Occupational Risk Factors Associated with Needle-Stick Injury among Healthcare Workers in Hawassa City, Southern Ethiopia

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Abstract

Background: Accidental occupational injuries to health care workers continue to have a significant problem in healthcare systems owing to the associated risk of acquiring infections such as hepatitis B, hepatitis C and human immunodeficiency viruses.

Objective: The study examined the prevalence and health risk factors associated with needle stick injury in Hawassa City, Southern Ethiopia.

Method: A cross-sectional survey was conducted in Hawassa City from October to January 2010.

Result: Exposure to unsafe body fluids was common among healthcare workers in Hawassa City. The needle stick injury rate in the study area was 35.8%. Number of clinical procedures performed per day (p value=0.04) and the type of heath institution (p value=0.011) were significantly associated with the daily body fluids exposure. Lack of adequate personal protective equipment and negligence in personal safety were common among study participants.

Conclusion: High prevalence of infections among patients in hospitals associated with high rates of occupational exposure to blood may markedly put healthcare workers at risk of infections. Therefore, infection control programs through adherence to standard precautions are critically required.

Keywords: Exposure; Body fluids; Needle sticks injury; Health care workers

Introduction

Accidental occupational injuries to health care workers (HCWs) continue to have a significant problem in healthcare system owing to the associated health risk of acquiring infections such as hepatitis B (HBV), hepatitis C (HCV) and human immunodeficiency (HIV) viruses [1-4]. The worldwide incidence of percutaneous injury with a sharp object among the HCWs is estimated to be 3 million every year where a chance of four injuries per healthcare worker could occur annually [5,6]. Exposure to unsafe blood as a consequence of the injury may have a risk of infections to human immunodeficiency virus (HIV), hepatitis B (HBV), hepatitis C (HCV) [7-10]. An exposure to such unsafe blood contacts in work places can add up to a considerable percent of infections occurring among HCWs. For example, according to the World Health Organization estimation, the global burden of disease from occupational exposure accounted 40% and 2.5% for hepatitis and HIV infections, respectively [11]. Whereas the prevalence of some infections in HCWs depends on the disease prevalence in the general population, few reports showed a relatively higher sero-positivity for HBV among the healthcare workers in the health facilities [12]. Studies reported the high prevalence of needle stick injury among health professionals in Ethiopia [13,14]. Such occupational injury leading to workers dissatisfaction and psychological trauma may reduce workers motivation and in turn may

affect the quality of health care [13,15]. In our previous work we demonstrated

Study Population and Sampling

The study referred the healthcare workers in Hawassa. According to Hawassa City Administration Health Department report (2008), the city contained 52 healthcare institutions; five hospitals, two health centers, three higher clinics, 23 intermediate and small clinics, five eye and dental clinics and 14 diagnostic medical laboratories. In this study, only public owned Health Institutions, Hawassa University Referral Hospital and three Health Centers which are found in Hawassa City were considered. These heath institutions were purposefully selected to avoid bias reports from Private Health Institutions. Since the Survey assess the safety conditions health institutions, participants from private health institutions will deliberately tell false responses fearing the following measures to come from concerning government controlling agencies. The source population of the study was all health care workers in public healthcare institutions and who were involved in patient diagnosis, treatment and care. Study subjects were health care workers such as nurses, physicians, laboratory technicians and others working in Hawassa referral hospitals and the selected three health centers. Selection of the health institutions were purposive considering the high number of workers. The survey was carried out from October 2009 to January, 2010. Structured questionnaire aimed at assessing the factors associated with occurrence of different contacts and injuries for various kinds of expos"

workers (35.2%) rated high risk, 22.8% of the healthcare workers rated medium. The perception of low and no risk rate was reported by 22.8% and 6.8% of the healthcare workers, respectively.

	No of respondents (%)	
Question		
Have you ever been in contact with unsafe body fluid?		140 (91 dop't know
Yes	114 (70.4)	
No	48 (29.6)	
Was the exposure occupational?		
Yes	122 (75.3)	
No	34 (21.0)	
Don't know	6 (3.7)	
Did the equipment you use were safe?		
Yes	89 (54.9)	
No	41(25.3)	
Don't know	32 (19.8)	
Is there any safety practice in your institutions?		
Yes	112 (69.1)	
No	32 (19.8)	
Is the safety practice satisfactory?		
Yes	52 (32.1)	
No	51(31.4)	
Don't know	16 (9.9)	
Did you face any psychological hazard?		
Yes	75 (46.3)	
No	49 (30.2)	
l don't know	16 (9.9)	
Do you use any personal protection equipment (PPE)?		
Yes	140 (8I don't know	16 (9.9)

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- 16 Desalegn B, Beyene H, Yamada R (2012) Patients-to-healthcare workers HIV transmission risk from sharp injuries, Southern Ethiopia. SAHARA J 9 1-5.
- Abraha MW, Nigatu TH (2009) Modeling trends of health and health related indicators in Ethiopia (1995-2008): a time-series study. Health Res Policy Syst 7: 29.
- 18 Haile D, Berhane Y (1997) Injection practice in north western Ethiopia. Ethiop Med J 35: 117-125
- 19 Nsubuga FM, Jaakkola MS (2005) Needle stick injuries among nurses in sub-Saharan Africa. Trop Med Int Health 10:773-781.
- 20 Elisabetta RA, Pruss-Ustun; Yvan Hutin (2005) Sharps injuries Assessing the burden of disease from sharps injuries to health-care workers at national and local levels. Environmental Burden of Disease Series, World Health Organization, Protection of the Human Environment.
- Alemayehu T (2009) Assessment of Health Care Workers Occupational Exposure to HIV and Post-Exposure of Prophylaxis (PEP) in Health Centers and Hospitals of Addis Ababa sponsored Master's Thesis Extract on HIV/AIDS, 78-89.