National Situation and Needs Assessment of HIV and AIDS, Drug Use and Related Health Services in Nigerian Prisons

PREFACE

The National Situation and Needs Assessment of HIV and AIDS, Drug Use and Related Health Services in Nigerian Prisons was conducted under the leadership of the National Agency for the Control of AIDS (NACA) in collaboration with the Nigerian Prisons Service and with the support of the United Nations Office on Drugs and Crime (UNODC). This study provides critical empirical data on a key population group within the larger national HIV response.

HIV key populations, including people who use drugs and people in prisons, typically have insufficient access to HIV prevention, treatment and care services. Fragile health systems, stigma and discrimination, sexual and gender-based violence and lack of supportive policies are some of the barriers that key populations face. Across countries, key populations are between 10 and 50 times at greater risk of HIV infection compared to other adults. Effective government support and community-based HIV prevention and treatment programmes that provide tailored services for key populations are currently too few and too small to result in a significant reduction in new infections. To achieve the target of reducing new HIV infections among key populations, a wealth of strategic information is needed to guide the development and scaling up of programmes that are responsive to the specific challenges and needs as well as the creation of an enabling social and legal environment – thus the crucial nature of this very first study of the issue.

The survey had three components; the first was the assessment of drug use, sexual risk behaviours and HIV prevalence among people in prison; the second component focused on qualitative inquiries of the health situation among people in prisons, while the third component consisted in qualitative inquiries into the prison situation according to prison staff. The study was conducted in twelve prisons across the six geopolitical zones (Lagos {two prisons} in South West; Rivers and Akwa Ibom in the South South; Anambra and Imo in the South East, Kebbi and Kano in the North West, Plateau and Federal Capital Territory in North Central and Bauchi and Yobe states in North East). A total of, 2,511 people in prison participated in the bio-behavioral survey. The survey provides empirical data on the sexual risk behaviours in prisons, the prevalence of drug use in prisons, including injecting drug use, HIV prevalence and the status and availability of health services in prisons.

We envisage that the results and the findings of the study will be used by policy-makers, planners, researchers, development partners as well as non-governmental organisations to formulate and monitor policies, programmes and strategies that help to develop targeted services for people in prisons and contribute to the reduction of HIV in Nigeria as people in prison return back to their communities.

We appreciate the support of the Federal Ministry of Health, the United Stated Agency for International Development (USAID) and Heartland Alliance in conducting this research. We would also like to appreciate members of National Steering and Technical Committees involved in this exercise, particularly the field staff across the study states, for their dedication and hard work towards the successful completion of the survey.

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NACA	**Nigerian Prisons Service**	**UNODC**

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List of Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ARVs	Antiretrovirals
CSPro	Census and Survey Processing System
CYPL	Children and Young Persons Law
DCP	Deputy Controller Prisons
DPTC	Drug Prevention Treatment and Care
EDF	European Development Fund
FGDS	Focused Group Discussions
HBV	Hepatitis B
HCV	Hepatitis C
HIV	Human Immunodeficiency Virus
ICT	Information Communication Technology
IDs	Identifiers
IQR	Interquartile Range
KABP	Knowledge, Attitude Behaviour and Practice
KIIS	Key Informant Interviews
MSM	Men Having Sex with Men
NGOs	Non-governmental Organization
NHREC	National Health Research Ethics Committee
NPS	Nigerian Prisons Service
PCB	Programme Coordinating Board
PLWH	People Living with HIV
PLWHA	People Living with HIV/AIDS
PWID	People who Inject Drugs
STDs	Sexually Transmitted Diseases
STIs	Sexually Transmitted Infections
TB	Tuberculosis
UNAIDS	Joint United Nations Programme on HIV and AIDS
UNODC	United Nations Office on Drugs and Crime
XDR-TB	Extensive Drug Resistance TB

Executive Summary

People in Prisons are key populations not only for HIV and other sexually transmitted infections (STIs) but also for Tuberculosis (TB) and Hepatitis B (HBV). Penal institutions all over the world are considered environments for fast and uncontrolled spreading of HIV and Hepatitis B due to many specific risk factors including practices, poor health care and living conditions. Factors related to the prison infrastructure, prison management and the criminal justice system also contribute to the increased vulnerability to HIV and AIDS, TB, HCV & HBV and other health risks in prisons.

The national assessment of HIV and AIDS and health services situation in Nigerian prisons aimed to characterize HIV, TB and Hepatitis B and C among prisoners in Nigeria as well as estimate the size of drug use among prisoners. While previous HIV studies have been done in prisons, they have been limited in scope and coverage. The study was conducted in twelve prisons across the six geopolitical zones (Lagos in South West; Rivers and Akwa Ibom in the South South; Anambra and Imo in the South East, Kaduna, Kebbi and Kano in the North West, Plateau in North Central and Bauchi and Yobe states in North East).

A cross-sectional descriptive study with both quantitative and qualitative data collection methods was employed for the assessment. Respondents were selected by systematic interval sampling method. Data on knowledge, attitude, behavior and practice (KABP) was collected through interviewer administered questionnaire while HIV test was conducted using serial algorithm according to the National HIV testing guideline. Qualitative data was collected through focus group discussions (FGDs) and key informant interviews (KIIs). Health services status was assessed by asking questions on the availability of selected services and client's satisfaction to these services in prisons.

The results show that a total of 2,511 people in prisons participated in the study of which majority were male (92%). About 50% of the respondents were aged 25 – 35 years and 70% of the respondents were of Christian religion. Ninety-eight percent were Nigerians and about two-fifths had secondary level education. Seventy-five percent of the respondents were employed prior to being incarcerated and about two-thirds were single.

Drug use was reported by people in prisons and this included both injecting and non-injecting drug use. About one in two persons and one in twenty persons had a lifetime history of use of cannabis and non-medical use of opioids respectively. The use of cannabis among people in prison was higher than that of the general population where prevalence of cannabis use was 11%. However, the non-

medical use of opioids was similar for both people in prisons and the general population. The most common drug used in prison were cannabis and opiates and median number of users was 455. Estimated proportion of people who inject drugs in prison was about three percent and about two percent of respondents reported initiating injecting drug use in prison. Injecting drug use in prison was higher than that reported among the general population of less than one percent.

While only four percent reported to have engaged in consensual sex with other people in prisons, over 70% reported that consensual sex between people in prisons occurred and this was higher among males (76%) than females (28%). Also, 60% of people in prisons voluntarily offer sex for goods and services and this was reported to be higher among male prisoners (64%) than females (12%).

Overall, HIV prevalence among people in prison was 2.8% and this was higher among females (6.9%) than males 2.7%. This was double the HIV prevalence among the general population (1.4%). It was highest among those with no formal education (3.8%) and among those older than 45 years (8.1%). By geopolitical zone, there was noticeable heterogeneity between people in prison and the general population in all regions with HIV prevalence being lowest in the North East (1.4%) and highest in North Central (7.1%). Compared to general population, HIV prevalence was 1.4% vs. 3.5% in North East region, 7.1% vs. 3.4% in North Central region, 2.6% vs. 3.2% in North West, 3.9% vs. 1.8% in South East, 2.2% vs. 5.5% in South South and 2.8% in South West region for both people in prison and general population.

Overall, positive TB screening was 46% and this was similar for both males and females. Positive TB screening was higher among older people in prisons compared to younger ones. By geopolitical zone, it was lowest in the North East (17%) and highest in the South South (71%).

Knowledge of key transmission routes was high for HIV but low for hepatitis. For HIV, 91% and 85% of respondents correctly identified unprotected vaginal and anal sex respectively as key transmission routes. Over 80% and 60% identified sharing of needles and sharp objects and breastfeeding respectively as transmission routes for HIV. For HBV only about 50% identified unprotected vaginal and anal sex as transmission routes for hepatitis. About 70% of respondents correctly identified sharing of needles and sharp objects as transmission routes for hepatitis.

Stigma was high among both male and female people in prisons. Only about two-fifths of respondents were willing to eat with a person living with HIV (PLWH) while about 60% were willing to associate or share a cell with a PLWH.

Risk perception to infectious diseases was low as only 55% of respondents felt at high risk to HIV. However, about 70% of respondents felt at high risk to tuberculosis (TB) while 57% felt at risk to syphilis and 48% to hepatitis.

On exposure to health information, while over 50% had received some information on HIV, only about two-fifth had received information on condoms and one-fifth on condom compatible lubricants. Only about a fifth had received any information on clean needles and syringes. Exposure to health information was higher among those who had stayed longer in prison.

Only about 50% and 60% of respondents confirmed the availability of HIV testing services and TB treatment services. About two-fifths confirmed availability of antiretroviral treatment and less than 1% for condom and condom compatible lubricants. Lastly less than a fifth confirmed availability of hepatitis B vaccination or C treatment. Less than half of people in prison who had received healthcare services were satisfied with the services.

Conclusions

This study documents the use of drugs among people in prisons in Nigeria with initiation occurring in prison among a few. HIV harm reduction services [1]must be made available as routine HIV prevention services offered to clients. The HIV prevalence was double that of the general population and females had a higher burden of HIV. Lastly, over two-fifths of people in prison had a positive TB screen. Capacity building among prison health personnel and comprehensive HIV and TB treatment services must be instituted in all prisons and prisons must be linked to the viral load network to ensure that people living with HIV in prisons are appropriately monitored. Health education and information including HIV prevention services for people in prisons must be responsive to the needs of the people in prisons. Given that drug use and injecting drug occurs in prisons, HIV harm reduction information and services must be made available to all people in prisons to mitigate the long-term effects of drugs use. Lastly, prison health care services must be improved as less than half of the people in prisons were satisfied with the quality of services they have received.

[1] Comprehensive harm reduction package includes; (i) needle and syringe exchange programs, (ii) opioid substitution therapy, (iii) HIV testing and counselling, antiretroviral therapy, (iv) prevention and treatment of sexually transmitted diseases, (v) condom programming, (vi) targeted information, education and communication, (vii) prevention, vaccination, diagnosis and treatment of viral hepatitis, prevention, (viii) diagnosis and treatment of viral hepatitis. Source: WHO, UNODC, UNAIDS Technical Guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users. 2012.

1.0 INTRODUCTION

The HIV and AIDS epidemic remains one of the greatest health and development challenges of our time. The number of adults acquiring HIV each year has not declined significantly over the past seven years. The epidemic continues to claim more than one million lives each year. Globally nearly 70 million people have been infected with HIV, of whom 35 million people have died of AIDS-related causes since the beginning of the epidemic.[1] Nigeria has the second highest burden of Human Immuno-deficiency Virus (HIV) infection in the world. Nigeria has a generalized epidemic with HIV prevalence of 2.8%.[2] It is estimated that 3.1 million people are living with HIV and AIDS. The number of new HIV infections in 2018 was estimated to be at 130,000 with an estimated AIDS-related deaths of 53,000.[2] To be able to better characterize the nature of Nigeria's HIV epidemic in terms of geographic and population transmission dynamics, the Government of Nigeria is currently leading a massive population-based AIDS indicator survey for effective and efficient national response. This report will complement the national survey.

Global prison population are put at more than 10.74 million people at any given day in recent times with a larger proportion being persons who are yet to be convicted.[4] In Nigeria, total people in prisons' population as at July 2018 was 75,772 with total male prison population of 74,186 and total female population of 1,586.[5] A report of people in prisons' mortality in Nigerian prisons from 2007 to 2017 put the figure of deaths at 1066 persons out of which 85 are AIDS-related deaths.[5] This high HIV prevalence poses a threat not only to the people in prisons but also those who manage the people in prisons and their contacts.

Studies have highlighted risk behaviors in these settings such as sexual contacts, drug use including injecting drug use and unsafe medical practices.[6] Disease remained pervasive in cramped, poorly ventilated prison facilities, which had chronic shortages of medical supplies. Inadequate medical treatment caused many people in prisons to die from treatable illnesses such as HIV and AIDS, malaria, and tuberculosis.

People in prisons are one of the most-at-risk populations not only for HIV and other sexually transmitted infections (STIs) but also for Tuberculosis (TB) and Hepatitis B (HBV).[7,8] Penal institutions all over the world are considered environments for fast and uncontrolled spreading of HIV and Hepatitis B due to specific risk practices, poor health care and living conditions.[8]

In Sub Saharan Africa, extraordinary high rates of HIV have been documented in prison populations including populations of South Africa (41%), Cote d'Ivoire (27.5%) and Zambia (27%). A 2009 report from Zimbabwe suggested that more than half of people in prisons in that country may be living with HIV .[9] In the same region, despite increasing number of people living with HIV (PLWH) gaining access to anti-retroviral therapy (ART), approximately 70% of people in prisons with TB are co-infected with HIV. The fate of the African prisoner is summed as follows: "Sentenced and locked away, African people in prisons have been forgotten by HIV prevention and treatment programs.[10,11]

PRISON SITUATION

The prison HIV situation is especially delicate when the interaction between prison and non-prison communities is considered. People in prisons who are infected with HIV, upon their release become part of the general population which could increase the risk of transmission and infection. In addition to the HIV risk behaviors, such as unsafe sexual activities and drug use including injecting drug use, factors related to the prison infrastructure, prison management and the criminal justice system also contribute to the increased vulnerability to HIV and AIDS, TB and other health risks in prisons. These factors include overcrowding, violence, poor prison conditions, corruption, denial, stigma, inadequate protection for vulnerable people in prisons, inadequate training for prison staff as well as poor medical and social services.

Prisons worldwide are known for high rates of communicable diseases which affect both people in prisons and prison staff; these rates exceed those in the general population.[12] The Human Immunodeficiency Virus (HIV) is a major threat to prison health with HIV rates as high as 50 percent.[13] The 2017 Nigeria Prisons Service HIV/AIDS & TB Control Programme reported that about 198 people in prisons from 27 prison facilities across the nation were living with HIV. Further compounding the situation are high risk behaviours in the prison environment including unprotected anal sex between males, rape, people who inject drugs (PWID), alcohol abuse, tattooing and the use of contaminated cutting instruments. Female people in prisons are sexually abused by other people in prisons and prison guards. They also have challenges with sanitary towels and their sexual and reproductive health needs are often not met.

Surveys of prison populations, despite being limited, have provided some data on substance use in Nigeria. For example, in a study of some condemned armed robbers in Benin-City, Edo State[14] reported that more of the armed robbers were users of cannabis (45%) as compared with the non-armed robbers (0.9%). In another study conducted in Abeokuta Prison, the prevalence of current

abuse of cannabis was reported to be 7%.[15] Most of those studied were males and young adults. Lifetime prevalence rates for cannabis use was 33.9%. Drug prevention and treatment services in prisons in Nigeria are limited.

The use of contaminated injecting equipment when using drugs is one of the primary routes of HIV transmission in prisons. Many people in prisons begin injecting drugs for the first time in prison.[16] Where there are high numbers of imprisoned people who inject drugs, there is a higher risk of HIV transmission. Possessing a needle is often a punishable offence and therefore many people share equipment that has not been sterilized between uses.

Many countries fail to link their prisons healthcare to the national HIV/TB or public health programmes hence access to HIV prevention and care programmes are often lacking in prisons. Many also fail to provide adequate occupational health services to those working in prisons Health services in prison settings, where they exist, are generally substandard and under-funded, characterized by shortage of staff and of essential medications. Often health care in prison settings works in complete isolation from the general health care system, hampering the quality of health care and continuum of care following release. In Nigeria, not enough attention has been given to HIV knowledge and service provision in prison settings. There may have been studies that focus on HIV and issues like drug use as subjects of research in prisons, but they are isolated studies with limited scope in a few prisons. This provides context for a much-needed assessment with sufficient scope and representativeness to inform HIV and AIDS action in the country. As a result of this gap, UNODC was given the responsibility by the UN Joint Programme on HIV and AIDS to support Nigeria to "conduct an assessment of HIV and AIDS Situation and health services in Nigerian Prisons. UNODC is a co-sponsor of the Joint United Nations Programme on HIV and AIDS while UNAIDS is the convening agency. The work of the Joint Programme is guided by a shared vision of Zero new HIV infections, Zero discrimination, Zero AIDS-related deaths—and the 2016–2021 Fast-Track Strategy, approved by the UNAIDS Programme Coordinating Board (PCB) in October 2015. UNODC is presently implementing a large-scale drugs project funded by the European Union under the 10th European Development Fund (EDF). The project "Response to Drugs and Related Organized Crime in Nigeria", which aims to support Nigeria's efforts in fighting drug production, trafficking and use, and in curbing related organized crime including counterfeit narcotics and psychotropic substances. The project proposes a balanced approach to drug control, with equal attention paid to drug interdiction and drug demand reduction, including drug prevention, treatment and care (DPTC). The project

supported the current assessment of HIV and AIDS Situation and health services including drug prevention, treatment and care services in prisons.

