Original Research Article

Knowledge, Attitude and Utilization of HIV Post Exposure Prophylaxis among Health-Care Workers in Enugu State University Teaching Hospital, Parklane Enugu.

ABSTRACT

Background: The importance of Human Immune Deficiency Virus Post-exposure Prophylaxis (HIV PEP) can never be over-emphasized as it has proven beyond every reasonable doubt to forestall the likelihood of contracting the deadly disease, Acquired Immune Deficiency Syndrome (AIDS).The consequences of having a health care worker (HCW~~s~~) infected with HIV are of great public health importance. These HCWs are more at risk of being infected by the reason of their occupation and its hazards.

Aim: The objective of this study was to assess the knowledge, attitude and utilization of HIV PEP among health care workers in Enugu State University of Science and Technology Teaching Hospital (ESUTH), Parklane, Enugu State.

Methodology: This study was an observational, descriptive, cross-sectional study. The sample size was 204 HCWs and 200 questionnaires were returned for analysis. The sample was selected by multi-stage sampling technique. The data was analyzed using statistical packaged for social science (SPSS).

Results: The study revealed that majority of the respondents~~was~~ werewithin the age range of 26-30and 31-35 years (24.5% each). Majority (65.6%) ~~was~~weremarried and most (44.0%) were nurses.About 89% have heard of HIV PEP. Almost forty-three percent (42.5%) have been accidentally exposed to needle stick injury before but only 39% reported. Even a less percentage (21%) went ahead to take PEP.

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Conclusion: The study concluded ~~that~~ that most of the correspondents were aware of HIV PEP but only a few deemed it necessary to practice what they know. Therefore, there is a great need for health education on the right approach to HIV PEP in this institution and the general population. This will go a long way to help reduce the incidence of HIV infection and improve the utilization of HIV PEP among HCWs in ESUTH.

Keywords: Knowledge, Attitude, Utilization, HIV Post exposure prophylaxis, AIDS, health care workers.

1. INTRODUCTION

The Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) pandemic still ranks one of the foremost causes of death in the developing world.[1]It is still a severe developmental crisis in Africa which remains by far the most affected region in the world.[2] With the very high prevalence of sharp injuries, low rate of reporting and the use of Post Exposure prophylaxis (PEP), the expected national incidence may be seriously underestimated.[2] The daily rate of infection of a previously non-infected individual in this sub-region is set at 160,000 individuals.[1]

Since the start of the epidemic, 40 years ago till 2021, 79.3 million people have become infected with HIV while there are 36.3 million deaths associated with AIDS.[3] In 2020, 65% of HIV infection in the world was attributed to sex workers and their clients, people who inject drugs, transgender people, gay men and other men who have sex with men and their sexual partners.[3] According to the UNAIDS 2021 epidemiological estimates, in 2020, an average~~ly~~ of 37.7 million people globally were living with HIV while about 1.5 million were newly infected with the virus and averagely 680,000 deaths related to AIDS ~~was~~ were recorded.[3] However, since the peak of

HIV infection in 1997 till now, incidences of HIV ~~has~~ havereduced by 52%; a 31% reduction from 2010 to 2020. Death due to AIDS has ~~being~~ beenreduced by 64% since the peak in 2004. This reduction might be due to improvement in HIV/AIDS prevention and treatment. Third, by the UNSAIDS region data; after 'Eastern and Southern Africa' and 'Asia and the Pacific' are the 'West and central Africa'.[3] In West and Ceentral Africa 4.7 million were living with HIV in 2020, 200 000 newly infected, 150 000 AIDS related death. Nigerian HIV records seem the highest in Africa; the country in Africa with the largest number of people living with HIV. [3] In 2020, Nigeria recorded 86, 000 trends of new HIV infection, 1,700,000 people living with HIV, 49, 000 of AIDS related deaths. [3]

