



HIV- Related Knowledge and Risk Perception Among Health Care Personnel in Selected Primary Health Care Centres in Lucknow

KEYWORDS

HIV, Knowledge, attitude, practices, healthcare personnel.

* DR.MUKESH SHUKLA

DR.NEERAJ KUMAR GUPTA

Assistant Professor, Department of Community Medicine, Hind Institute of Medical Sciences, Ataria, Lucknow (UP) * Corresponding Author

Medical Officer, PHC Sarojininagar, Lucknow, UP

ABSTRACT *Background: The HIV/AIDS pandemic has become one of the most important problems of public health importance. Although its mode of transmission is known, but with increasing prevalence of HIV infection, healthcare workers are substantially at more risk of clinical exposure to infected patient.*

Objective: The present study aimed to assess HIV- related knowledge and risk perception among the health care personnel in selected Primary Health Care Centres in Lucknow.

Materials and methods: This was a Cross-Sectional study conducted using pretested, semi structured questionnaire among 74 health care personnel comprising of staff nurses, laboratory technicians, pharmacists and class IV workers working at the Primary Health Centres.

Result: Almost all staff nurses (90.0%), half of the paramedical staff (59.3%) and only 10% of the class IV workers were aware about mode of transmission of HIV via. needle stick injury. Less than half of all healthcare workers had knowledge about vertical transmission of HIV. Almost all the staff nurses and about 87.5% of paramedical staff believed that health care worker to be at high risk of HIV while caring the patients. More than 80% of all healthcare workers believed that all surgical and obstetrical patients should be screened for HIV.

Conclusion: The study revealed quite sub-optimal knowledge in concern to several aspects of HIV among primary healthcare personnel. Therefore insights a need to increase the knowledge level through orientation programmes for health care personnel.

Introduction

Health care workers (HCWs) are persons working in health care setting and they are potentially exposed to infectious materials such as blood, tissue, specific body fluids, medical supplies, equipment or environmental surfaces contaminated with these substances [1]. Infection acquisition at healthcare settings has been identified as one of the major challenges of modern medicine and remains as a major health concern around the globe. [2] There are always instances where primary prevention used to fail and health care workers may be accidentally or through unsafe procedures exposed to risk of HIV infection. [3] Unsafe and inadequate practices like careless while handling contaminated needles, reuse of inadequately sterilized needles, and improper disposal of hazardous waste (major problem in developing countries) can increase the potential risk of occupational transmission of these blood borne infections. [4] Also as issues related to HIV/AIDS usually evoke strong emotional reactions including anxiety and withdrawal [5], the healthcare's attitudes to such issues may indicate their preparedness level in providing care to HIV patients. Therefore knowledge and attitudes of healthcare workers indirectly influences the health seeking behaviour of people with HIV to access care, and the quality of the care they receive. [6]

Further, understanding about the knowledge about HIV infection in health care provider will thus help in formulating preventive strategies as HIV touches all aspects of primary healthcare, including mother and child health, family planning and education. Therefore the present study aimed to assess HIV- related knowledge and risk perception among the health care personnel in selected Primary Health Care Centres in Lucknow.

Materials and methods:

Study Setting: The study was conducted at Primary health care centres of Lucknow.

Study Design: Hospital-based cross-sectional study.

Study population: Health care personnel (designated as staff nurses, health workers, laboratory technicians, pharmacists and class IV workers)

Sampling

Thirteen primary health centres were selected randomly in Lucknow from March 2014 to May 2014. A total 74 health care personnel working at primary health centres present during the visit of investigator to centre and willing to participate were included in the study.

Data management: The information was collected on a pretested, semi structured questionnaire. Information was gathered regarding demographic details, HIV-related knowledge and risk perception.

Results: Out of total 74 health care workers, majority were paramedical staff (lab technicians, pharmacists and field workers) comprising 43.8% of the study population, followed by class IV workers (30.1%) and staff nurses (27.3%).