Prisons concentrate great numbers of HIV infected and at-risk populations including those who use drugs and inject drugs, while people in prisons comprise one of the least represented populations in national HIV strategies. Tuberculosis is a particularly serious health consideration in African prisons. HIV-positive people in prisons with TB can easily transmit TB to those who are not infected with HIV. With new extensive drug resistant TB strains (XDR-TB) appearing in many places, the problem has been further exacerbated.

In Nigeria, there are 244 prison facilities. The prisons are divided into 8 zones (A-H), and they spread across the federation. They are: Lagos Zone A, Kaduna zone B, Bauchi zone C, Minna zone D, Owerri zone E, Oyo zone F, Benin zone G and Markurdi zone H. The types of prisons in Nigeria are:

- Maximum security prisons
- Medium security prisons
- Female Prisons
- Satellite prisons
- Farm centers

1.2 LITERATURE REVIEW

Existing literature reviewed, focused on the situation in Sub Saharan Africa where it is estimated that HIV prevalence in prisons is between 2 to 50 times that of the non- prison population[11] while TB incidence in prisons worldwide has been estimated at more than 20 times higher than in the general population.[13]

Globally, people in prisons are the most at-risk populations not only for HIV and other sexually transmitted infections (STI) but also for Tuberculosis (TB) and Hepatitis B (HBVs).[8] Penal institutions all over the world are considered environments for fast and uncontrolled spreading of HIV and Hepatitis B due to specific risk practices, poor health care and living conditions.[8]

International data shows that HIV prevalence among people in prisons is between six to fifty times higher than that of the general adult population. For example, in the USA the ratio is 6:1, in France it is 10:1; in Switzerland 27:1 and in Mauritius 50:1).

The use of contaminated injecting equipment when using drugs is one of the primary routes of HIV transmission in prisons. Many people in prisons begin injecting drugs for the first time in prison.[16] The regions where people in prisons are most affected by HIV are East and Southern Africa, West and Central Africa, both of which have a high HIV prevalence in the general population.[17] A review of the best available data on gender composition of the incarcerated indicates that African countries have among the lowest numbers of female people in prisons compared to global figures. In Africa, the number of female people in prisons is about 14,000 while in other regions the corresponding figures range from as low as 6,000 to as high as 183,000. Also, with regard to the percentage of female people in prisons in the total prison population, African penal institutions indicate ratios of female imprisonment that are relatively lower when compared to international rates.

Overall, female people in prisons have higher HIV prevalence than men, although there is a significant variation between regions. In West and Central Africa, HIV prevalence among female people in prisons is almost double that of men (13.1% vs. 7.1%), and in Eastern Europe and Central Asia, it is almost three times higher (22.1% vs. 8.5%). [11]

Africa, in particular, Sub Saharan Africa, is characterized by the weakness of the criminal justice and judicial system and this has adverse effect on the penal system – overcrowding, mixing of un-sentenced and convicted persons[18] as well as detaining juveniles with men and mixing men and women

in the same jail.[19] This is of course in contravention of international law which requires that individuals who are detained be brought promptly before a judge and be charged or released. [20]

The appalling physical condition of African prisons, along with inadequate food and nutrition as well as short or non-existent health services seriously exacerbate the prevalence of HIV inside prisons.

In male prisons, in Africa and worldwide, homosexual activity is not uncommon – though the reported number of instances is likely to be much lower than the actual numbers due to the denial or criminalization of homosexuality, stigmatization of people in prisons by society at large, and underreporting of rape and sexual abuse among male people in prisons.

It has been further documented that in many prisons studied, people in prisons often exchange basic goods (hygiene products – such as soaps or personal items such as blankets or shoes) for sex as those items may not be available for the majority while in prison. In the same way, poor food and nutrition, including low quality and scarcity of food for those incarcerated, drives people in prisons towards exchange of sex for food.[10]

1.3 RATIONALE FOR THE STUDY

In Nigeria there have been a few studies in the prisons, which have been limited in scope. This national assessment of HIV and AIDS TB and Hepatitis B and C and health services situation in Nigerian prisons provides context for a much-needed assessment with sufficient scope and representativeness to inform HIV and AIDS, TB and Hepatitis B and C as well as drug use action in the country.

This study is intended to provide critical information for planning and implementing targeted HIV prevention, care and treatment programs in prisons, taking into cognizance the heterogeneous nature of Nigeria's epidemic.

2.0 GOAL OF THE STUDY

The goal of the assessment of HIV and AIDS situation and health services in Nigerian prisons is to provide critical information on the current situation with regards to prevalence of HIV and selected coinfections (HIV/TB, HIV/HBV & HCV) as well as the availability and quality of health services

2.1 Objectives of the Study

The primary objectives of the proposed study are:

i. To determine the prevalence of HIV infection among people in prisons in Nigerian
ii. To identify risk behaviors associated with HIV in prison settings
iii. To determine the size of people who use drugs and inject drugs among people in prisons
iv. To determine the availability of health care services for HIV prevention and treatment in prison settings

The secondary objectives of the study are:

i. To determine the prevalence of TB infection among people in prisons in Nigeria
ii. To determine the prevalence of Hepatitis B and C infection among people in prisons in Nigeria
iii. To determine the prevalence of HIV/ TB and HIV/Hepatitis B and C co-infections in Nigerian prisons

3.0 METHODOLOGY

3.1 Study Area

This study was conducted in 12 prisons covering the six geographical zones of Nigeria (Imo, Anambra, Rivers, Akwa Ibom, Lagos, Bauchi, Yobe, Kano, Kaduna, Kebbi and Plateau States).

3.2 Study Design

This study was cross-sectional in design employing mixed methods of data collection. Quantitative data were collected using interviewer-administered structured questionnaire while qualitative data were collected using interviewer guide. Voluntary HIV and Hepatitis B and C testing were done, including TB screening for people in prisons.

3.3 Study Population

The study population comprised people in prisons (male and female) and the prison staff (health and administrative personnel).

Inclusion Criteria

- People in prisons who are 18 years and above.
- People in prisons who have been in the prison facility for three months and above
- Prison staff who have worked in a health facility for at least one year
- Both foreign and Nigerian people in prisons who can communicate in English

Exclusion Criteria

- People in prisons with history of violence, disobedience and difficult to handle.
- People in prisons and staff who decline to participate in the study

3.4 Sampling Strategy and Design.

The survey used a stratified cluster sampling approach. The 244 prisons were divided into six strata depending on the zone: (South East, South South, South West, North East, North West and North Central zone) Samples of prisons were randomly drawn from each of the geo-political zones without replacement according to types of prisons. Systematic interval sampling was then used to select respondents from the line list of convicted and pre-trial people in prisons.

Proposed Sample Framework of type of Prison each Zone

Type of prisons	SS Zone	SE Zone	SW Zone	NE Zone	NC Zone	NW Zone	Sample
Maximum security prison	**7**	**4**	**2**	**2**	**2**	**2**	**19**
Medium Security Prison	**16**	**10**	**15**	**22**	**33**	**17**	**113**
Satellite		**-**	**-**	**44**		**43**	**87**
Female prison	**1**	**-**	**2**	**-**	**-**	**-**	**3**
Open camp and Agricultural Settlement (Farm center)	**4**	**2**	**2**	**1**	**6**	**4**	**19**
Total	**28**	**16**	**22**	**69**	**42**	**67**	**244**

For this study, the Cochran's formula for sample size estimation was used to determine the proposed sample size for the inmate.

$$n_o = \frac{z^2 p q}{e^2}$$

Z^2 = normal distribution 95% = 1.96 (a two-tail test)

P is set arbitrarily at 0.5 q = 1-p = 1 – 0.5 = 0.5

e= level of precision or difference at 0.05 (10% of p)

Design effect = 2

The following prisons as shown in the table below were drawn from the six geopolitical zones. The prisons drawn were: Maximum, medium, female, satellite (lock up) and agricultural settlements (farm centers).

Table 1: Sampling Frame

GEOPOLITICAL ZONE	STATE	DRAWN PRISONS	TYPE OF PRISON	INMATE POPULATION	SAMPLE SIZE
South East	Imo	Owerri	Maximum	2205	353
	Anambra	Nnewi	Medium	268	43
South South	River	Port Harcourt	Maximum	4083	653
	Akwa Ibom	Ikot Ekpene	Medium	764	122
South West	**Lagos**	Female Kirikiri	Female	296	47
		Kirikiri	Medium	3423	547
North East	**Bauchi**	Bauchi	Maximum	997	159
	Yobe	Potiskum	Medium	458	73
North West	**Kano**	Kano Central	Maximum	2086	334
	Kebbi	Yelwa Yauri	Satellite	86	14
North Central	**Plateau**	Jos	Maximum	983	157
	FCT	Dukpa	Farm Centre	52	8
Total		**12**		**15701**	**2511**

Pretesting Design based on standard table for Population size and Precision of 5%			
State.	**Prison**	**Population**	**Sample Size**
FCT	**Kuje**	**855**	**25**
	Suleija	**399**	**25**

3.5 Ethical Considerations

This study involved humans and most especially persons incarcerated in prisons. This protocol was reviewed by the National Health Research Ethics Committee (NHREC). Questionnaires and HIV testing were initiated only after receiving written approval from respondents.

3.6 Informed Consent

This was achieved by explaining to participants the aim, purpose, the methods that will be used during the study, potential risks, benefits to themselves, the community and contribution to science and intended use of results of the study. Participants were given the liberty to choose to voluntarily participate or refuse participation and withdrawal even after voluntary enrolment at any point in time if they so wish without any penalty. No data collection was to take place prior to obtaining informed consent. Written informed consent/assent was obtained from all potential literate respondents, while oral informed consent/assent was obtained from potential literate respondents to allow for both interviews and bio-specimen collection and storage.

3.7 Data Management

3.7.1 Data collection flow

After recruitment, study participants were guided through the following steps:

1. Introduction and explanation of the study
2. Interviewer obtained informed consent for behavioral component from all the participant
3. Interviewer conducted the behavioral interview
4. Interviewer obtained informed consent for biologic component (HIV, HBV, & HCV)
5. Trained counselors conducted pre-test counseling and screened for TB
6. Trained testers conducted HIV test
7. TB was assessed with the use of symptomatic screening
8. Participants were informed that results for their HIV test will be available in approximately half an hour
9. A trained counselor provided the participant with post-test counseling during which the results were provided.

3.7.2 Interviews:

For People in Prisons

The survey questionnaire was administered by face-to-face interviews and conducted by trained interviewers. The interview was conducted in secure/ private rooms to ensure the confidentiality of information provided by the respondents. The respondents were assured that all information and discussions would remain confidential and that their participation was voluntary. They were informed that they may refuse to answer any questions and that they may opt out of the study at any time. They were also told that their decision to participate or not will not affect any benefit that they would normally receive in the prison.

All study related biologic specimens and questionnaires were labeled with a study code. The respondent's identity was captured on the survey questionnaires.

3.7.3 Prison staff

KIIs were done using interview guides. The interview was conducted in secure/ private rooms to ensure the confidentiality of information provided by the staff. They were assured that all information and discussions would remain confidential and that their participation is voluntary.

3.7.4 Testing procedures:

This study deployed the use of linked anonymous methods. Each sample was coded by the trained counselor/personnel with the same code as on the respondent's questionnaire. All people in prisons who consented were tested for HIV and screened for TB. They were also provided on site test results along with post-test counseling with full respect of confidentiality. Individuals who tested positive for HIV were referred for continuum of care at the prison health facility for further care and ARV treatment. Respondents that tested positive for TB were also referred to prison health services.

3.8 Field counseling and testing procedures

3.8.1 HIV rapid testing

People in prisons who had completed the questionnaire were offered to be tested for HIV. The Trained counselor/ personnel provided pre-test counseling and obtained informed consent. The participants were informed that the testing procedure will take 30 minutes. Blood sample collection

was done by finger prick. The Trained counselor/ personnel performed serial HIV testing using Determine as first line and Unigold for confirmation. All discordant tests were retested using Statpak as a tie-breaker.

3.8.2 Systematic screening for active TB

All people in prisons who consented for the study were screened for TB using the WHO recommended systematic screening for active TB. The assessment included screening for symptoms cough lasting for longer than 2 weeks, haemoptysis, weight loss, fever or night sweats.

3.9 Programming of Questionnaire on Tablets

The questionnaires for both the people in prisons and prison wardens were programmed for electronic capture using Census Survey Program (CSPro). A field test was done prior to commencement of the training of interviewers to ensure sequence of questions were maintained and that skip patterns followed logical sequence. The program was then installed in tablets and further test run for practical use.

3.10 Training of Field Team

3.10.1 Interviewers

Based on an estimated number of people in prisons and prison wards, interviewers, counselors and testers participated in a three-day training that covered basic interview skills, interview techniques, ethics in research, use of tablets and overview of the questionnaire. In addition, to improve response rate, interpretation of medical/public health terms was done. Lastly each participant engaged in role play sessions to identify gaps and challenges in the interview techniques and/or interpretation/delivery of questions to the participants.

3.11 Data Management and Analysis

Following completion of data collection via tablets, the data set were cleaned and coded for analysis. Data analysis was conducted using STATA 15. Unique study IDs were generated for each client. This ID was subsequently captured on the HIV client intake form which was used by the counselor to conduct pre-test counselling. This ensured that behavioural questions were linked to client's biological data. Data analysis included proportions. Variables with expected sub-cell count of less than 5 were assessed using Fisher's Exact test.

4.0 RESULTS

4.1 Baseline characteristics

A total of 2,511 respondents participated in the study with 92% being males and 8% females. About half (51%) were aged 25-35 years and about two-fifths (39%) had completed primary level education (Table 1). Majority were of Christians (70%), Nigerians (98%), single (65%) and employed (75%) prior to be imprisoned. Overall, more females (10%) than males (8%) had completed tertiary level education and more females (11%) than males (6%) were students prior to their imprisonment.

Table 2: Sociodemographic characteristics of people in prisons

Socio-demographic characteristics	Male (N=2,321) % (n)	Female (N=190) % (n)	Total (N=2,511) % (n)
Age (years)			
16-24	21.2 (492)	25.3 (48)	21.5 (540)
25-35	52.0 (1,206)	39.0 (74)	51.0 (1,280)
36-45	17.3 (401)	20.5 (39)	20.5 (39)
≥45	9.6 (222)	15.3 (29)	15.3 (29)
Religion			
Christian	69.1 (1,585)	81.2 (151)	70.0 (1,736)
Muslim	30.4 (697)	18.3 (34)	29.5 (731)
Traditional	0.3 (7)	0	0.3 (7)
Others	0.2 (5)	0.5 (1)	0.2 (6)
Citizenship			
Nigerian	98.6 (2,262)	95.2 (177)	98.4 (2,439)
Others	1.4 (32)	4.4 (9)	1.7 (41)
Education level			
Never attended	15.2 (349)	12.4 (23)	15.0 (372)
Primary	38.8 (891)	41.4 (77)	39.0 (968)
Secondary	38.4 (880)	36.6 (68)	38.2 (948)
Tertiary	7.9 (174)	9.7 (18)	7.7 (192)
Occupation prior to Imprisonment			
Employed	75.9 (1,742)	62.9 (117)	75.0 (1,859)
Unemployed	17.9 (411)	26.3 (49)	18.6 (460)
Student	6.2 (141)	10.8 (20)	6.5 (161)
Marital status prior to imprisonment			
Single	66.4 (1,522)	44.6 (83)	64.7 (1,605)
Married	30.0 (688)	40.3 (75)	30.8 (763)
Widowed	2.5 (58)	5.4 (10)	2.7 (68)
Divorced/separated	1.1 (26)	9.7 (18)	1.8 (44)

4.2 Imprisonment History

Overall, majority of the study population were pre-trial (75%) while about a quarter had being convicted. For the current sentence, about a third (32%) had spent between 3 months to less than 1 year while about 10% had spent over 10 years in prison. Life time history of imprisonment was highest among those in the 3 months to 1-year group while less than 5% had spent over 10 years in prison. More females (13%) than males (10%) had spent over 10 years in prison. Most respondents had been to prison only once in their lifetime (94%).

