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Constraints in Nurses' use of HIV protective barriers in the care of PLWHA in the University College Hospital, Ibadan, Nigeria

# Constraints in Nurses' use of HIV protective barriers in the care of PLWHA in the University College Hospital, Ibadan, Nigeria



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**ABSTRACT:** This survey examines the constraints limiting nurses' use of protective barriers in the care of people living with HIV/AIDS in Ibadan, Nigeria. 270 females and 5 male nurses working in UCH were purposively selected. A self-developed questionnaire was used during data collection. Data was analyzed using descriptive statistics and chi square.

Results about nurses' use of protective devices (eg gloves) showed that 206 (94.2%) use PB always, 15 (5.5%) frequently use PB and 1 (0.4%) occasionally use PB. Chi-square test shows significant differences between constraints in the use of PB in the care of PLWHA and adherence to HIV/AIDS universal precautions ( $X^2=15.22$ , 1df,  $P<0.05$ ). It was concluded that nurses in the selected setting were faced with constraints in the use of PB and as such were inadequately protected from blood-borne diseases especially when caring for PLWHA.

**H**IV/AIDS is a chronic illness. Its cure remains elusive while the disease remains life-threatening. The risk of contracting HIV by caregivers is very high.<sup>1</sup> Across cultures and health care settings, nurses are involved in the care of PLWHA. Research has revealed nurses' concerns about becoming infected through occupational exposure. Hence, prevention of exposure remains the most effective measure to reduce the risk of HIV transmission to health workers especially nurses who are the fulcrum of care. The relevance of universal precautions (UP) and use of protective barriers (PB) in reducing the transmission occupational exposure to HIV is significant.

Nurses constitute the fulcrum of HIV/AIDS prevention and care. But it is unclear whether nurses utilize PB or adopt UP when caring for PLWHA. The constraints faced by nurses in utilizing PB or adopting UP also require empirical investigation. It is against this background that this study was carried out.

Numerous health-care workers occupationally exposed to blood-borne pathogens have contracted fatal and other serious viruses and diseases including HIV, hepatitis B, and hepatitis C in their workplace.<sup>2,3,4,5</sup> The researcher's personal observation as nurses on the wards, revealed that nurses' fear of contagion is associated with lack of knowledge about HIV/AIDS, and that 60% of nurses

**TABLE 1: DISTRIBUTION OF RESPONDENTS BY SEX**

Sex	Frequency	Percentage (%)
Males	5	1.8
Females	270	98.2
<b>Total</b>	<b>275</b>	<b>100</b>

**TABLE 2: PROFESSIONAL QUALIFICATION OF RESPONDENTS**

Professional Qualification	Frequency	Percentage (%)
Registered Nurse/Midwives (RN, RM)	193	70.2
Registered Nurses (RN)	69	25.1
Registered Nurse/Psychiatric (RNP)	12	4.3
Registered Public Health Nurses (RPHN)	01	0.4
<b>Total</b>	<b>275</b>	<b>100</b>

think that HIV positive in-patients should be isolated from other patients; or they could be placed at the end of the wards to prevent them from contracting the disease.

Nigeria is home to more PLWHA than any other sub-Saharan African country, and the HIV prevalence is yet to be curtailed, information about the principles of universal precautions are

TABLE 3: CONSTRAINTS IN THE CARE OF PEOPLE LIVING WITH HIV/AIDS

	Response	Frequency	Percentage (%)
Do nurses in this hospital have adequate training on how to protect themselves from HIV infection and other blood-borne viruses?	Yes	213	77.5
	No	21	7.6
	Not sure	41	14.9
	<b>Total</b>	<b>275</b>	<b>100</b>
Doctors do not reveal the retroviral status of patients to nurses	Yes	74	26.9
	No	185	67.5
	Not Sure	11	4.0
	<b>Total</b>	<b>275</b>	<b>100</b>
Are there constraints to the use of protective barriers and other universal precaution by nurses	Yes	140	50.9
	No	96	34.9
	Not Sure	38	13.8
	<b>Total</b>	<b>275</b>	<b>100</b>

TABLE 4: HOW OFTEN DO NURSES IN THIS HOSPITAL USE THE FOLLOWING PROTECTIVE BARRIERS

	Always		Frequently		Occasionally		Rarely	
	FREQ	%	FREQ	%	FREQ	%	FREQ	%
Face mask	124	45.1	89	32.4	58	21.1	58	21.1
Goggles	21	7.6	25	9.1	88	32.0	141	51.3
Aprons	57	20.7	65	23.6	117	42.5	36	13.1
Puncture proof sharp boxes	206	74.9	41	14.9	16	5.8	12	4.4
Gloves	259	94.2	15	5.5	1	0.4	0	0

