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Original Article

Knowledge and practice of health care workers towards post exposure prophylaxis in the era of low and stable HIV prevalence in Southwestern Nigeria

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ABSTRACT

Nigeria ranks top among the countries with the highest burden of Human Immune-deficiency Virus (HIV) infection. Despite ready-made access to HIV care, Post-Exposure Prophylaxis (PEP) practices have not increased commensurately due to several gaps within the health sector. This research was undertaken to assess knowledge and practice of health care workers towards PEP of HIV in Southwestern Nigeria. A descriptive cross sectional study was carried out among 300 health care workers selected using the multi-staged sampling method. Research instruments used were self-administered pre tested and semi structured questionnaires. Data collected were analyzed using the SPSS software version 17.0.

One hundred and four (34.7%) of respondents said they occasionally recap used needles, one hundred and eighty-one (60.3%) have heard about PEP. Only 2.7% had good mean knowledge scores while 57.3% and 40.0% had moderate and poor mean knowledge scores of PEP respectively. Only 24 (13.3%) knew the correct number of drugs combinations, 36 (19.9%) knew the antiretroviral drugs administered; 113 (62.4%) believed that the drugs were antibiotics. Forty-four (14.7%) had needle stick injuries in the last 6 months, out of which 29 (65.9%) used PEP. Predictors of good knowledge of PEP on logistic regression include male gender, having spent more than 5 years in hospital practice, having heard about PEP and being aware of the national PEP guidelines. There is a need to create better awareness about PEP among health care workers to reduce and prevent occupational HIV transmission.

1. Introduction

HIV still remains the scourge of our times and a disease of significant public health importance. Nigeria ranks top among the countries with the highest burden of HIV/AIDs.[1] About 2.5% of the global HIV cases are due to occupational exposures among health care workers [1]. Occupational exposure to blood or other body fluids constitute a small, but significant risk of transmission of HIV and other blood-borne pathogens amongst health care workers HCWs [2]. Despite readymade access to HIV care, PEP practices among health care workers have not increased commensurately due to several gaps within the Nigerian health sector [3].

Post-exposure prophylaxis of HIV was recommended by WHO/ILO [4].When administered shortly following an accidental exposure, PEP treatment has been shown to significantly reduce the risk of HIV infection [5]. Despite the national PEP guidelines being widely circulated in Nigeria, HCWs were reported to have poor knowledge of the guidelines [6], and had been taking inadequate measures following occupational exposures to HIV [7]. This may not be unconnected with the reported poor knowledge and compliance with standard precautions among HCWs most especially in developing countries [8,9].

A comparism of the last two HIV sero-prevalence surveys in Nigeria has shown a marginal increase in the prevalence of HIV infection in some Nigerian states including Osun state. This may have led to a heightened concern among the various cadres of health care workforce in terms of its impact on the practice and safety of the practitioners [10]. PEP is an effective method of preventing HIV infection among the exposed health care workers [11].

With the concept of the 'right to know', health care workers and clients could demand for their rights to know the HIV status of each other before certain treatments and procedures can be instituted to prevent infections. It is therefore important to identify the gap existing between knowledge and practice relating to standard precautions. Newly recruited health workers could be at higher risk because they are probably starting work newly, have little information about HIV and PEP and have not been trained on the use of PEP in preventing HIV

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among the exposed such as rape victims and health care workers who sustained needle stick injuries.

Determining the knowledge and practice of PEP among HCWs would identify their needs and the next line of action when exposed to HIV. The gap between the knowledge or attitude to PEP by the healthcare workers and their poor practices is unacceptable. Therefore a study to determine factors that contribute to these poor practices can provide reliable information to stem the tide of acquisition and reduces the risk of getting infected when exposed to HIV. This study assessed knowledge and practice of health care workers towards PEP of HIV in Southwestern Nigeria.