Table 3: Respondents imprisonment history by Gender

Imprisonment history	Male % (n)	Female % (n)	Total % (n)
Prison status			
Convicted	25.2 (577)	20.4 (38)	24.8 (615)
Remand/awaiting trail	74.8 (1,717)	79.6 (148)	75.2 (1,865)
Duration of imprisonment for current sentence			
3 Month to less than 1 year	31.2 (80)	39.5 (15)	31.7 (195)
1 Year to less than 3 year	27.6 (159)	18.4 (7)	27.0 (199)
3 years to less than 5 years	12.3 (71)	18.4 (7)	12.7 (78)
5 years to less than 10 years	18.9 (109)	10.5 (4)	18.4 (113)
More than 10 years	10.1 (58)	13.2 (5)	10.2 (63)
Lifetime imprisonment duration			
3 Month to less than 1 year	33.4 (765)	53.2 (99)	34.8 (864)
1 Year to less than 3 year	34.1 (782)	25.3 (47)	33.4 (829)
3 years to less than 5 years	14.0 (322)	10.2 (19)	13.8 (341)
5 years to less than 10 years	14.3 (328)	8.1 (15)	13.8 (343)
More than 10 years	4.2 (97)	3.2 (6)	4.2 (103)
Frequency of imprisonment			
Once	94.1 (2,158)	96.8 (110)	94.3 (2,338)
Two times	5.1 (118)	3.2 (6)	5.0 (124)
≥Thrice	0.8 (18)	0	0.7 (18)

4.3 Drug Use and Injecting Risk Behaviours

Overall, 55% (1,384) of the people in prisons had a lifetime history of drug use prior to confinement. Apart from alcohol (54%), the most common drug used was cannabis (51%) followed by tramadol (23%) and codeine (19%). Across all types of drugs surveyed, (Fig 1) males reported higher use of drugs than females.

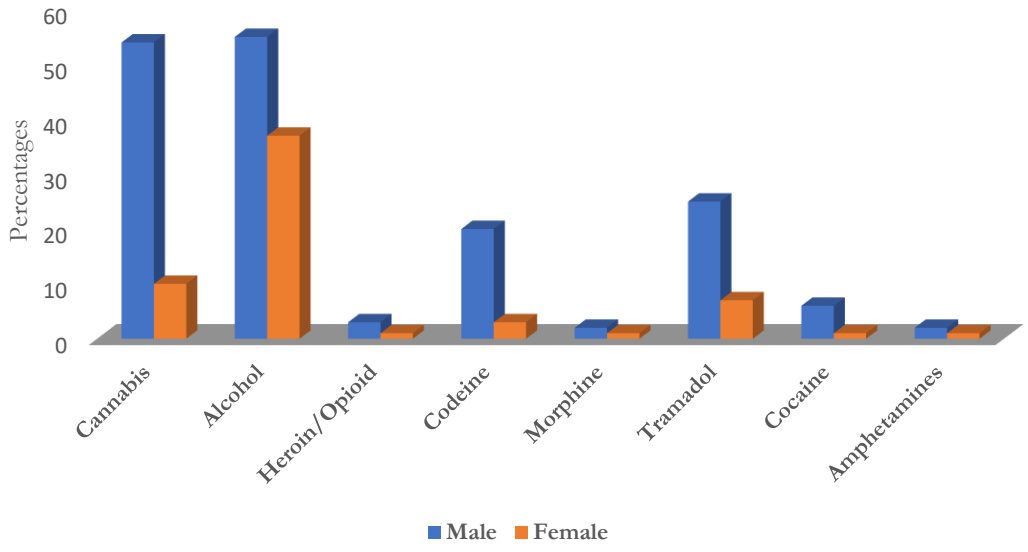

Figure 1: Types of drugs ever used by people in prisons prior to confinement

Similarly, the median number (Table 4) of people in prisons who reported use of cannabis was 455 (interquartile range {IQR} 10 – 1,500). For opiates (codeine, morphine or tramadol) it was 50 (IQR:0-700). There was no reported use of heroin, cocaine or amphetamines by people in prisons. The report of drug use in prison was exclusive to males. For injecting drug use, less than 5% of the people in prisons reported to have ever injected drugs or observed injection drug use in prisons. Furthermore, when respondents were asked to characterize the size of drug use in prisons, only 3% reported that few prisoners inject drugs in prisons while only 1% reported that many people in prisons inject drugs. The median age of injecting debut was 21 years (IQR: 18 – 24 years). Among those who reported a history of injecting drugs, about one-fifth reported sharing needles and syringes (20%) and other injection paraphernalia (15%). Lastly, about 3% of those who reported injecting drug use, reported initiating drug use in prisons.

Table 4: Drug Use and Injecting Risk Behaviours

Drug abuse practice in prisons	Male %(n)	Female %(n)	Total % (n)
Are there people in prisons who use drugs in prison? (IQR)			
Cannabis	455 (10 - 1,500)	0	455 (10 - 1,500)
Alcohol (including self-brewed)	0	0	0
Heroin/Opioid	0	0	0
Opiates (codeine, morphine, tramadol)	50 (0 - 700)	0	50 (0 - 700)
Cocaine	0	0	0
Amphetamines	0	0	0
Tablets without prescription	0 (0 - 100)	0	0 (0 - 100)
Personal history of drug use			
Cannabis	53.9 (1,236)	9.9 (18)	50.7 (1,254)
Alcohol (including self-brewed)	54.9 (1,259)	37.1 (69)	53.6 (1,328)
Heroin/Opioid	2.7 (61)	1.1 (2)	2.5 (63)
Opiates			
(i) Codeine	19.8 (455)	2.7 (4)	18.6 (460)
(ii) Morphine	2.4 (54)	0.5 (1)	2.2 (55)
(iii) Tramadol	24.7 (566)	6.5 (12)	23.3 (578)
Cocaine	6.3 (144)	0.5 (1)	5.6 (145)
Amphetamines	1.8 (41)	0.5 (1)	1.7 (42)
Tablets without prescription	29.3 (671)	19.4 (36)	28.5 (707)
How many prisoners are injecting drugs in this prison?			
None	56.0 (1,330)	54.8 (102)	57.7 (1,432)
Few	3.3 (75)	0.5 (1)	3.1 (76)
Many	1.0 (23)	0.5 (1)	1.0 (24)
Most	0.2 (4)	0.5 (1)	0.2 (5)
Don't know	37.6 (862)	43.6 (81)	38.0 (943)
Have you ever injected drug?			
Inside and outside prison	0.2 (4)	0	0.2 (4)
Only outside prison	0.4 (10)	0	0.4 (10)
Only inside prison	2.0 (46)	0.5 (1)	1.9 (47)
Never	97.4 (2,234)	99.5 (185)	97.5 (2,419)
Age (yrs) of injecting drug use debut			
Median (IQR)	21 (18 - 24)	NA	NA
History of sharing injection items outside prison			
Needles	20 (12)	NA	20 (12)
Syringes	20 (12)	NA	20 (12)
Cutlery (for drug use)	23.3 (14)	NA	23.3 (14)
Others	15 (9)	NA	15 (9)

History of sharing injection items inside prison			
Needles	21.7 (11)	NA	18.3 (11)
Syringes	6.7 (3)	NA	6.6 (3)
Razor	90.0 (39)	NA	88.5 (39)
Cutlery (for drug use)	70.0 (27)	NA	68.9 (27)
Others	16.7 (10)	NA	21.3 (11)

4.4 Sexual practices in prisons

When respondents were asked if they had heard or witnessed any sexual interactions in the prison, about half (54%) reported that they had witnessed sexual violence. When asked if they had been involved in any sexual practices while in confinement (Table 5), 4% reported that they been engaged in consensual sex with another inmate while 1% reported consensual sex with staff. Engaging in consensual sex with people in prisons was similar for both males and females (4%). About 1% of both males and females had been forced to have sex. When asked about their knowledge on consensual sex between people in prisons, over 70% reported that they had observed consensual sex between people in prisons. This was higher among males (76%) than females (28%). However, less than 10% was reported for consensual sex between staff and people in prisons. Lastly, respondents reported that about two-thirds (60%) of people in prisons voluntarily offer sex for goods or money in prisons (Fig 2) and this was reported to be higher among males (64%) than females (12%). About 60% of people in prisons were reported to have been deceived into offering sex for goods while less than 5% reported to have ever engaged in transactional sex.

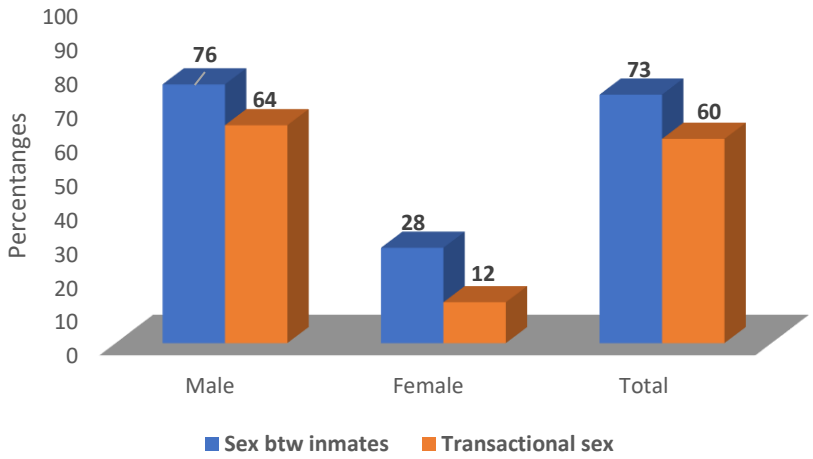

Figure 2: Sexual Practices in Prison

Table 5: Sexual Practices in Prison

	Male % (n)	Female %(n)	Total
Sexual experience in prison			
Heard or witnessed sexual violence	56.7 (1,300)	23.7 (44)	54.2 (1,344)
Heard or witnessed psychological violence	78.7 (1,806)	57.0 (106)	77.1 (1,912)
Been involved in consensual sex with another inmate	3.5 (81)	3.8 (7)	3.6 (88)
Been involved in consensual sex with staff	0.9 (21)	1.6 (3)	1.0 (24)
Been involved in consensual sex with visitor	0.7 (17)	0.5 (1)	0.7 (18)
Been forced to have sex	0.9 (20)	0.5 (1)	0.9 (20)
Forced someone else to have sex with you	0.2 (4)	0	0.2 (4)
Been involved in sexual violence	0.3 (6)	0.5 (1)	0.3 (7)
Consensual sex in prison			
Between people in prisons	76.4 (1,774)	28.4 (54)	72.8 (1,828)
Between people in prisons and staff	7.0 (162)	1.1 (2)	6.5 (164)
Between people in prisons and visitors	1.5 (35)	0	1.4 (35)
Transactional sex in prisons			
Voluntarily offer sex for goods or services	64.0 (1,467)	12.4 (23)	60.1 (1,490)
Deceived into offering goods	60.1 (1,348)	14.0 (26)	56.6 (1,404)
Ever engaged in transactional sex	4.3 (99)	1.1 (2)	4.1 (101)

4.5 HIV Prevalence

Overall, HIV prevalence among people in prisons was 2.8% (Table 6) and this was higher among females (6.9%) compared to males (2.7%). HIV prevalence (Fig 3) was lowest in north east zone (1.4%) and highest in north central zone (7.1%). By age, it was lowest among those aged 16-24 years (1.0%) and highest among those 45 years and above (8.1%). It was highest among those who were employed prior to incarceration (3.3%) and lowest among students (1.5%). Lastly, it was lowest among singles (2.1%) and highest amongst those who were widowed or divorced (7.3%).

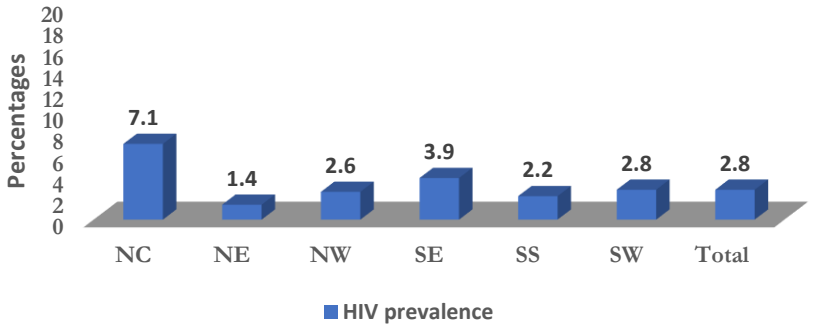

Figure 3: HIV prevalence by Geopolitical Zones

4.6 Knowledge, Attitudes, Behaviours and Practices

4.6.1 Knowledge of HIV

When respondents were asked about knowledge on HIV transmission routes (Fig 4), majority of the respondents correctly identified unprotected vaginal (91%) and anal sex (85%) as key transmission routes. Also, sharing of needles and sharp objects was also identified by majority of the respondents as key transmission routes. Less than a third correctly identified breastfeeding (61%) and mother-to-child transmission (56%) as key routes of HIV transmission. Similarly, less than a third correctly rejected the misconception that HIV can be transmitted through contact with toilet seats (57%), sharing eating utensils (58%) and by mosquito bite (55%).

Knowledge of appropriate route of transmission was similar for males and females for unprotected vaginal sex (91%) and anal sex (85%). It was slightly higher among females than males for breastfeeding (69% vs. 60%) and mother-to-child transmission (56% vs. 54%). Rejection of misconceptions was higher among females than males for contact with toilet seat (71% vs. 56%), sharing of eating utensils (68% vs. 57%) and mosquito bite (68% vs. 54%).

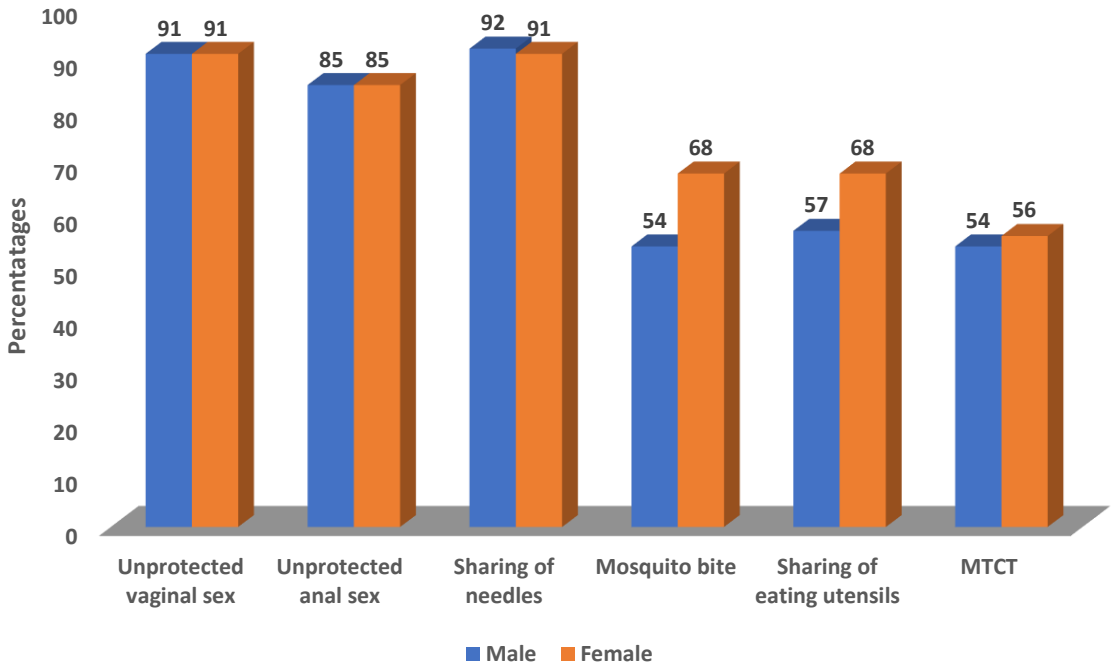

Figure 4: Knowledge of HIV Transmission Routes

Table 6: HIV Prevalence

Socio-demographic characteristics	HIV prevalence %(n)	95% CI
Overall	**2.83 (54)**	**2.19 - 3.48**
Gender		
Female	**6.9 (9)**	**2.5 - 11.3**
Male	**2.7 (45)**	**1.9 - 3.4**
Age (years)		
16-24	1.0 (4)	0.0 - 2.0
25-35	2.0 (19)	1.1 - 2.9
36-45	5.7 (17)	3.1 - 8.4
≥45	8.1 (14)	4.0 - 12.2
Religion		
Christian	3.1 (38)	2.1 - 4.1
Muslim	2.8 (16)	1.5 - 4.2
Traditional	0	
Others	0	
Citizenship		
Nigerian	3.0 (54)	2.2 - 3.8
Others	0	
Education level		
Never attended	3.8 (11)	1.6 - 6.1
Primary	3.2 (22)	1.9 - 4.5
Secondary	2.5 (17)	1.3 - 3.7
Tertiary	2.7 (4)	0.1 - 5.4
Occupation prior to Imprisonment		
Employed	3.3 (42)	2.3 - 4.2
Unemployed	2.7 (10)	1.0 - 4.3
Student	1.5 (2)	1.0 - 3.5
Marital status prior to imprisonment		
Single	2.1 (24)	1.3 - 2.9
Married	4.2 (23)	2.5 - 5.8
Widowed/divorced/ separated	7.3 (7)	2.1 - 12.5
Geopolitical zones		
North central	7.1 (12)	3.2 - 10.9
North east	1.4 (3)	0.2 - 3.0
North west	2.6 (8)	0.8 - 4.3
South east	3.9 (14)	1.9 - 6.0
South south	2.2 (16)	1.1 - 3.2
South west	2.8 (16)	1.6 - 3.9

4.6.2 Knowledge of Hepatitis Transmission

When respondents were asked about knowledge on hepatitis transmission routes (Fig 5), only about half of the respondents correctly identified unprotected vaginal (56%) and anal sex (56%) as key transmission routes. About seventy percent of respondents correctly identified sharing of needles (69%) and sharp objects (70%) as key transmission routes. Less than half of the respondents correctly identified breastfeeding (49%) and mother-to-child transmission (44%) as key routes of hepatitis transmission. Lastly, less than a half correctly rejected the misconception that hepatitis can be transmitted through contact with toilet seats (23%) and sharing eating utensils (35%).