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Majority of the people living with HIV/AIDS (PLWHA) are seen in low and middle-income countries.[4] Sub-Saharan Africa~~n~~ been among ~~this~~ thesecategories harbours an estimated 66% of PLWHA.[4] In absolute figures, South Africa with 7.1 million, followed by Nigeria with 3.2 million had the highest HIV/AIDS number of cases by the end of 2016.[4] According to a survey by the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the National Agency for the control of AIDS, Nigeria had 1.9 million people living with Nigeria.[5] However, the Nigerian total prevalence has dropped to 1.4% by 2018 from 3.0 in 2017.[5]The apparent decline has been attributed to better surveillance.[4] On the other hand, since 2005, the reduction in the number of annual AIDS-related deaths ~~has~~ havebeen minimal, indicative of the fact that only 33% of those with a positive diagnosis in Nigeria are accessing antiretroviral treatment (ART).[4]

HIV testing is an essential gateway to HIV prevention, treatment, ~~and~~ care and support services.[6] In 2020, about 6.1 million people in the world did not know that they were living with HIV.[3]However; approximately 25% of PLWHA globally are unaware of their HIV status in 2017.[3]Across the country testing rates are low: only 15.1% of people between the ages of 15-49

tested from 2016 to 2017 and knew their results.[4] Nigeria is estimated to have 90% of people living who know their status by 2021.[3] The HIV epidemic affects not only the health of individuals, it impacts households, communities, and the development and economic growth of nations.[6] Many of the countries hardest hit by HIV also suffer~~s~~ from other infectious diseases, food insecurity, and other serious problems.[6]

This high population of people getting infected with HIV will need increasing and wide range of services by the health care workers (HCWs). This would lead to an increased risk of occupational exposure particularly when there is a breach of the infection prevention protocol. Occupational exposure to blood or other body fluids constitutes a small but significant risk of transmission of HIV and other blood-borne pathogens among HCWs.[2,7] About 2.5% of the global HIV cases are due to occupational exposure among HCWs.[7] Most people at risk of occupational exposures are in ~~the~~ developing countries where there is paucity of standard reporting protocols.[2]

Per-cutaneous injuries usually inflicted by a hollow bore needle are the most common mechanism of occupational HIV transmission.[2] Centre for Disease Control (CDC) estimates that more than 380,000 needle stick injuries occur in hospitals each year, and approximately 61% of these are caused by hollow bore devices.[2] The consequences of having an infected health care worker are of great public health importance. The economic impact of losing work hours and also the possibility of infecting a previously uninfected patient and even re-infection of an already infected patient cannot be overlooked.

Post-exposure prophylaxis, also known as post-exposure prevention (PEP) is a short-term treatment started after high-risk exposure to an infectious agent, such as HIV, hepatitis B virus (HBV) or hepatitis C virus (HCV) (Canadian AIDS Treatment Information Exchange.[8] The

purpose of PEP is to reduce the risk of infection.[8] HIV PEP offers babies in utero with HIV-positive mothers and immediately after delivery, rape victims and unprotected sexual intercourse the opportunity to prevent the development of this disease which still has a very poor prognosis, especially in our developing country.

In the health care setting, it offers a level of protection to medical staff after exposure to infected bodily fluids through needle injuries and other sharp surgical instruments, even after exposure of the eye, nose or mouth to HIV-infected blood, (with risk of infection after such exposure being an average of 0.1%).[9] Other factors that may put health workers at higher risk of HIV infection include a high prevalence of the infection in the population, such as Nigeria, with about 1.9 million people living with HIV.[5] It is therefore necessary that health care workers arm themselves with sufficient knowledge of prevention in case of ~~an~~ accidental exposure for themselves and for the public.

1.1 Research Questions:

1. How knowledgeable are the health workers in ESUTH about HIV PEP?
2. What is there attitude towards receipt of HIV PEP following exposure to (suspected) sources of HIV?

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~~3.~~ 2. MATERIALS AND METHODS

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2.1 Study design

This study is of descriptive cross-sectional design.

2.2 Study setting

The study was carried out in Enugu State University Teaching Hospital, Parklane, Enugu State. In order to have a representative sample from the area understudied; a stratified sampling technique was used to cover the healthcare workers according to cadre: doctors, nurses, medical laboratory scientists, and ward orderlies/cleaners.