2. Materials and methods

2.1. Study area

This study was carried out in Osun State in southwestern Nigeria, with a population of about 4.2 million according to a projection of the 2006 National population census [12]. HIV prevalence in the state was lower than the national average put at 5.1% [13], however the State prevalence rate increased from 2.7 to 3.0 according to the 2013 National AIDs and Reproductive Health survey [13]. There are 3 levels of health care namely the primary being managed by the Local Government, the secondary by the State Government and the tertiary by both the State and Federal Governments. There are 2 teaching and nine general hospitals, and numerous primary health care centers in the state. In Osogbo town which is the capital city of Osun state, there is a teaching hospital, two secondary health facilities and eight primary health care centers PHCs. The health care workers are exposed to needle stick injuries, and percutaneous exposures to fluids of suspected and confirmed HIV cases. They also manage rape cases and other sexually assaulted clients which is another indication for PEP. Unlike in many other states of Nigeria, Authors also observed little presence of non governmental organizations (NGOs) working in the area of HIV/AIDs in Osun state and thus, the availability of donor funded PEP kits may not readily be guaranteed.

2.2. Study population

Only Government health facilities at primary, secondary and tertiary care levels were recruited into this study. To reduce possible bias from variation in job knowledge acquired due to the number of years of experience put in practice, health care workers who have spent less than one year in their present work-station were excluded from the study. In addition, only core clinical health care workers (who deals directly with patients and are at high risk) were recruited into the study.

2.3. Study design

Descriptive cross sectional study.

2.4. Sample size estimation

Using the Leslie Fischer's formular for the calculation of sample size for population less than 10,000 [14], a sample size of 271 was calculated and this number was increased to 300 to account for attrition cases and non-responses.

2.5. Sampling method

The multi-stage sampling method was employed in sample selection. In stage one, the only teaching hospital (LAUTECH), one of the two secondary health facilities (General Hospital Asubiaro) and four of the eight PHCs were selected using simple random sampling employing simple balloting. Each hospital was divided into clinics, laboratory and ward units. Questionnaires were equally allocated to the health facilities and units using proportionate allocation technique. Questionnaires were conveniently administered on eligible health care workers met in selected units on the day of visit to the health facility. A total of 2 visits to each of the health facilities were made.

2.6. Research instruments

For data collection include semi structured, self administered and pre-tested questionnaires conducted by 3 research assistants. Pre-testing was done among ten randomly selected nurses at the General Hospital Oluyoro Ibadan, and the responses were used to further modify the questionnaires. The HIV project managers of three health facilities (each per level of care) offering donor funded HIV care reviewed the questionnaire for construct validity. Questionnaires consist of sections on socio-demographic data, indication and knowledge, attitude and practice of PEP.

2.7. Ethical approval

The ethical approval to conduct this study was obtained from LAUTECH Teaching Hospital Research ethics committee. Further permission was taken from the management of the hospitals while written informed consent was obtained from each of the health care workers who responded to the study instrument.

2.8. Data management

The Statistical Package for Social Sciences software version 17.0 (SPSS Inc, Chicago, IL, USA) was used for data analysis after data cleaning Validity of data entered was ensured by double data entry and random manual checks. The Chi square test and binary logistic regression model was used to explore associations between selected categorical variables, and p values were considered significant at values less than or equal to 0.05.Mean knowledge score was computed in two ways using the 16 knowledge questions. A correct answer attracted one mark while a zero was awarded to an incorrect answer. Knowledge scores was categorized into good (8–16 points), and poor (0–7). Good mean knowledge was further re-categorized into good knowledge (12–16 points) and moderate (8–11 points).

3. Results

Table 1 shows that a majority 276 (92.0%) of the respondents were

Table 1
Socio-demographic data of respondents.

Variables	N	%
Age		
< 25	24	8.0
> 25	376	92.0
Sex		
Male	101	33.7
Female	199	66.3
Marital status		
Never married	21	7.0
Married	238	79.3
Others	41	13.7
Occupation/designation		
CHEW	151	50.3
Medical lab scientist	54	18.0
Nursing	95	31.7
No of years put in clinical practice		
< 5 years	247	82.3
≥5 years	53	17.7