Knowledge of appropriate route of transmission of hepatitis was higher among males than females for unprotected vaginal sex (56% vs. 50%) and anal sex (56% vs. 52%). It was higher among males than females for sharing of needles (73% vs. 69%), breastfeeding (57% vs. 49%) and mother-to-child transmission (45% vs. 44%). Rejection of misconceptions was higher among males than females for contact with toilet seat (23% vs. 17%), but higher among females than males for sharing of eating utensils (45% vs. 35%).

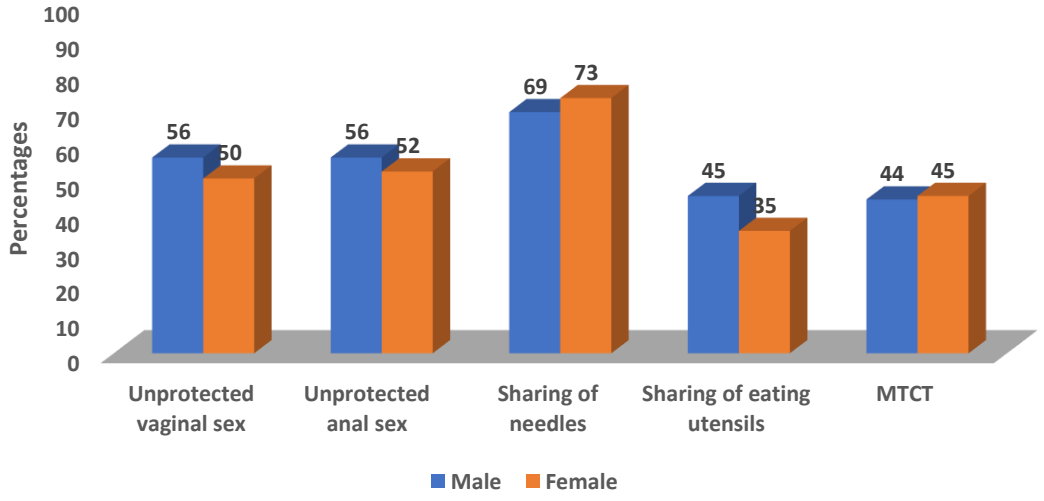

Figure 5: Knowledge of Hepatitis Transmission Routes

4.7. Stigma

4.7.1 HIV Stigma

As an assessment of stigma to HIV among the people in prisons showed that less than half of respondents were willing to eat (Table 7) with a PLWH (44%). Only 59% reported that they would be willing to continue to associate with a PLWH while 57% would be willing to share a cell with a PLWH. Stigma was higher among males than females for all indicators of stigma. For willingness to eat with a PLWH, 43% of males compared to 57% of females, reported being willing to east with a PLWH. Similarly, 58% of males compared to 70% of females were willing to continue associating with a PLWH, while 57% of males compared to 72% of females were willing to share a cell with a PLWH.

Table 7: Stigma and knowledge of transmission routes for HIV and Hepatitis

	HIV			Hepatitis		
	Male %(n)	**Female %(n)**	**Total %(n)**	**Male %(n)**	**Female %(n)**	**Total %(n)**
Knowledge						
Vaginal sexual intercourse without a condom	91.3 (2,095)	91.4 (170)	91.3 (2,265)	55.9 (1,283)	50.0 (93)	55.5 (1,376)
Anal sexual intercourse without a condom	85.4 (1,959)	85.0 (158)	85.4 (2,117)	56.2 (1,288)	51.6 (96)	55.8 (1,384)
Oral sex	72.1 (1,653)	61.3 (114)	71.3 (1,767)	53.8 (1,234)	48.9 (91)	53.4 (1,325)
Contact with toilet seat	55.7 (1,277)	71.0 (132)	56.8 (1,409)	23.2 (532)	17.2 (32)	22.7 (564)
By drinking from the cup of an HIV infected person	56.8 (1,303)	67.7 (126)	57.6 (1,429)	34.5 (792)	44.6 (83)	35.3 (875)
By kissing	30.0 (689)	38.7 (72)	30.7 (761)	19.4 (444)	23.7 (44)	19.7 (488)
By mosquitoes	54.1 (1,242)	67.7 (126)	55.2 (1,368)	50.0 (1,148)	64.0 (119)	51.1 (1,267)
By an injection with used needles	92.2 (2,114)	90.3 (168)	92.0 (2,282)	69.0 (1,582)	72.6 (135)	69.2 (1,717)
By injecting with shared needles	92.2 (2,115)	90.9 (169)	92.1 (2,284)			
By sharing of razor blades, other sharps objects or tooth brushes	93.5 (2,144)	90.4 (168)	93.2 (2,312)	69.4 (1,591)	73.7 (137)	69.7 (1,728)
By tattooing	82.5 (1,893)	76.9 (143)	82.1 (2,036)	64.0 (1,468)	62.9 (117)	63.9 (1,585)
By sharing blood in brotherhood rituals	85.5 (1,962)	81.2 (151)	85.2 (2,113)	66.4 (1,523)	66.1 (123)	66.4 (1,646)
By shaking hands	78.6 (1,802)	86.6 (161)	79.2 (1,963)	63.4 (1,454)	75.3 (140)	64.3 (1,594)
By breastfeeding	60.1 (1,378)	68.8 (128)	60.7 (1,506)	48.3 (1,109)	56.5 (105)	49.0 (1,214)
From mother to child during pregnancy and child birth	54.0 (1,239)	55.9 (104)	54.2 (1,343)	44.4 (1,015)	44.6 (83)	44.3 (1,098)
Stigma						
Willing to eat with known infected person	42.7 (980)	56.5 (105)	43.8 (1.085)	32.9 (754)	37.6 (70)	33.2 (824)
Willing to continue to associate with a known infected person	58.4 (1,340)	69.9 (130)	59.3 (1,470)	51.7 (1,186)	61.3 (114)	52.4 (1,300)
Willing to share a cell with a known infected person	56.7 (1,300)	71.5 (133)	57.8 (1,433)	51.0 (1,169)	60.8 (113)	51.7 (1,282)

4.7.2 Hepatitis Stigma

Stigma to hepatitis was assessed by asking respondents their opinion on interaction with known hepatitis inmate. Thirty-three percent of respondents were willing to eat with people in prisons who had hepatitis, 52% were willing to continue to associate with them and willing to share a cell. Stigma was higher among males than females for all indicators (Table 7). Only 33% of males compared to 38% of females reported being willing to eat with a known person in prison who had hepatitis (Fig 6). About half (52%) of male people in prisons compared to 61% of female people in prisons reported being willing to continue to associate with known people in prisons infected with hepatitis, while 51% of males compared to 61% of females reported being willing to share a cell with person in prison infected with hepatitis.

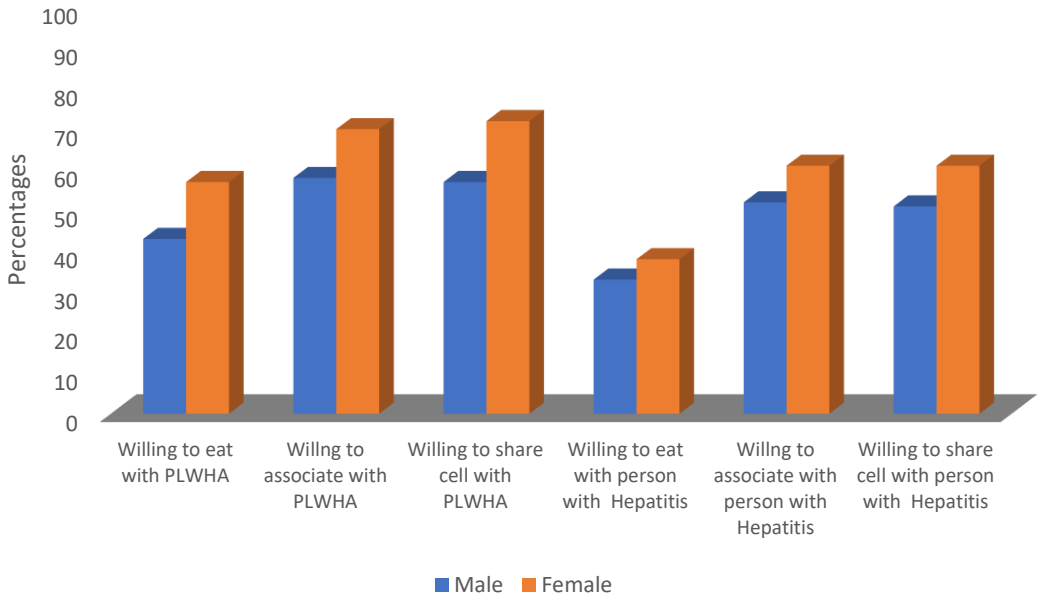

Figure 6: Stigma to HIV and Hepatitis

4.8 Risk Perception to Infections

Table 8 describes respondents' perception to infections in the prisons. Overall, people in prisons felt they were at risk to contracting tuberculosis while being in prison (58%). This was followed by HIV (47%), and hepatitis and sexually transmitted infections (30%). Across all infections assessed, males felt at more risk than females. For HIV, 49% of males compared to 31% of females felt at risk to contracting the infection. For tuberculosis, 60% of males compared to 34% of females felt at risk to

contracting the infection while for hepatitis, it was 32% vs. 19% for males and females respectively. A further assessment of their perception of the likelihood of contracting these infections, showed that 71%, 57%, 55% and 48% of respondents reported that they had a high risk of contracting tuberculosis, STIs, HIV and hepatitis respectively.

Table 8: Risk Perception to Infections

	Male % (n)	Female %(n)	Total % (n)
Perception of risk to contracting infections			
HIV	48.7 (1,117)	30.7 (57)	47.3 (1,174)
Syphilis and other STIs	30 (687)	28.5 (53)	29.8 (740)
Tuberculosis	59.9 (1,374)	34.4 (64)	58.0 (1,438)
Hepatitis	31.2 (716)	18.8 (35)	30.3 (751)
Rate of risk of contracting infections			
HIV			
High risk	55.3 (618)	45.6 (26)	54.9 (644)
Low risk	41.4 (462)	50.9 (29)	41.8 (491)
No risk	1.4 (16)	1.8 (1)	1.5 (17)
Syphilis and other STIs			
High risk	56.5 (388)	66.0 (35)	57.2 (423)
Low risk	39.7 (273)	32.1 (17)	39.2 (290)
No risk	1.5 (10)	0	1.4 (10)
Tuberculosis			
High risk	71.2 (978)	60.9 (39)	70.7 (1,012)
Low risk	26.5 (364)	39.1 (25)	27.1 (389)
No risk	1.1 (15)	0	1.0 (15)
Hepatitis			
High risk	48.5 (347)	42.9 (15)	48.2 (362)
Low risk	44.7 (320)	51.4 (18)	45.0 (338)
No risk	1.8 (13)	2.9 (1)	1.9 (14)

4.9 Availability and Quality of Health Services

Table 9 describes the common illnesses experienced by people in prisons in Nigeria and the availability of healthcare services to respond to these illnesses. Overall, malaria was the most common illness reported (90%) to occur in prisons. The next most common illnesses reported were skin diseases (69%), fever (62%) and tuberculosis (55%). Other illnesses observed to occur include stomach ache (37%), HIV (29%) and high blood pressure. When respondents were asked which illnesses, they have experienced personally (Fig 7), while being incarcerated, malaria (65%) was reported as the most common. This was followed by fever (38%) and skin diseases (30%).

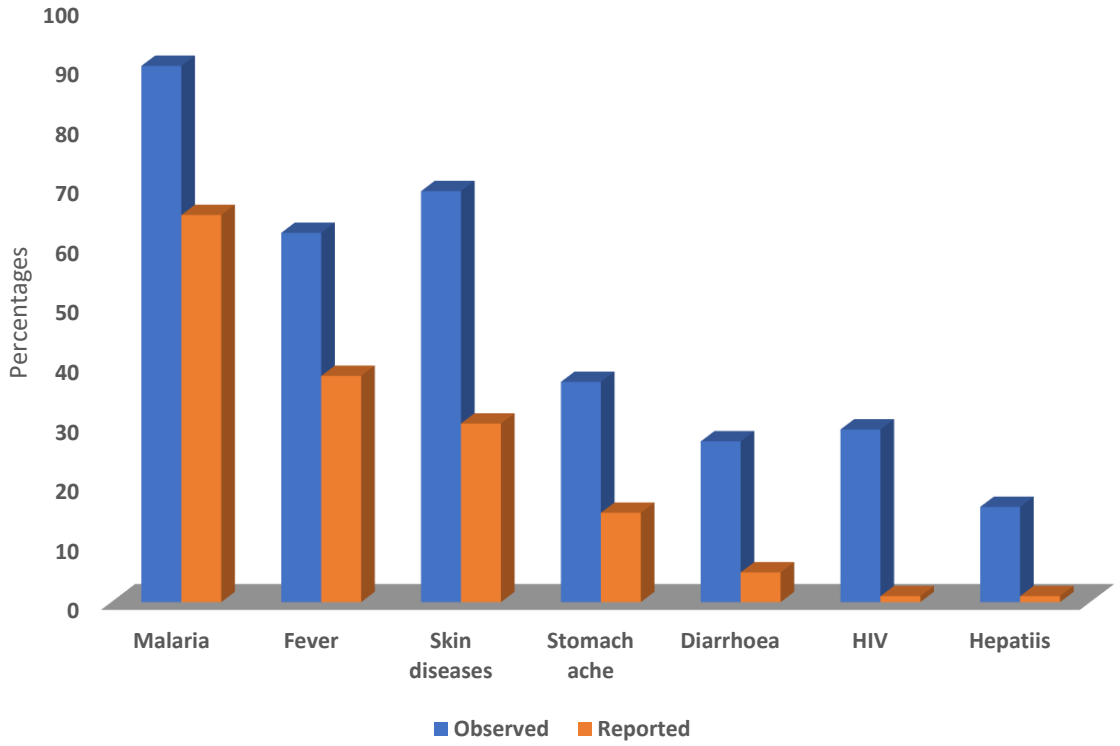

Figure 7: Types of Illnesses Reported in Prisons

4.10 Availability and Satisfaction of Health Services Received

Among people in prisons who reported to have experienced some illness while in prison, majority obtained treatment from the prison clinic. Other sources of treatment include family or friends (23%) while about 4% were referred outside the prison clinic for treatment. About a tenth of the respondents did not receive any treatment for their ailment.