All the staff nurses were aware about sexual mode of transmission while the knowledge regarding same was comparatively less among paramedical staff and class IV workers (62.5% and 81.8% respectively). Almost all staff nurses (90.0%), half of the paramedical staff (59.3%) and only 10% of the class IV workers were aware about mode of transmission via needle stick injury. Less than half of all healthcare workers had knowledge about vertical transmission of HIV. However the knowledge about transmission

through infected blood products was quite better among staff nurses and paramedical staff (100% and 93.7% respectively). With respect to symptoms of HIV, knowledge about same was minimal among class IV workers (45.4%). All healthcare worker were aware that HIV is preventable disease, however a major concern was that only one out of 22 class IV workers was aware about post-exposure prophylaxis for HIV. Knowledge about universal precaution was found more than 50% among all healthcare personnel other than class IV workers.

Almost all the staff nurses and about 87.5% of paramedical staff believed that health care worker to be at high risk of HIV while caring the patients. More than 80% of all healthcare workers believed that all surgical/obstetrical patients should be screened for HIV. Half of the staff nurses and paramedical staff believed universal precaution to be strictly followed by all healthcare workers, however only one-tenth of class IV believed the same.

Discussion: The study assessed the knowledge, attitude and risk perception regarding HIV among primary healthcare workers involved in care of patients. Almost all healthcare workers were aware about sexual route of transmission; but the knowledge about vertical transmission of HIV was comparatively less. Similar finding were also reported by Karmode *et al.*, who stated that healthcare workers were generally aware of the way in which HIV can be transmitted. [7] Kumar *et al.*, in their study among nursing students reported knowledge about use of sterilised needles and syringes (75%) and safe blood transfusion (82%) as important for prevention of HIV transmission. [8] Similar findings were revealed in present study where majority of the staff nurse opined needle stick injury and infected blood transfusion to be important modes of HIV transmission.

More than half of the staff nurses and paramedical staff were aware about the importance of universal precaution in preventing HIV transmission in healthcare settings. Similar findings were also reported by Yadav *et al.*, and Vaz *et al.* (72% and 64% respectively). [9, 10] Proper understanding about the risks at workplace among healthcare workers will help thereby in reducing transmission of HIV. All the staff nurses and 87.5% of paramedical staff opined that healthcare workers to be at high risk of getting infection while caring the patients. The findings were in coherence with other studies. [9, 10, 11] Majority of the healthcare workers felt that all surgical and obstetric patients should be routinely screened for HIV. Other studies had shown similar observations. [9, 11, 12] This finding signifies the concern of healthcare worker regarding HIV infection. About 60% of staff nurses, 68.7% of the paramedical staff and only 4.5% of class IV workers had knowledge about post-exposure prophylaxis. The findings indicate the knowledge gap among healthcare workers with respect to post-exposure prophylaxis. Similar types of findings were also reported by Gandha *et al.*, and Gupta *et al.* [13, 14]

Conclusions: This study highlights the differences in knowledge, attitude as well as risk perception regarding HIV infection different categories of healthcare personnel. The most suboptimal situation was of class IV workers who were at the lowest strata in term knowledge therefore was at highest risk of HIV infection. Therefore it was concluded that provision satisfactory knowledge through orientation programme as well as IEC (Information, Education and

Communication) activities will help to create awareness about HIV infection can only bring about a positive attitude.

Table 1: Knowledge of health care personnel about HIV infection. (N=74)

Knowledge regarding HIV infection	Staff nurses (n=20)	Paramedical staff (n=32)	Class IV worker (n=22)
Modes of transmission			
1. Needle Stick Injury	18(90.0)	19(59.3)	8(9.1)
2. Vertical Transmission	9(45.0)	10(31.2)	3(13.6)
3. Infected blood transfusion	20(100)	30(93.7)	10(45.4)
5. Unprotected Sex	20(100)	20(62.5)	18(81.8)
(B) Symptoms of HIV/AIDS	18(90.0)	19(59.3)	10(45.4)
(C) Prevention from HIV			
Whether HIV is preventable	20(100)	32(100)	22(100)
Post exposure prophylaxis available	18(60.0)	22(68.7)	1 (4.5)
Prevention from parent to child transmission	18(90.0)	22(68.7)	3(13.6)
4. Universal precautions	15(75.0)	17(53.1)	4(18.1)