2.3 Participants and sample

The study targeted and accessed HCWs in Enugu State University Teaching Hospital, Parklane, Enugu State. This group was selected because of their availability and knowledgeability of the subject matter understudy. The sample size was calculated using Cochran's sample size determination formula which is presented as follows:

– $N=Z^2 PQ/ d^2$

Where N is the sample size

Z is confidence interval = 1.96

P is prevalence from a previous study~~.~~ = 86%.[10]

D is allowable error= 0.05=5%Q is 1-P = 1 - 0.86 = 0.14

N = $\frac{1.96^2 \times 0.86 \times 0.14}{0.05^2} = \frac{0.46252864}{0.0025} = 185.011456$

N is approximately = 185

Adding 10% to the total for

The ~~T~~total minimum sample size is 204

2.4 Tools of the study

Data for the study was collected by the researchers who were able to cover the area understudied. The data collection instrument used was a 30-item self-reported questionnaire developed to ascertain the level of knowledge, attitude and practice towards PEP among health workers in ESUTH. The respondents were requested to tick the alternative that matched their opinions on each item, and this was completed within 2 hours. The modified questionnaire consisted of five sections; Section A: Demographic Data, Section B: Knowledge of HIV Post Exposure Prophylaxis (PEP), Section C: Attitude towards HIV PEP, Section D: utilization of PEP, Section E: Reasons that Influence the Utilization of PEP.

2.5 Ethical Consideration

Ethical approval was obtained from the management of the Health and research ethics committee of ESUTH through the Chairman, Medical Advisory Committee (CMAC) to carry out the study in the hospital. Informed consent was obtained from all individual participants included in the study. ~~Confidentially~~ Confidentialityand ~~anonymosity~~ anonymityof data from the participants was ensured throughout the study.

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2.6 Statistical analysis

The data gathered for this study ~~was~~ were analyzed using descriptive statistics of mean, frequencies and percentages to summarize the data, and inferential statistics via the statistical package for social scientists SPSS.

3. RESULTS

Majority (73.0%) of the respondents were females while 27.0% were males. Majority are between the ages of 31-35years and 26-30 years (24.5% each). Greater percentages (28.0%) have checked their HIV status within the past 3-6months.

Majority of the respondents (89.0%) have heard of HIV PEP. Many (34.5%) said they heard it from lectures. Majority (82%) answered correctly that HIV PEP is needed after exposure. The procedure that puts most of them at risk of contracting HIV infection is injection prick injury (54.0%).

Most (93%) of the respondents believe that HIV PEP reduces the risk of HIV infection. Majority (43.0%) stated that HCWs exposed to needle stick injury report to the hospital management.

About forty-two percent (42.5%) of respondents have been accidentally exposed to needle stick injury. Only 39% reported while 21.0% took PEP.

Public awareness (70.0%) was the most accepted reason that influences the utilization of HIV PEP. 'Careful and protective practices by health workers' was stated by most (93.5%), as a factor that can reduce accidental occupational exposure.

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It doesn't show how knowledge and attitude were assessed. E.g. percentage of participants with good knowledge or attitude. This should be rectified.

The results in table five were not indicated in the research question.

4.3. DISCUSSION

In health care settings, there is an increased risk of HIV transmission to Health Care Workers because of occupational exposure to blood-borne infection from needle sticks injuries. Treatment with antiretroviral drugs decreases the risk of infection. Post-exposure Prophylaxis regimens are typically prescribed for a four-week period. The sooner after exposure PEP is started the better, and it is started within the first 72 hours after exposure. HCWs should therefore be well informed on what PEP is and be willing to use and recommend it to anyone during occupational exposure.

The study findings showed that the majority (89.0%) of respondents have heard of HIV PEP before the study, which is to be expected, giving given their educational qualifications and professions.

According to the 2007 Zambia Demographic and Health Survey (ZDHS) results compiled by Central Statistical Office (CSO) 2008, information obtained from the media and health facilities is considered most reliable as it is communicated by individuals who received training in HIV(National AIDS council, 2009), but from table 2, only 10.0% of the respondents stated media as their source of information while 0.5% stated the clinic. Many of the respondents who stated lectures (34.5%) and textbooks (25.5%) as their source of information is still considered as adequate because lectures and textbook are given and written by experts in the field.