Table 9: Types of illnesses observed and experienced by people in prisons

	Observed			Reported		
	Male %(n)	**Female %(n)**	**Total %(n)**	**Male %(n)**	**Female %(n)**	**Total %(n)**
Illnesses						
Malaria	90.6 (2,103)	87.4 (166)	90.4 (2,269)	64.9 (1,506)	63.4 (121)	64.8 (1,627)
Fever	61.6 (1,430)	59.5 (113)	61.5 (1,543)	37.9 (879)	35.3 (67)	37.7 (946)
Stomach ache	37.1 (862)	32.1 (61)	36.8 (923)	14.6 (339)	17.4 (33)	14.8 (372)
Pneumonia	21.2 (493)	12.1 (23)	20.6 (516)	4.8 (111)	3.7 (7)	4.7 (118)
Diarrhea	27.8 (646)	15.3 (29)	26.9 (675)	5.5 (127)	4.2 (8)	5.4 (135)
Urethral discharge	16.8 (390)	24.7 (47)	17.4 (437)	3.6 (84)	11.1 (21)	4.2 (105)
HIV and AIDs	29.4 (682)	22.6 (43)	28.9 (725)	0.8 (18)	2.1 (4)	0.9 (22)
Jaundice	9.7 (225)	4.2 (8)	9.3 (233)	0.2 (5)	0.5 (3)	0.2 (4)
Hepatitis	16.2 (377)	6.8 (13)	15.5 (390)	0.5 (12)	0	0.5 (12)
Tuberculosis	57.1 (1,325)	25.3 (48)	54.7 (1,373)	5.3 (124)	2.6 (5)	5.1 (129)
High blood pressure	24.6 (570)	18.4 (35)	24.1 (605)	2.8 (66)	7.4 (14)	3.2 (80)
Skin diseases	70.3 (1,631)	48.4 (92)	68.6 (1,723)	30.9 (718)	21.1 (40)	30.2 (758)
Diabetes	15.2 (352)	13.2 (25)	15.0 (377)	0.5 (12)	3.2 (6)	0.7 (18)
Place of treatment						
Prison clinic				77.9 (1,808)	91.6 (174)	78.9 (1,982)
Referral				3.6 (84)	3.2 (6)	3.6 (90)
Family or friends				23.4 (542)	16.3 (31)	22.8 (573)
None				9.4 (218)	3.7 (7)	9.0 (225)
Others				3.2 (74)	1.6 (3)	3.1 (77)

An assessment of the range of services available to people in prisons showed that 54% and 55% of respondent reported that HIV testing services and TB screening services respectively, were available in their facility (Table 10). About a fifth reported that testing for hepatitis B and C were available and less than 1% reported availability of condoms or lubricants. Sixty percent reported that treatment for TB was available, while about two-fifths reported the availability of antiretrovirals for treatment of HIV. About 90% of females reported that women have access to reproductive health services while about half reported that women with babies have access to replacement feeding.

When respondents were asked about their level of satisfaction (Fig 8) with the services received from the prison clinic, less than two-fifth (37%) reported being satisfied with the services received. More females (62%) than males (35%) reported being satisfied with services received.

By geopolitical zones, only in north east and north west zones did 50% of respondents report being satisfied with the services received while the least satisfied zone was the South South zone (28%).

Table 10: Availability of health services

Characteristics	Male (N=2,294) % (n)	Female (N=186) % (n)	Total (N=2,480) % (n)
Respondents who said the following services are available in prison			
HIV testing services	53.2 (1,219)	64.5 (120)	54.0 (1,339)
Screening for tuberculosis	55.2 (1,266)	60.2 (112)	55.6 (1,378)
Treatment for tuberculosis	59.8 (1,370)	64.5 (120)	60.1 (1,490)
Prevention of mother to child transmission treatment (PMTCT)	6.6 (151)	21.0 (39)	7.8 (190)
ARV treatment for HIV	37.4 (857)	48.4 (90)	38.2 (947)
Male circumcision	2.1 (48)	6.5 (12)	2.4 (60)
Supplementary feeding for HIV or TB patients	13.2 (303)	11.8 (22)	13.1 (325)
Sexual and reproductive health	12.4 (285)	26.3 (49)	13.5 (334)
Condoms	0.9 (21)	0.5 (1)	0.9 (22)
Lubricants	0.6 (13)	0	0.5 (13)
Needles and syringes for injecting drug users	7.0 (161)	3.8 (7)	6.8 (168)
Testing for Hepatitis B and C	19.8 (455)	18.8 (35)	19.8 (490)
Hepatitis vaccination	10.3 (237)	9.7 (18)	10.3 (255)
Drug treatment	19.6 (450)	14.5 (27)	19.2 (477)
Respondents who said the following services are available for women in prison			
Women have access to reproductive health service		89.7 (167)	
Women with babies have access to replacement feeding/ powder milk		51.1 (95)	

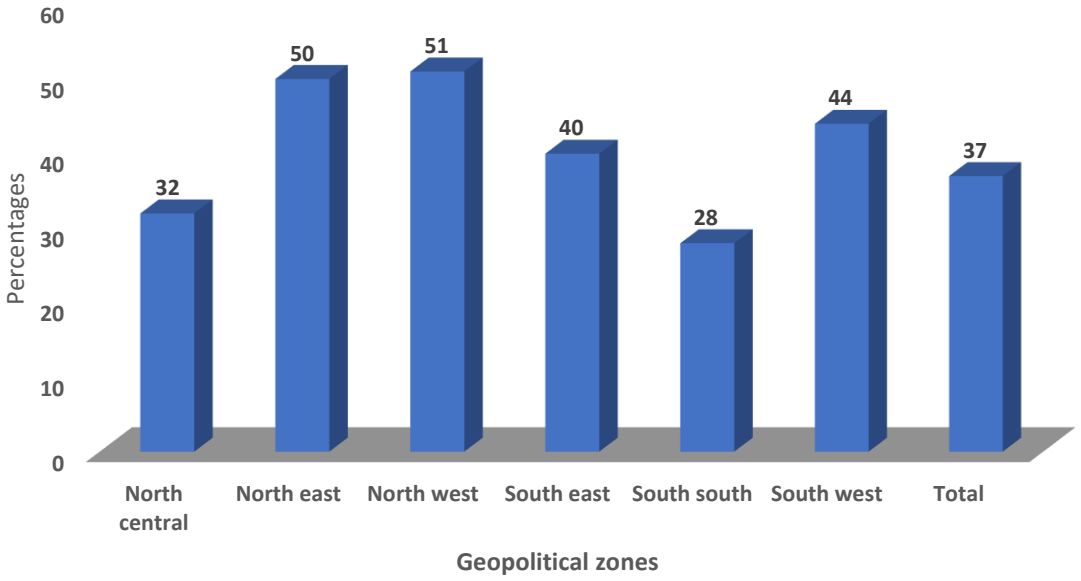

Figure 8: Distribution of Satisfaction with Level of Healthcare Received by People in prisons

4.11 Diagnosis and Treatment Interruption

Respondents were asked if they had been diagnosed of some illnesses and if treatment for these illnesses was interrupted upon incarceration. Of the 78 people in prisons who reported that they were HIV positive (Table 11), 5 (6%) reported having their treatment interrupted during their stay in prison. For tuberculosis, of the 138 people in prisons diagnosed with TB, 9 (7%) reported having their treatment interrupted during their stay in prison, while for hepatitis, of 36 people in prisons with self-reported hepatitis, 9 reported experiencing treatment interruption.

Table 11: Diagnosis and treatment interruption in Prison

	Male % (n)		Female %(n)		Total	
	Diagnosed	Treatment interrupted	Diagnosed	Treatment interrupted	Diagnosed	Treatment interrupted
Illness						
HIV	2.8 (63)	6.4 (4)	8.1 (15)	6.7 (1)	3.2 (78)	6.4 (5)
Other STIs	6.2 (143)	NA	10.2 (19)	NA	6.53 (162)	NA
Tuberculosis	5.8 (132)	6.8 (9)	3.2 (6)	0	5.6 (138)	6.5 (9)
Hepatitis B	1.5 (34)	26.5 (9)	1.1 (2)	0	1.5 (36)	25.0 (9)
Hepatitis C	0.8 (19)	NA	1.1 (2)	NA	0.9 (21)	NA

4.12 Exposure to Health Information

Table 12 describes the respondent's exposure to health education while in prison. The most common health information received by people in prisons was on HIV (54%), followed by information on TB (50%), HIV testing (48%) and information on positive living (41%). Less than a third of people in prisons had received any information on sexual and reproductive health (22%) and on clean needles and syringe (24%). Information on condoms was 21% and lower (11%) on condom compatible lubricants. Information on condoms was similar for males and females (21%), however for condom compatible lubricants, it was slightly higher among males (11%) than females (9%). By gender, more females than males had received information on HIV (60% vs. 54%), HIV testing (51% vs. 48%) and positive living (45% vs. 40%). By duration of stay, information received on HIV, TB, HIV testing and hepatitis increased with the duration of stay in prison (Fig 11).

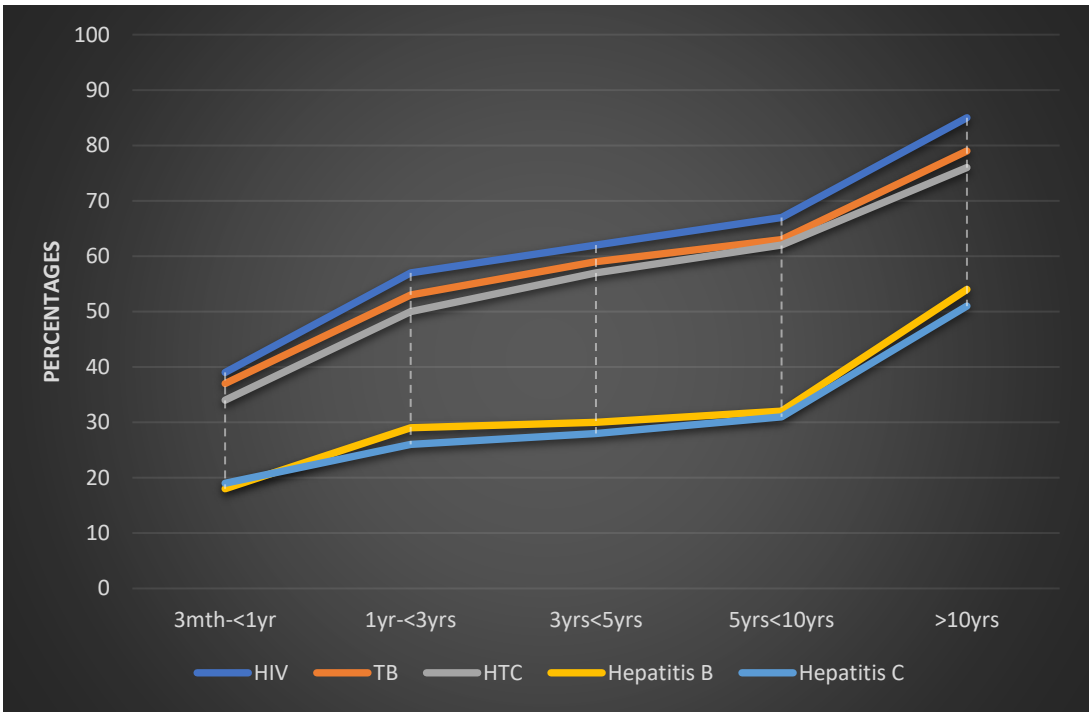

Figure 9: Exposure to Health Education by Duration of Stay in Prison

Table 12: Exposure to health education

Access to information on HIV and AIDS	Gender			Duration of stay in the prison for the current sentence/awaiting trial				
	Male (N=2,294) % (n)	Female (N=186) % (n)	Total (N=2,480) % (n)	3mth-<1yr	1yr-<3yrs	3yrs<5yrs	5yrs<10yrs	>10yrs
Respondents who said they have been given the following while in prison								
Information on HIV	53.5 (1,227)	60.2 (112)	54.0 (1,339)	38.5 (333)	57.3 (475)	62.2 (212)	67.4 (231)	85.4 (88)
Information on Hepatitis B	27.0 (620)	24.2 (45)	26.8 (665)	18.2 (157)	29.3 (243)	29.6 (101)	31.5 (108)	54.4 (56)
Information on Hepatitis c	24.9 (572)	22.0 (41)	24.7 (613)	16.8 (145)	26.1 (216)	27.6 (94)	30.9 (106)	50.5 (52)
Information on STIs	34.1 (781)	38.2 (71)	34.4 (852)	23.4 (202)	37.3 (309)	39.9 (136)	40.8 (140)	63.1 (65)
Information on condoms	21.4 (491)	21.5 (40)	21.4 (531)	13.4 (116)	24.0 (199)	23.2 (79)	27.1 (93)	42.7 (44)
Information on condom compatible lubricants	10.6 (244)	8.6 (16)	10.5 (260)	6.9 (60)	10.7 (89)	11.4 (39)	13.7 (47)	24.3 (25)
Information on Tuberculosis	50.7 (1,164)	46.8 (87)	50.4 (1,251)	36.7 (317)	52.8 (438)	58.7 (200)	62.7 (215)	78.6 (81)
Information on Antiretroviral Therapy (ART)	29.7 (682)	27.4 (51)	29.6 (733)	19.6 (169)	29.7 (246)	33.1 (113)	43.4 (149)	54.4 (56)
Information on prevention of mother to child transmission (PMTCT)	11.1 (254)	24.7 (46)	12.1 (300)	8.3 (72)	10.6 (88)	15.3 (52)	16.0 (55)	32.0 (33)
Information on alcohol and drugs	33.2 (762)	26.3 (49)	32.7 (811)	23.5 (203)	35.6 (295)	32.8 (112)	40.8 (140)	59.2 (61)
Information on sexual & reproductive health (SRH)	21.1 (484)	36.0 (67)	22.2 (551)	15.2 (131)	23.6 (196)	23.8 (81)	29.7 (102)	39.8 (41)
Information on clean needles and syringes	23.6 (542)	25.3 (47)	23.6 (589)	15.5 (134)	25.7 (213)	24.6 (84)	30.6 (105)	51.5 (53)
Information on bleach (disinfectants)	34.3 (787)	44.1 (82)	35.0 (869)	27.4 (237)	35.6 (295)	37.2 (127)	43.7 (150)	58.3 (60)
Information on HIV counseling and testing	47.9 (1,099)	50.5 (94)	48.1 (1,193)	34.0 (294)	49.8 (413)	56.9 (194)	62.4 (214)	75.7 (78)
Information on positive living	40.2 (922)	45.2 (84)	40.6 (1,006)	28.6 (247)	42.7 (354)	45.8 (156)	51.9 (178)	68.9 (71)
Information on male circumcision	4.6 (106)	5.9 (11)	4.7 (117)	2.7 (23)	4.5 (37)	6.7 (23)	7.9 (27)	6.8 (7)

4.13 TB Screening

Clinical screening of TB of the respondents showed that 46% of the respondents had a symptom of TB. By symptoms, 19% had only one symptom, 16% had two symptoms, 10% had three symptoms while 6% had four symptoms. The most common symptom reported was night sweat (29%), followed by cough (23%).