TABLE 5: RESPONDENTS PREVENTION PRACTICE/COMPLIANCE WITH PROTECTIVE BARRIER

	Never	Sometimes	Often	Always	Total
I protect myself against blood and body fluids of all patients regardless of their diagnosis	0	9	33	233	275
I put used needles and other sharp objects into the designated sharps containers	8	35	37	195	275
I wear gloves whenever there is a possibility of exposure to blood or other body fluid	5	20	12	238	275
I wear eye protective (goggles/glasses) whenever there is possibility of blood or other body fluids splashing on my face	156	50	17	52	275
I do not recap needles that have been contaminated with blood or used on body fluids	74	57	29	115	275
I promptly wipe up all spills of blood and other body fluids with disinfectants	8	34	39	184	275
I cover my broken skin before coming to work	6	17	31	221	275
I report needle stick injury when I have such on a record sheet/book	115	42	30	88	275
I obtain PEP treatment after exposure to needle stick and sharp injury when caring for PLWHA	161	6	17	33	275

widely disseminated in Nigerian hospitals. Lack of training about occupational prevention of blood-borne pathogens and poor infection control practices place nurses at HIV risk in practice.<sup>6</sup> In addition to the risk nurses face in the health care settings in Nigeria, there is wide spread poor infection control practices.<sup>7</sup> Additionally, post-exposure prophylaxis, a short course of triple-drug ART provided to prevent possible HIV infection, is yet to be broadly institutionalized in Nigeria's health-care facilities.<sup>8,9,10</sup> Succinctly, it is imperative to assess the frequency and constraints in nurses' use of HIV PB in the care of PLWHA in resource limited settings like Nigeria.

#### Material and method

The study as part of a larger study was carried out with the aim of identifying the frequency of the use of PB, compliance with UP and what constitute constraints for nurses in adhering to UP in the care of PLWHA. This is a cross sectional survey conducted at the UCH, Ibadan covering various wards including: surgery, paediatrics,

has 950 nurses. 11 professional nurses of various cadres were selected from each of the wards using purposively selected, yielding 286 respondents participated in the study. However, only 275 consented and completed the questionnaires representing a 96% response rate.

The instrument for this study is a 54-item self administered questionnaire which was divided into six sections: Section A containing 8 questions tapped information about demographic characteristics. The 12-item Section B obtained information about frequency of contact with needles or other sharp devices at work. The 5-item Section C sought information about frequency of needle-stick injuries/injuries with a sharp device at work. Section D contained 10 items which tapped information about constraints in the care of PLWHA. The 9-item Section E obtained information on knowledge about sharp injury prevention. Section F contained 10 items which tapped on prevention practices and compliance with UP.

Data collection was preceded by ethical permission from the

TABLE 6: CROSS-TABULATION OF CONSTRAINTS IN THE CARE OF PLWHA AND ADHERENCE TO PROTECTIVE BARRIERS IN THE CARE OF PLWHA

Constraints in care of PLWHA		Adherence to post exposure prophylaxis		
		Yes	No	Total
YES	Observed	124	17	141
	Expected	128.6	12.4	110
NO	Observed	105	5	
	Expected	120.4	9.6	
<b>Total</b>		<b>229</b>	<b>22</b>	<b>251</b>

analyses. The stated hypothesis was tested using chi-square and Spearman correlation to estimate the degree of relationship between constraints and utilization of universal precautions.

The chi-square result indicated a significant relationship between constraints in the care of PLWHA and adhering to universal precaution. So, the null hypothesis is rejected.

#### Discussion

One of the major research questions in this study is "...are there constraints for nurses in adhering to universal precaution in the care of PLWHA?" Question 19 under section C of the questionnaire addressed this. The result shows that 50.9% of the respondents agreed that there are constraints to the use of PB and UP. 34.9% of the respondents indicated that they did not agree that there are constraints while 14% of the respondents are not sure whether there are constraints to the use of protective barriers. This findings agree with the following studies.<sup>11,12,13,14,15</sup> This suggests that as professional, participants in this study identify and appreciate hindrances in the realization of an hazard free working environment. This calls for greater attention considering the stigmatization, discrimination, and isolation of PLWHA by members of the society as well as many health professionals. In another dimension, this could be a reflection of participants' level of knowledge about HIV/AIDS, or predictors of their perception, attitude or practice of HIV/AIDS UP.

Question 22 sought to find out whether participants ever attended any infection control training programme. 57.5% of respondents indicated that they have attended an infection training programme while 42.5% reported that they never attended any infection control course. From the above findings, there was some level of knowledge deficit. This findings is supported by<sup>6,16,17</sup> on the relevance of structured training in prevention of occupation exposure to blood-borne pathogens. Without adequate knowledge about HIV/AIDS, the basic information required for moulding opinion, attitude and practice of HIV/AIDS prevention practices would be lacking, thus reducing the

TABLE 7: HYPOTHESIS CHI-SQUARE TEST

	Calculated Value	Df	Sign Value	Critical Value
Pearson Chi-square	15.22	1	0.00*	5.02
Spearman correlation	0.12	-	0.56**	

\* Significant at 0.005, \*\* Not significant.

probability of adopting UP and PB in the care of PLWHA.