The awareness of PEP is adequate here, as among the 89% of respondents who have heard about PEP (table 2), many (82%) stated correctly that it is needed after exposure and up to 93.0% stated that HIV PEP can be used after accidental occupational exposure. Though the awareness level is high, the majority of the respondent have bad knowledge about HIV PEP as only 51.0% were able to state correctly that HIV PEP time limit is within 72hours. This corresponds with the

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Additionally, this is quite an old reference, compare with a more recent result and indicate the findings from the Nigerian DHS

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study done in Lagos State University Teaching Hospital where 83.3% were aware of HIV PEP but only 54% of the respondents knew when to commence PEP following exposure (Sarah et al., 2014). Also in a study by Adebimpe[12], the respondents were found to have poor knowledge. In Nigeria, most training on PEP and HIV programmes providing access to PEP resources are donor funded.[12] With dwindling donor funding and other competing priorities, it may be impossible to support all health care facilities and HCWs having formal or on the job raining on PEP since this is the major avenue for majority of those who have bad knowledge acquiring such vital information.[12] This could be the major cause of poor knowledge found across the country.

There is good attitude towards HIV PEP as 93.0% agreed that HIV PEP reduces the risk of HIV infection. This agrees with a study done in Gondar University Hospital, where more than half (78.5%) believe that HIV PEP can reduce the probability of been infected with HIV.[13] About forty-three percent (43.0%) of respondents stated that every HCW exposed reported the incidence while 36.5% felt otherwise. The factors stated by most respondents as the possible reason for not reporting include; 'thinking they can handle it' (18.0%), 'not knowing where to report' (26.5%), 'fear of stigmatization' (15.0%), 'side effects of the drugs' (2.0%), 'fear of results' (13.5%), 'the stressful and cumbersome process' (2.0%), 'not chanced' (11.5%), 'patient is negative' (9.0%), 'ignorance' (2.5%). All these factors correspond with those listed in a study done among HCWs by Njemanze.[14]

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About forty-two percent (42.5%) of the respondents have been exposed to accidental needle or sharp object injury and/or body fluid splashes (table 3) and it is comparable to a study in Lagos where 47.3% had sustained a needle stick injury.[2] Most (54.0%) of our respondents stated injection prick injury as the procedure in their profession that accidentally exposes them. This

means that the risk of HIV among HCWs through occupational exposure is high. This is supported by the study in Botswana among doctors and nurses.[15]

Among the proportion that got exposed, only 39.0% reported and only 21.0% took HIV PEP. It can be assumed that even though the respondents are aware they were at risk of HIV infection, it did not compel them to take action of reporting the exposure. This did not correspond with the level of utilization observed in Botswana where 74.8% of those exposed took HIV PEP.[15] The reasons stated for not reporting include; 'don't feel I'm at risk' (68.0%), 'don't know who to report to' (22.0%), 'don't want to do HIV test' (2.5%) 'I have taken prophylaxis (2.5%), 'patient is zero negative' (5.0%) and corresponds with reasons given by HCWs in southern Nigeria where similar study was carried out.[12] Work has to be done in this institution and Nigerian health sector in general to improve the utilization rate of this life saving service.

Accessibility of this service has to be made easy and user-friendly in this institution because even though 89.74% agreed that the service is accessible 7.0% stated that their confidentiality was not maintained and 5.5% stated that the caregiver did not show concern about their accidental exposure.

Our study revealed that many (92.5%) believe that there are factors influencing the use of HIV PEP. These factors include; public awareness (70.0%) and lack of knowledge (57.5%). This corresponds to a study done in Ethiopia, which stated lack of knowledge as the reason that brought down the utilization of HIV PEP.[13] Factors stated by most of the respondents as those that reduce occupational HIV exposure (and thereby reduce need for HIV PEP) are careful and protective practices by HCWs' (93.5%), 'enlightenment campaign and awareness creation' (66.5%), 'government intervention through provision of steady PEP drugs and facilities'

(52.5%). These factors were among those well illustrated by the study done by Njemanze in factors that impact HIV PEP among HCWs.[14]

~~5.~~4. CONCLUSION

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From our study, it can be noted that the attitude of these HCWs toward HIV PEP was optimal and more than half agreed that the PEP service in the institution is adequate. However, knowledge among HCWs about HIV PEP was not adequate and the utilization of the services is not optimal. This can lead to many cases of unreported and undiagnosed cases of HIV and therefore put other workers and patients at risk.

