

INFECTION CONTROL AND PRACTICE OF STANDARD PRECAUTION AMONG HEALTH CARE WORKERS

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ABSTRACT

Background: Healthcare-associated infections (HAIs) have been reported to be a serious problem in the healthcare services as they are common causes of illness and mortality among hospitalized patients including healthcare workers (HCWs).

Material & Methods: A cross-sectional study was done by using Proportional sampling technique to select a sample and a self structured questionnaire was used to collect relevant information from the healthcare providers working in Selected Hospitals of Vadodara city.

Result: A total of 421 HCWs were interviewed, Majority (77.9%) correctly describe universal precaution and infection control with 19.2, 19.2, and 28.0%, respectively. About 70.1% usually wear gloves before handling patients or patients' care products, 12.6% reported wash their hand before wearing the gloves, 10.7% washed hands after removal of gloves, and 72.4% changed gloves after each patient. Only 3.3% had a sharp disposal system in their various workplaces. There was a statistically significant difference in the practice of standard precaution among those that were exposed to blood products and body fluid compared to those that had not been exposed in the last 6 months ($\chi^2 = 3.96, P = 0.03$), public healthcare providers when compared to private health workers ($\chi^2 = 22.32, P = 0.001$), among those

working in secondary and tertiary facilities compared to primary healthcare centres ($\chi^2 = 14.64, P = 0.001$) and urban areas when compared to rural areas ($\chi^2 = 4.06, P = 0.02$). The only predictor of practice of standard precaution was exposure to blood and body fluid in the last 6 months odds ratio (OR) = 4.56 (confidence interval (CI) = 1.00-21.28).

Conclusion: This study implies that inadequate workers' knowledge and environment related problems, is a crucial issue that need urgent attention. Institution of a surveillance system for hospital acquired infection to improve consistent use of standard precautions among health workers is recommended.

Key Words: Health workers, Infection control, Northern Nigeria, Standard precaution practice

INTRODUCTION

Healthcare workers (HCWs) are at direct risk of exposure to blood and other body fluids during the course of their job. Consequently, they are at risk of infection of blood borne viruses including hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV).¹ Occupational exposure to blood can result from percutaneous (needle stick or other sharps injury) and mucocutaneous injury (splash of blood or other body fluids into the eyes, nose, or mouth), or blood contact with non-intact skin.² Compliance with these standard precautions has been shown to reduce the risk of exposure to blood and body fluids.³

MATERIAL &METHOD

In this study, cross-sectional research design was used. Health care workers from selected hospitals of vadodara. 421 staff nurses were selected as a sample by using random sampling technique. The tool for data collection was consists of three parts; the first part was demographic variables. The second part was self designed questionnaire and third part was practice check list. Each samples are allow to perform procedure among patients who are admitted in the hospital and who gave their consent to participate in the study after explanation of its purpose and instructions.

FINDINGS

A total of 421 health workers were interviewed, 284 (67.5%) were males and 137 (32.5%) were females. Majority (77.2%) of the participants were aged 20-39 years, and only one (0.25%) and two (0.5%) were less than 20 years and greater than 60 years, respectively. The mean age of the health workers studied was 34.09 years (standard deviation (SD) = 8.1) and the mean year of experience at work was 8.24 years (SD = 7.53). Among the health workers, 47.0% have been working for 5 years or less, 26.4% for 6-10 years, 11.4% for 11-15 years and 15.2% for more than 15 years and above. Fifty-two (12.4%) were medical doctors, 78 (18.5%) were nurses, 54 (12.8%) were laboratory scientists, 53 (12.6%) were pharmacists, 57 (13.5%) were community health workers, 74 (17.6%) were hospital orderlies, and 53 (12.6%) were from other professions in the hospital. Majority (77.9%) of the respondents were able to correctly describe universal precaution and infection control. Almost all of the respondents were able to recognize hand washing technique (100%), sterilization process (100%), and various equipments used for personal protection (99.8%). However, some of the HCWs could not recognize vaccination (19.2%), post exposure prophylaxis (19.2%), and surveillance for emerging diseases (28.0%) as standard precaution for infection control.

DISCUSSION

The study shows that many of the facilities in this study did not even have equipments and sufficient medication. The lack of protective materials and other supplies and utilities documented in the health facility survey and cited also by professionals as the main reason for not applying standard precautions may be a major factor in noncompliance to universal precautions. Health worker surveys and observations in Nigeria and elsewhere in Africa document that health workers often fail to practice standard precautions consistently and correctly. Although there has been controversy about how much HIV transmission in Africa is due to unsafe healthcare practices eliminating all unsafe practices in health facilities should be an urgent priority for HIV prevention and for overall infection control. A total of 421 HCWs were interviewed, Majority (77.9%) correctly describe universal precaution and infection control with 19.2, 19.2, and 28.0%, respectively. About 70.1% usually wear gloves before handling patients or patients' care products, 12.6% reported wash their hand before wearing the gloves, 10.7% washed hands after removal of gloves, and 72.4% changed gloves after each patient. Only 3.3% had a sharp disposal system in their various workplaces. There was a statistically significant difference in the practice of standard precaution among those that

were exposed to blood products and body fluid compared to those that had not been exposed in the last 6 months ($\chi^2 = 3.96, P = 0.03$), public healthcare providers when compared to private health workers ($\chi^2 = 22.32, P = 0.001$), among those working in secondary and tertiary facilities compared to primary healthcare centres ($\chi^2 = 14.64, P = 0.001$) and urban areas when compared to rural areas ($\chi^2 = 4.06, P = 0.02$). The only predictor of practice of standard precaution was exposure to blood and body fluid in the last 6 months odds ratio (OR) = 4.56 (confidence interval (CI) = 1.00-21.28).

CONCLUSION

This study concludes that inadequate workers' knowledge and environment related problems, including lack of protective materials and other equipments and utilities required to ensure safety of HCWs is a crucial issue that needs urgent attention. Institution of a surveillance system for hospital acquired infection to improve consistent use of standard precautions among health workers.

Ethical approval

Informed consent was obtained from participants and assured for anonymity. Since the study involved human subjects, a formal ethical approval was received from institutional ethical committee.

Conflict of Interest

The author declares that they have no conflicts of interest.

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