Table 13: TB Screening Disaggregated by Select Demographics

Socio-demographic characteristics	Positive TB Screen %(n)	95% CI
Overall	**45.8 (1,164)**	**43.8 - 47.7**
Gender		
Female	**55.4 (72)**	**51.5 - 56.3**
Male	**53.9 (900)**	**46.8 - 64.0**
Age (years)		
16-24	49.2 (191)	44.2 - 54.2
25-35	55.7 (525)	52.6 - 58.9
36-45	54.2 (161)	48.5 - 59.9
≥45	54.9 (95)	47.5 - 62.4
Education level		
Never attended	47.7 (137)	41.9 - 53.5
Primary	57.6 (397)	53.9 - 61.3
Secondary	55.2 (373)	51.4 - 58.9
Tertiary	43.8 (64)	35.8 - 51.9
GPZ		
NC	40.6 (69)	33.1 - 48.0
NE	17.1 (36)	12.0 - 22.3
NW	35.7 (112)	30.4 - 41.0
SE	62.5 (222)	57.5 - 67.6
SS	71.1 (530)	67.9 - 74.4
SW	21.0 (119)	17.7 - 24.4

4.20 Qualitative Inquiries

4.21 Substance/Drug Use in Nigerian Prisons

The general perception about drug use in Nigerian prisons is that it is prohibited. Most people in prisons and prison staff reported never experiencing or hearing of cases of drug use. To prevent smuggling of substance and drugs by visitors into prisons, staff members of the prison service ensured visitors were properly scrutinized. In most cases, visitors were mandated to taste food and substances brought to ensure it was devoid of drugs. The prison staff also conducts routine check of the cells at intervals to inquire to presence and use of drugs. However, a few people in prisons reported the use of cigarette, suggesting it was not part of drug use when compared with cannabis, cocaine or Indian hemp. The most common type of substance used was cigarette, followed by Indian hemp and tramadol. When People in prisons were asked how they sourced these substances, they hinted they were mostly procured through the help of the prison wardens. At other times, cigarettes would be thrown over the fence into the prison compound by unidentified individuals. People in prisons also reported that wardens shared these substances with them whenever they were taken out for manual labour. Conversely, most prison staff asserted that these substances were smuggled in by visitors and the people in prisons. Reasons attributed for use of substances among people in prisons include; relief from stress (calming of nerves), ease of defecation, increased propensity to sleep, mental clarity, avoidance of worry and frustration, craving for happiness, addiction and performance of physical tasks.

SUBSTANCE/DRUG USE IN NIGERIAN PRISONS

…it is hard for inmate to use drugs that are not prescribed. That is why we do search at regular intervals, sometimes it may be weekly, monthly and sometimes whenever we have information. Especially those that are coming from the outside.
Like when they are coming for visit like this, that is why from the gate, even you like this that is coming in as a visitor; from the gate they will check you. When they are visiting, anything that you will give to the inmate, like the bread; it will be checked so that you don't hide anything inside to give to the inmate.
-Prison Staff, Akwa Ibom (FGD)
R: They don't, how would you get, no like cigarette it is not classified high drugs. No but when it comes to cannabis, cocaine, India hemp and all that is restricted.
I: Okay. So, they don't have access to…?
R: And even drinks are restricted, they don't have access to them.
-Prison Staff, Rivers (KII)
R: Ehm… I can say they use it always because anytime you go in to search; you must get out one or two of those things. Either the Indian hemp mostly is the one we know here. So, I will say they use it often because, anytime you go in for that, you must always get one.
-People in prison, Owerri (FGD)

P3: make we say like 75 people smoke. Understand? You see one stick of cigar, like 10 people first share am [pidgin English].
-People in prison, Jos (FGD)
R4: The warders, the warders themselves, we have hungry warders, we usually give them money, they will bring the drugs. Then the prisoners, we don't have space to go out (cross talk)
R: Selling it out, N50 if he smuggles it in, you will buy it N100 or N150
-People in prison, Jos (FGD)
R: If I am warder that wears his shoe, they will only search my pocket and body but not my shoe, so I can put it inside my shoe and bring it in, even in my body I can carry it and even after searching they won't see it. That is to say that the staff aid the bringing of these drugs in, they are the main carriers.
-People in prisons, Jos (FGD)
And the people who provide these hard drugs are the warders themselves. They do that mostly if we are taken out to their houses to work for them. They bring it out and share it amongst us.
-People in prison, Bauchi (FGD)
yes o speak sir sometimes I just take it if not, if I go to the rest room I no go shit at all (laughter) that's the truth.

R: this is another reason why some people take ikong Ekpo [cannabis] leaf. Everyone takes it with different reason according to what's wrong with you, how you feel, what u want to do, to cool your hot temper before you go break person head

- People in prison, Akwa Ibom (FGD)

4.22 Sharing of Sharp Objects & Personal Items in Prison

Sharing of sharp objects and personal items among people in prisons was a common occurrence. The usual items shared were tooth brush, razor blades, clippers, needles and cutlery. Of these, razor blade was the object with the commonest shared use. The reason for this is the common practice of cutting the hair of new people in prisons before admission into their cells. There were several incidents where local barbers were hired to cut the hair of new people in prisons, during which they shared the use of razor blades for several people in prisons. People in prisons reported that this was usually done with the supervision of prison staff. However, this practice was not the same across all the prisons. In some instances, people in prisons could not afford to buy razor blades, hence resorted to asking prison staff for money to do so or borrowing blades from people in prisons who had. Their inability to afford razor blade was worsened by the policy that people in prisons were not allowed to keep cash in the prison. At other times, two people in prisons procured a razor blade, cut into two and shared for personal use. It was also a common practice for two people in prisons to use different ends of the same razor blade for nail or hair-cut.

Aside from a few prisons that had a general clipper for all people in prisons, a few people in prisons reported use of personal clippers for hair-cut. However, this was uncommon because of unstable power supply in Nigeria. For those who used clippers, the most common way of sterilizing clipper was exposing it to the fire from lighters. However, it was unsustainable as they reported scarcity of lighters in the prison.

There were only a few reports of sharing of spoons and brushes between people in prisons because some prisons received frequent supply of tooth brushes from NGOs. Body piercing such as tattoo was reported in some prisons but was subsequently banned because people in prisons took ill afterwards. There were no reports of use or sharing of syringes.

SHARING OF SHARP OBJECTS AND PERSONAL ITEMS IN PRISON

Yeah. Like razor blade and clipper. We share razor very well, 30 people use one razor blade to barb, also with the clipper they use. You know, nothing like ehnn ehnn lighter to burn the clipper. The first day I came here I barbed with razor blade, I contacted some rashes, but I requested for drugs outside, they brought it for me and I cured it. But many people inside here have the rashes, yes.

- People in prison, Anambra (FGD)

R: Sister, let me answer these question, you see sharing of razor, there is this local way of cutting hair, if you don't want to cut all of your hair, you see these comb you will put the razor and use on side to barb and the other side to carve, then the ones that don't have money to buy razor will use the other side to barb their hair. Clipper, we have general clipper that we normally use

- People in prison, Jos (FGD)

And about tattooing, honestly, we do it a lot here, even wardress gives prisoner earring to wear. So, we even have people who pierces ear here, tattoo has its own needle, sewing machine needle, they can use it for you

- People in prison, Jos (FGD)

R: Where they share razor is when they bring you in newly, if they bring you in the evening, the next morning they will use razor and barb all of you, what they are trying to say is the person doing that barbing job in here, the staff will only give them two or one razor to barb 20 guys, that is not good, because each person is supposed to have a razor but they will only give them two or one razor, and the will use this side for this and the other side for the other person, and you know they can be prone to any of these diseases you are talking about

- People in prison, Jos (FGD)

P: Uhh yes there are things like that especially the tattooing. The guy that does that uses same pin for all. But as result of that people took ill then the authorities placed a ban on it. So, whoever engages in such an act, will face the consequences

P: They will use 10 razors to barb eh... 10 people hair, one razor 20 Naira, because they no dey allow our parents give us money, they said money is exhibit [pidgin English]

- ***People in prison, Bauchi (FGD)***

P: No, no, no. No, they have enough toothbrush… they have enough toothbrushes. Why I say that is that most times, visitors – religious organizations, NGOs – that come visiting; they provide those things for them.

-Prison Staff, Owerri (FGD)

P: Yes, this is happening here or sometime our visitors bring it for us. Or we buy it, 10 naira for a razor blade to about 7 or 8 prisoners. People share needles too. You see the hands of all the people that sew clothes, it has so many holes due to the accident they get from sewing. This is also happening

- People in prison, Bauchi (FGD)

4.23 Perception on Risk Behaviours Of People in Prisons in Nigerian Prisons

4.23.1 Perception on Violence and Sexual Practices in the Prison

There were reported incidents of men having sex with men (MSM) in the prisons. This practice was common in some prisons but rare in others as strict measures were instituted by the prison authority to forestall that. In some prisons, there were anti-homosexual groups which monitored and reported cases to prison staff. Notwithstanding, the practice of homosexuality was more common among people in prisons who were married before incarceration yet serving a long term. The people in prisons reported that the act could happen anytime at any location, but its most prevalent occurrence was at night, within the cells or in toilets. The use of condom for protection among homosexuals was uncommon. The punishment for homosexuality and sex within the prison varied from shaming culprits to beating them up, bathing with faeces or separating homosexuals from the same cell.

People in prisons believed punishments provided deterrence to the practice of homosexuality. Although most of the homosexuality incidents were consensual, men who were newly admitted into the cells were considered vulnerable to forced sex by people in prisons who had been there earlier. Overall, forced sex and lesbianism were rare among the people in prisons. Conjugal visit was rare as it is prohibited by the standing orders and laws of the prison. However, some people in prisons canvassed for conjugal visit so they could have sex with their marriage partners as it is obtainable in

other countries. There were no reported sexual practices between prison staff and people in prisons. People in prisons reported frequent bullying, harassments and fist-fights which were usually devoid of use of weapons as prison wardens often inspected the cells of people in prisons to remove metals and objects they perceived could be used as weapons.

PERCEPTION OF VIOLENCE AND SEXUAL PRACTICES IN PRISONS

P: Me I've seen that countless time, sex between men. They will tie rope around their waist and go around the prison with them singing songs on them, throwing ashes on them. Of course, I see such here. I've seen such countless time.

-People in prison, Bauchi (FGD)

R: There are occurring but when you consider the frequency, it's not much. But you consider the…,,.because why am saying this, we consider this prison, the size of the prison, the caliber of the people in prisons that are here. We have condemned criminals, we have lifers, we have those that are were sentenced to thirty, thirty-five years. In a situation where you have those categories of people in prisons, somebody that has been in the prison for the past twenty years, somebody fifteen years. It was, before his coming to this place, he's a man that is married with the children. Suddenly he has a problem that he was brought to the prison. So, unless, not many would be faithful enough to restrict themselves. Some do…..go into such sexual promiscuities and when we get them, we have a means of dealing with them according to prison rules.

-Prison Staff, Kano (FGD)

P: Sometimes, they say that they have stayed long especially those people that have stayed long in prison – they are the only people indulging in that act.

R4: Force, is not force but they usually do it here, about the homosexual

R: You understand, this house is a tough place, so if you don't know how the house is, for instance you enter newly looking for so many things, the person maybe wants to do that thing, will call you and do it. Always, if you need something you can still call him and get.

-People in prison, Owerri (FGD)

I: Okay, about homosexuals, where do they do it, is it inside the cell?

R: Inside their room, inside their cell, anywhere (cross talking)

R: As this my brother have said, if they want to do it, they will block the cell, no person will enter, the person that will be at the front of the door you dare not enter inside, the person is a member of it, when the one inside finishes he will come and stand at the door, they have a backdrop

- People in prison, Jos (FGD)

P: I don't think there is anything like sexual harassment in here. What I understand by harassment is when somebody forces you seriously to do things you can't do. Anything about homosexuality in here is intentional

- ***People in prison, Bauchi (FGD)***

P: Like P rightly said, as a result of the culprits been closely watched, this is my eighth month in the cell since the last incident. This is because of how they were dealt with. When they are caught we will beat them up and next day in the morning the warders will order us to pour excrete water on them, make them dance round the female wing to be seen. The humiliation they go through has brought a halt to the act.

- ***People in prison, Bauchi (FGD)***

P: Yes, it happens. Like when we have a new person in the prison they bully him and make him do things against his will and we also experience fits fighting too. The last time someone got physical with one person, though has left the prison, he used, the toilet brush on his head and he started bleeding

People in prison, Bauchi (FGD)

4.23.2 Transactional Sex in Nigerian Prisons

People in prisons and prison staff reported that cash and gifts were offered in exchange for sex in the prisons. Although this was not a frequent practice, it was more common among homosexuals. Most prison staff reported only hearing and investigating cases of transactional sex but expressed frustration at their inability to source for evidence. Reasons highlighted for people in prisons' participation in transactional sex include; naivety, personal greed, insufficient supply of toiletries and poverty. People in prisons particularly reported there was a pattern of transactional sex between people in prisons serving jail term and those newly admitted into the cells. Items often exchanged for sex include food, money, sweets, toiletries, cannabis, Indian hemp *[cannabis]* and cigarettes.

TRANSACTIONAL SEX IN NIGERIAN PRISONS

R: Also, some boys, they don't have anything, if they see this Indian hemp [cannabis] and you sell it and if you do that thing, it is very common to deceive them

R: That one that day, it was N20 that was given to him to do that stupid act

R: And you know after that, he complained his N500 is missing (cross talking)

R: You know, those that are into these things are all lifers, but the small ones don't do this, they are the ones that are cheated upon

-People in prisons, Jos (FGD)

R: they will just promise them that my money in the record office, I will just give you. maybe they denial themselves food

-Prison Staff, Akwa Ibom

P: To some it's their ways. They are already use to that kind of act. But some are not like that. Some they lure them with cigarettes, gifts they got from outside, Indian hemp, sweets, bread and even fish. They lobby for fish in the kitchen just, so they can carry out their evil act.

P: When someone comes to this prison the person will stay for months without having bathing or washing soap to use. They lure them with washing or bathing soaps. And this happens most of the time in this prison but usually between men not with women or visitors, no. This happens between us the prisoners. Or sometimes the food they give us is not enough; people can also be lured through this means. This incidence happens all the time. Also, this happens when one has long throat [greed], longing for people's things.

-People in prison, Bauchi (FGD)

P: Yes. In investigations, the people in prisons they reported… they have made such reports that they were being lured to practice such by giving them money or food when they discover that you are not handy to provide for yourself, that they normally entice them to do such with either money or with food but for us to ascertain that the action really occurred is now the problem because we are not in the cell and they will not always be open to say the total truth about what transpired for the sake of being… in short; for sake of fears of being maybe attacked in their cells

-Prison Staff, Owerri (FGD)

4.24 Knowledge of Infectious Diseases (HIV, TB, Hepatitis B and C)

In terms of knowledge of HIV, TB, Hepatitis B or C, people in prisons and staff reported mixed views. Some people in prisons had the knowledge from previous seminars while others did not. People in prisons were more knowledgeable about HIV than TB and Hepatitis B or C. Their major source of information was through seminars and workshops organized by Non-Governmental Organizations, religious and medical groups. Modes of transmission of HIV identified by people in prisons include; unprotected sexual intercourse, kissing and sharing of razor blades, clippers, shaving stick, soaps or food. Similarly, people in prisons identified sharing of spoons and clothes, contact with sweats, unprotected sexual intercourse as modes transmitting Hepatitis. They expressed that TB could be transmitted through cough and sharing of cigarettes.

KNOWLEDGE OF HIV, TB, HEPATITIS B OR C IN NIGERIAN PRISONS

P: Honestly, we don't have any knowledge of it. Like that of HIV issue, some of us have knowledge on it while some of us don't. And those with full knowledge of it are few in number.

-People in prisons, Bauchi (FGD)

So, all these NGOs; they are doing enough. Even our department – the medial section – equally, they are doing enough in sensitizing both the people in prisons and staff. Like every Thursday, there's what we call lecture. When we have lectures, they will come and educate us on health issues and other things which we are required to pass on to the people in prisons.

-Prison Staff, Owerri (FGD)

R: through razor blade, clipper shaving stick, soap etc.

R: As far as HIV is concerned, even flies can cause HIV for example if flies perches on meat that'd yet to be eaten it can cause HIV even ant are also poisonous when they penetrate on food items

R: what I'm saying is catarrh can cause tuberculosis ooo…… [local expression of exclamation]

-People in prisons, Akwa Ibom (FGD)

I: Okay, this question I want to ask is for HIV/AIDS, hepatitis B and C and tuberculosis. Let start with HIV, what ways do you think someone can contract HIV?

R: Sharp object, like razor blade, needle and even through homosexual some persons get it

R: From food you can get it

R: Hepatitis is using…….if I have hepatitis I use my spoon and I give it to somebody to use and you know my saliva still on the spoon, he can contact through that way

I: Okay, is there any other way a person can contact it?