With poor knowledge observed in this centre, measures should be put in place to make sure that all HCWs are properly educated and well informed about HIV PEP. There is a great need for health education on the right approach to HIV PEP in this institution and the general population. This will go a long way to help reduce the incidence of HIV infection and improve the utilization of HIV PEP among HCWs in ESUTH.

Healthy HCWs are needed in achieving a healthy nation. Therefore, the right attitude will go a long way in reducing the morbidity and mortality by HIV in Nigeria.

a. Recommendations

1. Regular education and training of HCWs on HIV PEP should be carried out.
2. Hospital management should write and paste protocols for HIV PEP in every ward, clinic, theatre and laboratory in the institution.
3. Drugs for PEP should be made free in this institution.

4. Hospital management should ensure that the HIV PEP drugs are always available.

CONSENT

As per international standards or university standards,, respondents' written consent has been collected and preserved by the author(s).

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Factors		Frequency	Percentage (%)
Age	20-25	23	11.5
	26-30	49	24.5
	31-35	49	24.5
	36-40	42	21.0
	41-45	17	8.5
	Above 45	20	10.0
Gender	Male	54	27.0
	Female	146	73.0
Marital Status	Single	63	31.7
	Married	132	65.6
	Separated	2	1.1
	Widowed	3	1.6
Religion	Christianity	200	100
Profession	Nurse	88	44.0
	Medical Laboratory Scientist	15	7.5
	Doctor	53	26.5
	Cleaner/Ward orderly	44	22.0
Number of years in service	Below 1 year	2	1.0
	1-6 years	112	56.0
	7-15 years	73	36.5

	16- 20 years	6	3.0
	Above 20	7	3.5
When was the last time you had an HIV test?	<3 months	43	21.5
	3-6 months	56	28.0
	6-12 months	46	23.0
	> 1year	55	27.5

Table 1: Socio demographic characteristics of respondents

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Table 2: Knowledge of HIV PEP

Question	Responses	Frequency	Percentage (%)
Have you heard of HIV PEP?	Yes	178	89
	No	22	11
If you have heard of PEP, what is your source of information?	Textbook	51	25.5
	Colleagues/friends	31	15.5
	Media	20	10.0
	Lecture	69	34.5
	Seminar	2	1.0
	ART clinic	1	0.5
	Workplace	1	0.5
	No Response	25	12.5
When is it needed?	Before exposure	30	15.0
	After exposure	164	82.0
	During exposure	6	3.0
Are the services rendered in ESUTH	No	Frequency	Percentage (%)
	Yes	171	85.5
If yes, where?	ART clinic	193	96.5
	Laboratory	3	1.5
	Heart to heart clinic	1	0.5

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	Public Health department	2	1.0
When can it be used?	Accidental occupational exposure?	186	93.0
	After infected blood transfusion?	136	68.0
	After sexual exposure?	134	67.0
	After mother to child transmission?	72	36.0
	After infected organ transplant?	86	43.0
What time limit is it recommended?	Anytime	20	10.5
	Within 24hours	51	25.5
	Within 72hours	103	51.5
	Don't know	26	13.0
What procedure puts you more at risk of contracting HIV infection in your profession?	Injection prick injury	108	54.0
	Blood transfusion	7	3.5
	Emergency condition	1	0.5
	Contact with specimen	17	8.5
	Child delivery	1	0.5
	Disposal of used syringe	3	1.5
	IV access	5	2.5
	Invasive procedures	2	1.0
	Surgical procedure	22	11.0
	Spinal anesthesia	1	0.5
	Phlebotomy	1	0.5
	No response	32	16.0

