3**
Instrument processing	**352**	**97.8**
Yes	**8**	**2.2**
no		
Use of personal protective equipment		
Yes	**342**	**95.0**
no	**18**	**5.0**
Waste disposal		
yes	**340**	**94.4**
no	**20**	**5.6**

Majority of the respondent knew about diseases transmitted by sharp injury and body fluid- 86 % hepatitis B, 96.5% HIV, 54.6% hepatitis C, and least percent 18.4% Tuberculosis. This indicates that the health care workers had better knowledge about hepatitis B and HIV than other blood borne disease.

Regarding prevention method of HCAIs, most of them know about hand hygiene (96.7 %). Majority the respondents of 342 (95 %) had ever wore at least one type of personal protective equipment while providing patient care or caring equipments.

DISCUSSION

This study assessed important information regarding knowledge, attitude and practice of health care workers about infection prevention in different health care facilities in Lucknow city. Majority of the respondents had knowledge regarding infection prevention. Positive attitude about infection prevention is the pillar to prevent cross infection. More than two-third of the respondents had positive attitude about infection prevention. More than half had infection prevention practice. In spite of infection prevention training were given for health care workers safe infection prevention practice was relatively low in this study. Hand washing practice is the single most important means of preventing spread of infection.

CONCLUSION

Although HCW had a better knowledge and attitude, the practices were not satisfactory and safe enough to the expected standard of the national guide line. Unsafe injection practice was observed despite having good knowledge about it.

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