The result of the study also shows that 11.8% of the respondents never wore eye protective (goggles/glasses) whenever there was possibility of blood or other body fluids splashing on their face. 18.2% of the respondents sometimes wore eye protective (goggles/glasses), 6.2% often and 3.9% of the respondents clearly stated that they always wear eye protective (goggles/glasses). In addition, a high percentage (67.6%) of the respondents never reported needle stick injury. The consequences would be that unreported needle stick and sharp injuries are highly risk-laden and could prevent injured nurses from receiving post HIV exposure prophylaxis.

From the tested hypothesis, the result shows that 83.3% of the respondents had constraints in adhering to protective barriers in the care of PLWHA. Nurses experience constraints in the use of PB and UP. This could be due to irregular supply of the required materials. It is also evident that there are still gaps in the issue of reporting needle stick injury and obtaining post exposure prophylaxis treatment.

As health-care providers, nurses in HIV/AIDS care giving are frequently involved in activities that may expose them to occupational risk of HIV infection such as giving intravenous or intramuscular injection to patients, wound dressing in clinical or emergency settings, scrubbing and intra-operative nursing care among others. Therefore there is need for training on current issues about HIV/AIDS prevention, care and support; complimented with adequate supervision and follow up to assure continuous adherence to standard practices.

From the foregoing, it is evident that the participants' exposure to HIV/AIDS related information is far from adequate, there are many constraints in nurses' adoption of UP and use of protective barriers in caring for PLWHA. Worse still, nurses' use of PB in HIV risk-laden procedures (even when blood splashes were anticipated), could be seen to be far below optimal standards. The nurse respondents in this study are therefore potentially exposed to HIV in the course of their nursing duties with potentially grave consequences.

#### Conclusion

It is therefore very imperative at this point in the control of HIV/AIDS pandemic in sub-Saharan Africa to plan HIV/AIDS knowledge-building programmes, provide material and human resources required for preventing HIV, as well as planning and implementing culture specific programmes aimed at protecting health professional involved in the prevention and care of PLWHA. If care givers such as nurses are in resource limited settings such as Nigeria are insufficiently equipped and protected against contracting HIV/AIDS, very soon the little gains recorded in

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## References

1. Pruss Ustun, A., Rapiiti, E., & Hutin, Y., (2003); *Sharp Injuries: Global burden of disease from sharps injuries to health - care workers*. Geneva, Switzerland: World Health Organization.
2. Roy E., Robillard P. (1995); Underreporting of accidental exposures to blood and other body fluids in health care settings; An alarming situation (abstract). *Advanced Exposure Preview 1* (4): 11.
3. Centre for Disease Control (CDC) and Prevention. (2004). *Workbook for designing, implementing and evaluating a sharp injury prevention programme*.
4. Centre for Disease Control (CDC) and Prevention. (2001). Updated US Public Health Service Guidelines for the management of occupational exposure to HBV, HCV and HIV recommendations for post – exposure prophylaxis.
5. Osborn, E. H. S., Papadakis, M. A. & Gerberding, J. L. (1999); Occupational exposures to body fluids among medical students: A seven – year longitudinal study. *Annals of internal medicine*, 130, 45 – 51.
6. Wang H., Fennie, H. E. G., Burgess, J. & Williams, A. E., (2003); *Journal of Advanced Nursing* 41 (2), 187 – 194.
7. Sagoe-Moses C., Pearson R. D., Perry, J., Jagger, J.; *Risk to health care workers in developing countries* (2001).
8. Buve A, Foster S.O, Mbrili C., (1994). Mortality among female Nurses in the face of the AIDS epidemic: a pilot study in Zambia 8:396.
9. Sidwell R. U., Green, J. S. A., Novelli, V., (1999); Management of occupational exposure to HIV – what actually happens. *Communicable Disease Public Health* 2 (4); 258 – 263.
10. Campbell S. (2004) Management of HIV/AIDS transmission in health care *Nursing standard* 19 (27): 33 – 35.
11. Gershon, R. R., Karkashian, C. D., Grosch, J. W., Murphy, L. R., Escamilla-Cejudo, Flanagan, P. A. (2000); *Hospital safety climate and it's relationship with safework practices and workplace exposure incidents*. American.
12. American Nurses Association. (2000). ANA's needle stick prevention guide. Available at <http://www.nusingworld.org/needlestick/needleguide> PDF.
13. National Institute For Occupational Safety and Health (NIOSH) (1999) NIOSH Alert; Preventing need-lestick injuries in health care settings. DHHS (NIOSH) publication NO. 2000 – 108.
14. National AIDS Manual (2004) Post Exposure Prophylaxis Fact sheet 86. London.
15. Nigeria: HIV/AIDS country report 2005 published by National Action Committee on AIDS.
16. Hanrahan A, Reutter, L. (2003); A clinical review of the literature on sharps injuries: epidemiology; management of exposure and prevention. *Advance Journal of Nursing*. 25. 144 – 154
17. Wilburn, S. (2004); *Preventing needle stick injuries. In protecting the health and safety of health care workers*. Washington, D. C. American Nurses Publishing.

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