Question	Response	Frequency	Percentage (%)
Do you think HIV PEP reduces risk of HIV infection	Yes	186	93.0
	No	4	2.0
	Don't know	10	5.0
How will you rate PEP service here?	Poor	4	2.0
	Fair	41	20.5
	Good	117	58.5
	Excellent	38	19.0
Do you think every HCWs exposed report?	Yes	86	43.0
	No	73	36.5
	Don't know	41	20.5
If no, what do you think is the reason for not reporting?	They think they can handle it	36	18.0
	Not knowing where to report	53	26.5
	Stigmatization	30	15.0
	Side effect of the drug and knowing the patient is no infected	4	2.0
	Fear of the result	27	13.5
	The process is stressful and cumbersome	4	2.0
	nonchalant	23	11.5
	the patient is HIV negative	18	9.0

	Ignorance	5	2.5
Supportive measures that are offered to health workers who get exposed to blood or body fluids	Counselling and testing	150	75.0
	Follow up and monitoring	73	36.5
	Personal protection advices	91	45.5
	PEP	19	9.5
Are there factors that influence the utilization of HIV PEP	Yes	185	92.5
	No	15	7.5

Table 3: Attitude towards HIV PEP

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Table 4: Utilization of HIV PEP

Have you been accidentally exposed to needle stick or sharp object injury and/or body fluid splashes?	No	Frequency	Percentage (%)
	Yes	85	42.5
What did you do?	Report	78	39.0
	Took PEP	42	21.0
	Got HIV screening	56	28.0
	Wash the wound with detergent and water only	64	32.0
If you did not report, why?	Don't feel I'm at risk	122	61.0
	Don't know who to report to	44	22.0
	Don't want to do HIV test	5	2.5
	I have taken prophylaxis	5	2.5
	Patient is sero-negative	10	5.0
How accessible was PEP services to you?	Accessible	70	89.74
	Cumbersome processes involved	4	5.13
	Not accessible then	4	5.13
How was the reaction of the health care worker who attended you?	Supportive caring and confidentiality	38	90.48
	Confidentiality was not	3	7.14

	maintained		
	Did not show concern about my accidental exposure	1	2.38

Table 5: Factors that Influences the Utilization of PEP

Factor	Response	Yes, Frequency (%)	No Frequency (%)
Factors that Influence the Utilization of PEP	Stigma	71 (35.5)	129 (64.5)
	Lack of knowledge	115 (57.5)	85 (42.5)
	Religion	9 (4.5)	192 (96.0)
	Protocols involve in PEP	25 (12.5)	175 (87.5)
	Public awareness on PEP	140 (70.0)	60 (30.0)
	Good services	12 (6.0)	188 (94.0)
Factors that reduce occupational HIV exposure	Careful and protective practices by health workers	187 (93.5)	13 (6.5)
	Enlightenment campaign creation of awareness and education of health workers	133 (66.5)	67 (33.5)
	Government intervention through provision of steady PEP dugs and facilities	105 (52.5)	95 (47.5)
	Avoid careless sexual practices, risky behaviour and unnecessary attachment to patients	81 (40.5)	119 (59.5)
	Proper treatment and careful follow up of exposed persons	64 (32.0)	136 (68.0)
Do you think PEP	Yes	106	53.0

service in this institution is adequate?	No	24	12.0
	Don't know	70	35.0
What can be done by the hospital services to improve the PEP services here	Prompt services to those affected	62	31.0
	Enlightenment/awareness creation and education of health workers	81	40.5
	Employment of more workers	17	8.5
	Administrative improvement	19	9.5
	Provision of steady PEP drugs	15	7.5
	Government support	6	3.0

APPENDIX 1

QUESTIONNAIRE

Dear Respondent,

We are 5th year medical students of ESUT College of Medicine conducting a research on the knowledge, attitude and utilization of health workers in ESUTH towards HIV post Exposure Prophylaxis. To achieve this, your participation and co-operation is needed and will be highly appreciated. Responses to the questionnaire will be treated with absolute confidentiality.

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Thank you.