R: Yes, even if you are sleeping with your neighbour and you have sweat on your body, you can contact it

R: Through……..if 2 people are sleeping and some body have it and they are transferring their……...(cross talking) even through changing of clothes they will get it

I: So, what about TB, anybody has an idea how it is contracted?

R: TB is cough, smoking together (cross talking)

People in prison, Jos (FGD)

R: HIV, they say through sex, using sharp objects. Then for tuberculosis, they say even heat water too, always tuberculosis, tuberculosis is contagious, is airborne disease. Then this other hepatitis B, they said even sharing cup or water with somebody, you can get infected.

-Prison Staff, Rivers (KII)

4.25 Risk of Contracting HIV, TB, Hepatitis B and C in Prisons

Majority of people in prisons considered themselves at high risk of contracting HIV, Hepatitis and Tuberculosis. The HIV risks for people in prisons were associated with the practices of admitting people in prisons into cell without prior testing, frequent sharing of razor blades and sharp objects, fist fights, injuries and domestic accidents and cuts. Prison staff associated their HIV risk to high possibility of injury while separating fist fights between people in prisons and accidental piercing while removing sharp objects from the cells. People in prisons associated their high risk for contracting Hepatitis to frequent sharing of cups, spoons and clothes. On tuberculosis, both people in prisons and prison staff associated their risk of infection to sharing of cups, cigarettes and overcrowding of the cells. Many staff asserted that although the prison had cells where TB-infected people in prisons were isolated or quarantined, their continual exposure to infected people in prisons put them at high risk of contracting TB. Both people in prisons and staff expressed concern that late detection of TB and overcrowding of the cells facilitated its early spread among people in prisons. People in prisons expressed mixed views on their acceptance of persons infected with HIV, Hepatitis B & C and Tuberculosis. While some admitted cohabiting with infected people in prisons, others opined they would request for change of cell if they ever identified an infected inmate. People in prisons demonstrated willingness to support, socialize and relate with persons infected with HIV, Hepatitis B& C, but not Tuberculosis. Most people in prisons perceived that associating with TB-infected people in prisons could increase their chances of being infected. The major reason they provided for not relating with infected persons was to avoid gossips and rumors. Despite attempt by medical team of the prisons to be confidential, the identity of people in prisons infected with HIV and Tuberculosis was usually known to other people in prisons. There were reports of stigmatization and bullying of infected persons.

like maybe the inmate are fighting and you want to separate them, those that have injured themselves and blood is coming out, you know you won't go and look for gloves before you come. You will try as much as possible or an inmate just falls and sustains an injury, the first thing is for you to run and render help to the person, and you may be at risk

-Prison Staff, Akwa Ibom (FGD)

and the cells are congested to those that have TB, as a security there, you are the one to open them, whenever you open, the kind of breeze that will come out of the cell, hmm, you will pity yourself why are you working here. Because you have up to 200 persons in one cell

Prison Staff, Akwa-Ibom

R: HIV is not an infection you get that easily, except you have contact with that person, the only disease, you can be at risk is TB and hepatitis, if you are someone who wants to share clothes you could get that, and TB if you are not careful where you go to and share cigarette with you could get that, but HIV unless you are not careful you could get that.

-People in prison, Jos (FGD)

R: Yes! Yes! Tuberculosis as I mentioned earlier that those ones I know to my understanding is an airborne disease, is prone to and is very easy for me to be… to get that. That is one of the harzard!

-Prison Staff, Anambra (KII)

R: Yeah, any medical staff is at risk of contracting any of the, especially the airborne diseases, we have to be disciplined. We don't allow them to cough on our face. We don't allow them to do this thing.

-Prison Staff, Bauchi (KII)

R: Yes, I am staying with a person with HIV

I: You will not be afraid

R: One thing is, I am not afraid of him because he is my best friend, I don't use his razor, we don't share clipper, I don't cut his finger then use the razor. But we are cooking together. I will even eat his food, feel free with him, I won't make him feel as if am better than him, everything we will do it normally, but I won't take it likely that one day he will cheat on me, or try to make sure I have it because if I know, I will be observing

People in prison, Jos (FGD)

P: Like what you have just discussed, a person infected with HIV can be associated with, with ease compared to someone with TB. Someone infected with TB will be difficult to be friends with. But a person infected with HIV, you can eat sleep and dine with him. Nobody can get infected through their breath.

People in prison, Bauchi (FGD)

like recently, there was an inmate that was taking drugs for TB, and ehmm another inmate was asking another inmate, what kind of drugs does he come to the clinic to get every day, he now went to other inmate and started telling them that he is having HIV, when it got to our notice, we called him and he was pleading because the punishment that we to melted on him he saw hell, we told him that he could be sentence too for stigmatization, he fell on his knees and pleaded with the authority that the boy did something bad to him, instead of using another way, he wanted to use that way to pay him back

-Prison Staff, Akwa Ibom (FGD)

4.26 Perception on Health Services in Nigerian Prisons

There was a consensus that health services in prisons were inadequate. While some prisons had infirmary and clinics dedicated to attending to health concerns, others did not. People in prisons perceived preventive health measures within the prisons either non-existent or below their expectations. They particularly decried poor hygiene among people in prisons in different states due to inadequate water supply and berated the sanitary conditions of their cells, toilets, and persons saddled with preparing their food. Some prisons staff believed that the medical officers who were expected to ensure proper sanitary conditions of the prisons were negligent of duties.

There was a relatively consistent pattern of adequate health personnel across the prisons, even though some specific cadres like nurses were inadequate. It is also noteworthy that the prison staff accessed healthcare at facilities other than those of the people in prisons, using the National Health Insurance Scheme.

Most prison staff opined that though there were efforts to improve health service provision within the prisons, an increasingly growing population of people in prisons has made the impact unnoticeable.

PERCEPTIONS ABOUT HEALTH SERVICES IN PRISONS

R: Ahhh I have enough staff most especially uhhh medical personnel. Though I'm still looking for more compare the population of nurses because I have only 3 nurses, uhh one pharmacy uhhh [Clanging sound in the background] uhh one publican officer. so you see there is need for at least 2 or 3 publican officers compare to the no of health to the cell I'm having in the prison.

-Prison Staff, Bauchi

R: Actually, Nigerian prison service, they're trying. But because of the explosion in population, it looks as if they are not doing much, especially a place like Port Harcourt prison that's locking on more than 4,000 people in prisons. No matter the inputs, it looks as if you are not doing much, but otherwise they are trying.

- Prison Staff, Rivers

We are about 16 medical staff in the clinic. So, the hospital is running 24 hours. Anytime you come there's a staff in the hospital. We have 24 hours shift. The hospital is working for 24 hours no time you come without any staff.

-Prison Staff, Bauchi

Ah you see... you see a toilet, just small toilet like this... more than... thirty something people is using it... Is too bad. Just small toilet like this... more than thirty-two people, fourteen is using it... One toilet... And... you the prisoners you are the one to use your to be using your money and buying... Klin (detergent)... to be washing the toilet... Izal... And even... at times... we wash the cells... You people are the ones to gather the money... to buy OMO... and... wash the cell because of all this... bedbug and the rest... One quarter that is biting people... inside the cells.... So... without keeping the cells clean... and the toilet clean... toilet that people more than thirty people is using it... and now is a dry season... Many cells now if they enter fi... five o'clock they use to share water two two cups three three cups... You will drink inside that cup... you will go and do toilet inside that cup,... you will cook... inside that... three cups... So you see and they call eh... this place a =Maximum... Prison=,...

-Person in prison, Jos

P1: and eh another thing, if in the process of cooking all the food they are serving us, if went there and stand, see the way they are cooking it, am telling you even dem bring the food, you will not eat it. Because the boys that, are cooking the food, you will see person sweating, he will comot the sweat, the sweat will be entering inside the food. All his ampit dirty, all this thing entering inside the food, turn it together, join together if you are eating food sometimes you will jam nail... Sometimes you are eating, you will jam hair...

- ***Person in prison, Bauchi***

R: Really, the sanitation of the place, the sanitation is left in the hands of the general duty staff, because truly speaking because the medical staff, we have the public officers who are supposed to be in-charge of the sanitation, but honestly to be sincere they are not taking part, there is just to give directives and stay in the office which is not supposed to be like that, they are supposed to go right inside the inmate cells to make sure that all those places are well swept and clean, sanitary conditions as well..

-Prison Staff, Jos

4.27 Access to Health Services for Women and Children in Prisons

Health services within the prisons across the country was limited to those obtainable at their clinics. Although some prisons have hospitals/clinics with medical team who offered ANC services and safe delivery for pregnant women, majority of pregnant people in prisons from other prisons accessed these services through referral to nearby private or government hospitals. Female prison staff escorted the people in prisons to these hospitals, most of which provided these services free of charge. In addition to this, mothers had access to immunization for their children outside the prisons and ambulatory services in case of emergencies. Women were provided sanitary pads monthly, some of which were provided by the prison service and supplemented by donations from Non-Governmental Organisations. Breastfeeding mothers had special considerations for feeding, supply of sanitary materials, replacement milk for their babies. Children below 18 months could stay in the prisons until they are weaned from their mothers.

ACCESS TO HEALTH SERVICES FOR WOMEN AND CHILDREN IN PRISONS

R: The arrangement is ehmm they take care of them here, they register them in the hospital outside the prison where they can be taking antenatal care and they will be booked and when every they have a date, they will attend their clinic and whenever they are putting to birth, anytime the sign comes, they will be sent to hospitals

-Prison Staff, Akwa Ibom (FGD)

R: Yes, the!! pregnancy women they also have special treatment. As you can see we have our hospital here which we have a medical doctor, here, we have nurses, I can refer you to recent ehhh issue that happened. We have pregnant women in this our prisons if I'm not mistaken we have like 3 to 4. And also, we have another one that she delivered here in this prison. She underwent her ANC, she used to go there escorted by our female prison officer

-Prison Staff, Bauchi (KII)

I: Okay ma. In terms of pregnant women, do they have antenatal services within or outside the prison?

P: Both; because we have a resident doctor, if they have any complaint, we refer them to our own resident doctor. And when the doctor cannot perform more than he could, we refer them out to Federal Medical Centres.

-Prison Staff, Owerri (KII)

*P3: Actually, ah, concerning the breastfeeding mothers, they are being take care of. And some sef, just recently, they bought milk for them, that's this "**SMA**" milk for the babies*

P3: they took them for scanning and other things like that. And those that are just given birth there's a provision of

hot water, there's a provision of all these sanitary eh, antiseptic liquid for their bathing and everything like that because they kept in a special place

-People in prison, Kano (FGD)

4.28 Common Illnesses in Nigerian Prisons

People in prisons highlighted malaria as the most common illness in the prisons. They explained that malaria was common because the prison cells were not covered with mosquito nets, or the nets were inadequate. Other common illnesses mentioned include typhoid, scabies, skin rashes, conjunctivitis, cough, diarrhea, tuberculosis, sexually transmitted infections including HIV/AIDS. Respiratory diseases and asthma were reported to be uncommon. The frequency of occurrence of these illnesses varied significantly across the prisons. While some occurred weekly, others occurred monthly but the role of weather, poor sanitary conditions and overcrowding of the prison in facilitating the spread of these diseases was underscored. Some prison staff were of the opinion that prevalence of HIV was occasioned by the stubbornness of people in prisons who engaged in risky sex without adequate protection. Some of the people in prisons could only identify the symptoms they manifested without necessarily knowing the diagnosis of their illnesses.

COMMON ILLNESSES IN NIGERIAN PRISONS

R: The common illness in Port Harcourt prisons specifically, we have malaria, we have scabies, so many forms of skin infection. We have tuberculosis and HIV-AIDS

-Prison Staff, Rivers (KII)

yeah, my opinion is that we are having so much bacterial infections. So, if you went inside the cells, you will see some of them, as in, their private part, they are having something like irritations. Some of them are having boils and some of them if you look at their bodies you will see "black black" spots, it is infections. Mainly in this prison the main thing is infections, it is too much

-People in prison, Anambra (FGD)

I: So, like how often do people come down with this illness?

R: Sometimes weeks, sometimes months

- People in prison, Jos (FGD)

R: Malaria, typhoid is common, even in the Nigerian society it is common because of the nature of the water, mosquito net cannot go round, you will see some of the window are not covered, mosquitoes and malaria, sometimes

you discover that HIV is also prevailing, because most of this people discovered that they are stubborn, even when you are telling them to use preventive measures they will not accept that, I discovered that rate of HIV is also prevailing

-Prison Staff, Jos (KII)

R: We normally have STI but normally they use to come from outside. They came with their problem into the prison. Even yesterday the officer in charge gave me 3000, we went and buy gentamicin injection, procaine penicillin of which we don't have in the prison. We are starting the treat of most people

-Prison Staff, Bauchi (KII)

P: Scabies is number one… scabies is common here. Malaria is also common; they're always complaining of malaria. Tuberculosis; we have patients that are suffering from tuberculosis here. Almost every month or quarterly, we must surely get a patient having tuberculosis.

-Prison Staff, Owerri

R: like the time we had this chickenpox, it was those they brought from the state CID that many of them have stayed there for over three weeks that one of them just came in and because of the congestion, the thing spread like wildfire, we just tried to contain. But the skin infection is as the problem of congestion

-Prison Staff, Akwa-Ibom (FGD)

4.29 Common Ways People in Prisons Accessed Medical Care

Prison staff and people in prisons identified five common ways of accessing medical care for people in prisons namely; family and friends, prison clinics/medical facilities, referrals to facilities outside the prison, Non-Governmental Organisations and religious bodies. The first point of care for many sick people in prisons was the prisons clinic. Most times, a mix of two or more ways was employed due to constraints of funds, or levels of authority as every treatment needed the approval of the prison service. However, the medical facilities operated by the prison service were limited in terms of services as well as drug and commodity supply. Hence, treatment of ill people in prisons or referral to other hospitals usually involved the support of family and friends. It was a common practice for people in prisons to see medical personnel of the prisons service, obtain prescription and hand to their friends and family to procure these medications. Sick people in prisons, particularly those diagnosed with HIV and TB received monthly supply of drugs and were attended to mostly by doctors from NGOs during their routine visit. Self-medication or self-care was highly discouraged in most prisons.

COMMON WAYS PEOPLE IN PRISONS ACCESSED MEDICAL CARE

R: They will ask you if you have money or your relatives have money that you should call them let them take you outside for treatment, but if you don't have, that is how you will suffer

-People in prison, Jos (FGD)

P: Honestly, you can't get any treatment here unless your relatives intervene. They won't give you any drugs until you bring one of your relatives and they will now refer you to a bigger hospital where your relatives will be billed for your medication.

-Prison Inmate, Bauchi (FGD)

R: Yes, I can say the common illness in the prison, like recently, we had issue with the eye problem that its normally called Apolo (conjunctivitis). In fact, it becomes a serious problem that one came in with that problem and before you know, it went around. Almost 60 to 70 of the people in prisons were infected. But our staff from the medical side, they didn't relent. They put on their feet to make sure that they work on it and by the grace of God it was tackled, yes. That's one of the major one that I know, you know, we faced it.

-Prison Staff, Bauchi (KII)

R: So, I have few of them with HIV, emmm, you know, HIV is a challenge, but they are very few and they are taking their medical treatment monthly or weekly. We make sure we get these drugs, make sure we monitor them to take that drugs, so they are not risk factor anymore

-Prison Staff, Anambra (KII)

R: Yes, they only come……. most at times they don't come to treat disease. But when you are diagnosed with HIV we have to refer them outside, to faith like churches, I told you that COCIN came early this year, people from other places, Plateau medical association, they use to come and treat people, they even do operation in this their clinic here for some of the people in prisons

-Prison Staff, Jos (KII)

R: The clinic here, the TB too, if you have it they normally bring the drug free for the HIV and the TB, the hepatitis they will take you out and take the test and get you the drugs or write you a prescription and place you on steady drugs

-Prison Inmate, Jos (FGD)

R: you know we have hospitals. As far as anything happens, any, even if at this, its headache. We don't allow prisoners to be, to medicate themselves. Small headache, there is "in-charge" of the cells, he'll take that person to the hospital

-Prison Staff, Kano (FGD)

R: the case that are beyond us that they need admission in the hospital, they will be admitted, and they will leave a security, when we finish, we bring them back

-Prison Staff, Akwa Ibom (FGD)

R: The Caritas Catholic Organization, they're handling the HIV patients. They're supplying their drugs, the kits and food supplements.