Table 2: Attitude and risk perception of health care personnel about HIV infection. (N=73)

Attitude and risk perception regarding HIV infection	Staff nurses (n=20)	Paramedical staff (n=32)	Class IV worker (n=22)
Doctors, nurses and other HCWs have a high risk of HIV/AIDS infection while caring for patients	20(100.0)	28(87.5)	8(36.3)
All surgical/obstetrical patient should be screened for HIV	20(100.0)	32(100)	18(81.8)
Reporting each and every case of needle stick injury	16(80.0)	17(53.1)	3(13.6)
Universal precautions should be strictly followed by all healthcare workers	10(50.0)	16(50.0)	2(9.1)
Extra infection control precautions for patients with HIV/AIDS	20(100.0)	30 (93.7)	12(54.5)

References:

1. Ministry of Health and Family Welfare: Government of India National AIDS Control Organization: Management of Occupational exposure including Post exposure prophylaxis for HIV. New Delhi: NACO; 2009.
2. Joshi S, Joshi A, Park BJ, Aryal UR. Hand washing practice among health care workers in a teaching hospital. J Nepal Health Res Counc. 2013;11(23):1-5.
3. Park K. Park's Textbook of Preventive and Social Medicine, 23rd ed. Jabalpur: Bhanot Publishers; 2015. p 353
4. Charles SM, Richard DP, Janine J: Risk to health care workers in developing countries. N Engl J Med 2001, 345:538-541.
5. Wallack JJ. AIDS anxiety among health care professionals. Hospital Community Psychiatry. 1989; 40:507-510.
6. Michelle Kermode, Wendy Holmes, Biangtung Langkham, Mathew Santhosh Thomas+ & Sandy Gifford. HIV-related knowledge, attitudes & risk perception amongst nurses, doctors & other healthcare workers in rural India. Indian J Med Res. 2005;122: 258-264
7. Karmode M, Holmes W, Langkham B, Thomas MS & Gifford S. HIV-related knowledge, attitudes & risk perception amongst nurses, doc-

- tors & other healthcare workers in rural India. *Indian J Med Res.* 2005; 122:258-64.
8. Kumar A., Lal P., Ingle G.K. & Gulati N. (1999) AIDS-related apprehensions among nursing students of Delhi. *Journal of Communicable Diseases.* 1999; 31(4), 217-221.
 9. Yadav SS, Yadav ST, Mishra P. Knowledge & risk perception regarding HIV among healthcare workers in a medical college hospital. *Int J Med Sci Public Health* 2014;3:73-75.
 10. Vaz K, McGrowder D, Alexander-Lindo R, Gordon L, Brown P, Irving P. Knowledge, Awareness and Compliance with Universal Precautions among Health Care Workers at the University Hospital of the West Indies, Jamaica. *Int J Occup Environ Med.* 2010;1(4):171-81
 11. Taher E, Abdelhi R. Nurses' knowledge, perceptions, and attitudes towards HIV/AIDS: Effects of a health education intervention on two nursing groups in Cairo University, Egypt. *J Public Health Epidemiol.* 2011;3(4):144-54
 12. Fusilier MR, Durlabhji S. Health care workers' AIDS attitudes and willingness to provide care - India. *J Health Hum Serv Adm.* 1997; 20: 145-58.
 13. Gandha Kapil M, Dhaduk Kishor M and Yadav Sudha B. A study to assess knowledge of health care workers in relation to post exposure prophylaxis in HIV/AIDS in Jamnagar District, India. *Journal of Pharmaceutical and Biomedical Sciences* 2012, 23 (15).
 14. Gupta V., Bhoi S., Goel A., Aggarwal P. Universal precautions: knowledge, attitude and practice of healthcare workers regarding HIV, hepatitis B and C. 16th European Congress of Clinical Microbiology and Infectious Diseases Nice, France, April 1-4 2006