Section A: Demographic Data

1. Age (years) _____
2. Gender: a) Male[ ] b) Female [ ]
3. Marital status: a) Single [ ] b) Married [ ] c) Divorced [ ] d) Separated [ ] e) Widowed[ ]
4. Religion: a) Christian[ ] b) Muslim [ ] c) Traditional religion [ ]
5. Profession: a) Nurse[ ] b) Medical Laboratory scientist [ ] c) Doctor [ ]
6. Number of years in service _____
7. When was the last time you had an HIV test?<3 months 3-6months 6-12months >1year

Section B: Knowledge of HIV Post Exposure Prophylaxis (PEP)

8. Have you heard of HIV Post Exposure Prophylaxis? a) Yes [ ] b) [ ]

9. If you have heard of PEP, what is your source of information? a) Textbook[ ] b) colleague/friend [ ] c) Media [ ] d) lecture [ ] e) Others (specify) _____
10. When is PEP needed? a) before exposure [ ] b) after exposure [ ] c) during exposure [ ]
11. Are the services rendered in ESUTH? a) yes [ ] b) no [ ] c) don't know [ ]
12. If yes, where can it be accessed within ESUTH? _____
13. When can HIV PEP used? (Tick the appropriate response)

    a) Accidental occupational exposure[ ] b) After infected blood transfusion[ ]

    c) After sexual exposure [ ] d) after mother to child transmission[ ]

    d) After infected organ transplant [ ]
14. What time limit is PEP recommended? a) within 48hours [ ] b)within 72hours[ ] c) Don't know[ ]
15. What procedure puts you more at risk of contracting HIV infection in your profession? _____

Section C: Utilization of HIV PEP

16. Have you been accidentally exposed to needle stick or sharp object injury and/or body fluid splashes? a) Yes[ ] b) No [ ]
17. If your answer to number 16 is **yes**, what did you do about it? (tick your responses)

    a) Report [ ]

    b) Took PEP [ ]

    c) Got HIV screening [ ]

    d) Wash the wound with detergent and water only [ ]

    e) Others (specify)_____

18. If you did **not report**, why?

a) Don't feel I'm at risk [ ]

b) Don't know who to report to [ ]

c) Don't want to do HIV test [ ]

d) Others (specify) _____

19. How accessible was PEP services to you? a) accessible [ ]b) Cumbersome processes involved [ ] c) Not accessible then [ ]

20. How was the reaction of the health care worker who counseled you?

a) Supportive caring and confidentiality [ ]

b) Confidentiality was not maintained [ ]

c) Did not show concern about my accidental exposure [ ]

d) Others (specify) _____

Section D: Attitude towards HIV PEP

21. Do you think HIV PEP reduces risk of infection? a) yes [ ] b) [ ] c) don't know [ ]
22. How will you rate the services of the PEP unit? a) poor [ ] b) fair [ ] c) good [ ] d) excellent [ ]
23. Do you think every health worker report accidental exposure to sharp stick or needle injuries or body fluid splashes to the PEP unit? a) Yes [ ] b) No[ ] c) don't know [ ]
24. If no, what do you think is the reason for not reporting? _____
25. What supportive measures are offered to heath workers who get exposed to blood or body fluids?

    a)Counseling and testing [ ]

    b) Follow up and monitoring [ ]

    c) Personal protection advices [ ]

    d) Others (specify) _____
26. Are there factors that influence the utilization of HIV PEP a) Yes [ ] b) No[ ]

Section E: Factors that Influences the Utilization of PEP

27. If yes, what can they be?

    a) Stigma[ ] b) Lack of knowledge [ ]

    c) Religion [ ] d) Protocols involve in PEP [ ]

    e) Public awareness on PEP [ ] f) Good services [ ]

    g) Others (specify)_____

28. Which of the following factors can reduce occupational HIV exposure (Tick all that applies)
    a. Careful and protective practices by health workers
    b. Enlightenment campaign creation of awareness and education of health workers
    c. Government intervention through provision of steady PEP dugs and facilities etc
    d. Avoid careless sexual practices risk behavior and unnecessary attachment to patients
    e. Proper treatment and careful follow up of exposed persons
29. Do you think PEP services provided in this health facility is adequate? a) Yes [ ] b) No[ ] c) don't know [ ]
30. What can be done by the hospital services to improve the PEP services here? _____