-Prison Staff, Owerri (KII)

4.30 People in Prisons' Satisfaction with Medical Services Provided

People in prisons expressed different views on their satisfaction with medical services provided. While some people in prisons expressed satisfaction with medical services provided, majority expressed dissatisfaction. However, most prison staff interviewed rated the medical services provided to people in prisons as excellent and satisfactory. People in prisons who expressed satisfaction attributed this to availability of drugs and medical personnel. People in prisons who were dissatisfied attributed this to several reasons. Some were dissatisfied because they perceived the drugs provided by medical personnel were not the right ones to treat their illness, expired and of low quality. Other reasons provided for their dissatisfaction include insufficient supply of drugs, the burden of referrals, maltreatment and disrespect by health personnel, and false accusation of people in prisons faking illnesses.

PEOPLE IN PRISONS' SATISFACTION WITH MEDICAL SERVICES PROVIDED

R: In my own opinion, everything is okay, they are taking good care of us, they are giving us drugs, when even I am sick I go and they give me drugs, if I need service, they give me service. Am okay with it

-People in prison, Anambra (FGD)

R: After the treatment we use to get testament from them, they've gotten their selves, yes. They've gotten themselves, they are ok. They will tell you that the treatment they get from us is quite satisfactory, because we have enough drugs that we do provide for the people in prisons

-Prison Staff, Bauchi (KII)

R: when we go for days it's always a difficult issue sometimes they give us paracetamol, knowing too well that paracetamol has nothing to do with it, paracetamol is what we always get.

-People in prison, Akwa-Ibom (FGD)

P: Some will give you the right medication, but some will not. And before he even treats, they shout at you and he

will not attend to you, he will just take his leave. Honestly, they give us expired drugs and when we take it, it won't work. And when we took ill, the prison head will now refer us to another hospital outside in case of the absence of drugs or we send for our relatives for support. We feel is not right for them to shout at us. They even go to the extend accusing us of false illness. why will you go to the hospital in the first if you are not ill? Some treat us well some don't. But not all

-People in prison, Bauchi (FGD)

At least, if you came here to report against yourself that you don't feel well, they will give you the medicine that you didn't request for; not to give you another medicine! Maybe I came here to say 'my headache' – they won't give me the drug for headache, they will give me drug for stomach! It's so bad! That's my complaint – I don't have anything to say, please.

4.31 Provision of Health Information in Nigerian Prisons

The major source of relaying health information to prison staff and people in prisons was through sensitization provided by the Public Health Unit of the Prison Service, Ministries of health, Non-Governmental Organisations and Religious Organisations. The use of Information, Educational and Communication materials (IEC) was reportedly common in some prison hospitals, particularly the ones with counselling unit. Prison staff held the opinion that the use of IEC materials was effective as people in prisons could connect better with them. In some prisons, Health Awareness Groups/Committees, comprising of health personnel and people in prisons were constituted to share health information in the cells. Health Information shared include that of personal hygiene, sanitation, Malaria, HIV and Hepatitis prevention. Some prisons have a day dedicated to lectures and awareness weekly while others shared health information as often as opportunity presented. Most organisations, except Corp Members who visited prisons weekly as part of their Community Development Service, maintained no specific regular pattern of health sensitization to the people in prisons. A few NGOs conducted sensitizations quarterly. Other forms of information shared in the prisons include religious and sports information, security and motivation for those who were traumatized.

R: I have mentioned the screen concerning the HIV, for those that have cough we run the test. Then the sensitization is the ehmm the public health unit do give health education both to the people in prison and the staff.

-Prison Staff, Akwa Ibom (FGD)

R: Yes, there are NGOs that use to come and enlighten our prisoners on diseases, communicable diseases but never the lest any NGO that can, are of help. You know we are many, we cannot just circulate everything

-Prison Staff, Kano (FGD)

R: So, any person that is being prone to be HIV positive, we sat him down, we counsel him and initiated the treatment. And there is counseling unit in the prison hospital.

R: We have these posters from the Federal Ministry of Health from which will connect faster, and which is been placed everywhere even at the gate you can see posters about HIV and this thing

R: Look at these they are all posters. Go outside! You see about Lasa fever, about HIV, about hepatitis all the posters are there been placed for them to read. And there is one in Arabic, there is one in Hausa and there is one in English. This one is in English for those who cannot read in Arabic then there is one in Hausa and there is one in English

-Prison Staff, Bauchi (KII)

R: We have health awareness groups, functional here in this prison. Comprising of nurses, comprises of health officers among the staff, among the people in prisons. So, they go for sensitization from one state to the other.

-Prison Staff, Rivers (KII)

R: We are used to have people from outside like NGOs and Nigeria Medical Association some to sensitize them and then conduct HIV test, hepatitis test and free, and sometimes give them medication

-Prison Staff, Jos (KII)

R: There are other people that have come for sports, for education for whatever you have, everything generally

-Prison Staff, Rivers (KII)

R: They normally come and make their own issue concerning education, concerning how you will talk to people in prisons especially those that they traumatized. So, they try to educate the staff and even the people in prisons, how they will get themselves revive themselves from the experienced they had.

-Prison Staff, Bauchi (KII)

4.32 Treatment Services for HIV, Hepatitis B & C and Tuberculosis in Prisons

Treatment of HIV infection across the prisons was through provision of antiretroviral drugs supplied by State Ministries of Health, Teaching Hospitals, Non-Governmental Organisations, UN agencies and General Hospitals. The usual practice was to obtain supplies from these sources and distribute to infected persons through the various prisons' clinics. At other times, HIV-infected persons were linked and accompanied by prison staff to general hospitals, where they received their drugs. Some prison clinics provided screening services for HIV but had to refer to tertiary hospitals for CD4 count before commencing daily treatment locally within the prison facility. The usual approach for treating tuberculosis was to isolate and quarantine infected persons in separate cells, administer drugs to them until they were fully recovered. Some prison clinics are TB centres providing services to both the prison and general population. Tuberculosis drugs were majorly supplied from the prison's headquarters to the clinics. Cases of pregnant women in prisons were uncommon and prevention of mother-to-child transmission of HIV was rarely available.

TREATMENT SERVICES FOR HIV, HEPATITIS B & C AND TUBERCULOSIS IN NIGERIAN PRISONS

R: As per TB case, this prison, the clinic, our clinic here is a TB centre. Some of our staff have attended different courses on TB; on tuberculosis. So even outsiders do come here to collect drugs. We have, we get supply from headquarters, Abuja and also from the….. TB emm monitoring bodies. I don't even know their name, but they do bring some drugs here and they make, they make this place to be a centre. Not only, not for the prisoners but even from outside. They do come here to collect drugs after they confirm as TB. But for…… HIV, how we, how they get their drugs is: after being confirmed positive, we receive drugs free from Aminu Kano Teaching Hospital. They are the one that are supplying us with drugs for HIV patients.

-Prison Staff, Kano (FGD)

R: We have ART. What I mean baa, once somebody is getting down, he has a complaint, or we suspected that this person has symptoms of HIV. We have our laboratory here. We went for the first test when we confirm that test of this thing, then we go for CD4 outside. We don't do CD4 counts here, it is outside. When he's been confirmed then we commence treatment. When their drugs are ready, we keep them for them here, every morning we give them. Depending on how the prescription is been given

-Prison staff, Bauchi (FGD)

R: When we have TB case, we have a separate cell for them i.e. is isolation cell. Their food, their dishes is been used by individual person. They are attached to their separate uhh cup, separate plate and this thing. So, once somebody is being diagnosed as TB patient, we carry him to isolation cell, then we commence treatment. Then we carry the drug on daily basis for him to drink. He will not move out, until after the situation of the treatment.

-Prison Staff, Bauchi (KII)

P: We have retroviral drugs for HIV/AIDS patients. We have TB drugs for the TB patients. The treatment is done in the prison with the help of the NGOs that supplies drugs for us to treat them.

*-**Prison Staff, Owerri (KII)***

5.0 DISCUSSIONS

This is the first national assessment of HIV, TB and status of health services among people in prisons in Nigeria. This study covered all geopolitical zones and thus, provides a holistic overview of sexual practices, drug use including injecting practices, and HIV prevalence among people in prisons in Nigeria.

5.1 Drug Use

This study demonstrates the use of drugs among people in prisons in Nigeria and showed that majority of the drugs used are of the non-injecting type. The low prevalence of injecting drug use among people in prisons may be explained by the low use of drugs prior to their being incarcerated as less than 5% of the respondents reported any history of injecting use. The common types of drugs used in prison include cannabis and opiates (codeine, tramadol) and use was primarily among male prisoners. This finding is corroborated by the qualitative inquiries in which cannabis and opiates were the most common drugs used in prisons. This distribution of higher drug use among males was also observed prior to incarceration. Among those who reported ever injecting drugs, the median age of injecting drug use debut was 21 years, and this suggests early exposure in possibly social settings such as tertiary institutions. A key finding in this study was that, though of small proportions, some people in prisons were initiated into injecting drug while in prison and this suggests that networks are being established to recruit and expand injecting drug use within prisons. Furthermore, about two-fifths of those who inject in prisons reported a history of sharing of needles. Given the high rate of infectivity for both HIV and hepatitis via direct inoculation through contaminated needles, evidence-based strategies are required to eliminate needle sharing while also controlling injecting drug use within prisons. Furthermore, the risk of localized epidemic remains high as absence of any intervention suggests that this practice will increase overtime as needles and syringes are not allowed within the prison settings.

5.2 Sexual Risk Behaviour

Sexual intercourse remains a dominant route of transmission in Nigeria. This study documented high rates of sexual activities in prisons. Over half of the respondents had witnessed sexual violence and over 70% reported that consensual sex occurs between people in prisons in prison. Furthermore, about two-thirds of respondents report the occurrence of transactional sex in prison settings. Findings from the qualitative inquiry provide insight into the drivers of sex work in prisons and this includes naivety, personal greed, insufficient supply of toiletries and poverty. Of note is that sexual encounters in prison was higher among males (76%) compared to females (28%). The risk of HIV transmission

is higher per anal sex than vaginal sex and calls to attention the need for culturally appropriate prevention interventions in prisons. Furthermore, health information on condoms and condoms compatible lubricants within the prison environment was less than 30% and were essentially absent as a health service. This implies that sexual encounters within the prison settings are largely unprotected, thus creating an enabling environment for propagation of HIV and hepatitis within this setting. Evidence based interventions that are applicable within the law are urgently required to avert an epidemic within the prison population. Lastly, as prisons are temporary settings and are a function of the duration of the sentence, there exists a viable bridge between prisons and the general population.

5.3 HIV Prevalence

Overall, HIV prevalence was 2.8% and this was higher among females (6.9%) than males (2.7%). The HIV prevalence was double that of the general population (2.8%)[2] and also follows the gender distribution as that of the general population in which females were higher than males (UNAIDS 2017). HIV prevalence was also higher among older people in prisons compared to younger ones and may reflect prolonged exposure to sexual activities both within the prison environment and outside the prison environment. Similarly, as in the general population, HIV prevalence was higher among widows/divorced compared to singles and married. By geopolitical zone, HIV prevalence was lowest in the north east zone (1%) and highest in the north central zone (7%). Few studies have assessed HIV prevalence among people in prisons in Nigeria and HIV sero-positivity has been reported to range between from 3% to 19%.[22-24] However, most of these studies had small sample sizes and used convenience sampling. The higher HIV prevalence among female people in prisons combined with the lower rate of sexual violence and transactional sex within the prisons suggests that the acquisition may have occurred prior to their being incarcerated compared to males with higher rates of sexual violence and transactional sex. Further research is recommended to identify correlates of HIV in prisons.

5.4 Tuberculosis

The symptomatic screening of TB using clinical signs and symptoms has been shown to be effective in identifying TB. Over two-fifths of people in prisons were positive following the TB screen and this calls for capacity and institutionalization of this practice with the prison health system. The distribution was similar for both males and females and suggests that the risk factors are more structural than biological. It was highest in the South South zone and lowest in the north east and this calls for critical assessment to factors that may be contributory to this uneven distribution. A key factor in the

transmission of TB include poor ventilation and overcrowding, however this study did not assess this, and it is thus recommended that future studies include indicators to capture the status of ventilation and overcrowding.

5.5 Knowledge of HIV and Hepatitis

Comprehensive knowledge of HIV has been promoted as a behavioral prevention of HIV. Majority of the respondents correctly identified known routes of HIV transmission; i.e., unprotected sex and sharing of needles and injecting paraphernalia. Knowledge of these known routes was high for both males and females and suggests adequate exposure to prevention intervention. However, rejection of common misconceptions was low, though it was lower among males than females. Furthermore, access to information on HIV was higher among who had stayed longer in prison compared to those with shorter duration. This implies that perhaps they had participated in prevention interventions within the prisons and calls for increased focus on newly incarcerated persons.

For hepatitis, knowledge of known routes of transmission was generally low with less than two-thirds of respondents correctly identifying routes of transmission and also rejecting known misconceptions. Given the high rate of sexual encounters in prisons and the absence of condoms and condom compatible lubricants, there is a possibility of increased transmission of hepatitis within this group while in incarceration and by extension to the general population upon their release from prison. Prevention interventions should thus be expanded to include information on hepatitis for prisoners.

5.6 Stigma

Stigma remains one of the most persistent drivers of HIV and a consistent barrier to uptake of HIV prevention services. Stigma as defined by Erving Goffman (2000) is the presence of an undesirable or discrediting attribute that an individual possesses which may reduce the status of an individual from a societal perspective.[25] Addressing stigma is complex and the current concept of intersectional stigma aims to address different facets of stigma; internalized (personal endorsement of prejudice and stereotypes), enacted (experiences of discrimination from others), and anticipated (expectations of discrimination from others in the future, even if one has not experienced discrimination in the past). AIDS stigma by association with someone who is HIV positive is classified as secondary stigma or "courtesy stigma" which can affect family and friends of PLWHAs, as well as health care workers. For the purpose of this study, we assessed respondents perceived stigma to HIV positive people in prisons.[26,27] Overall, stigma was observed to be high among people in prisons towards PLWH, with less than two-thirds of respondents willing to eat or share a cell with a PLWH. In addition, stigma was

higher among males than females and given that majority of people in prisons are males, efforts must be made to address stigma in prison settings. Further research is required to understand the role of intersectional section and HIV prevention outcomes. Also, further research is required to test interventions that may reduce intersectional stigma and to advance the measurement and understanding of the mechanisms and pathways between intersectional stigma and HIV prevention outcomes, particularly among socially disadvantaged populations in highly stigmatized (and sometimes criminalized) environments.

5.7 HIV Risk Perception

Risk perception to various diseases showed that the perception of contracting tuberculosis was highest amongst all infectious diseases assessed. The risk to contracting STIs was less than 60% despite high rates of reported sexual encounters in the prisons between people in prisons and absence of condoms and condom compatible lubricants. This may be attributable to the non-fatalness of STIs compared to HIV and TB. Over 70% of respondents felt at high risk to contracting TB and this may be due to awareness of the disease as well as awareness of risk factors to contracting the disease in a setting of poor ventilation and overcrowding. This is corroborated by the qualitative inquiries where sharing of cups and overcrowding were cited as reasons why they felt at risk to TB. Further research within prisons must include assessment of the living conditions of people in prisons to determine the correlation between living conditions and TB risk perception as well as to guide improvement in quality of living conditions.

Less than a two-third of respondents felt at high risk to HIV and hepatitis. A number of social and health psychology theories including the psychometric paradigm,[28-34] accord risk perception a central role in determining behavior. Sheeran et al. (2013) conducted a meta-analysis of risk appraisal and showed that interventions that were successful in heightening risk appraisals led to changes in subsequent intentions and behaviour.[35] de Hoog et al. (2007) showed that heightening severity of a threat, regardless of the medium of communication was associated with a positive and significant effect on intention and behaviour change.[36] Behaviour change interventions for HIV programs should be designed to heighten the threat of HIV. Behaviour change interventions for HIV and hepatitis programs should be designed to heighten the threat of diseases so as to obtain the maximum results in behaviour change.

5.8 Exposure to Health Interventions

Exposure to health interventions is a viable medium for prevention interventions in prisons. The most common information disseminated to people in prisons was information on HIV and TB. However, there seems to be some gaps in the quality of information offered to people in prisons. While over 50% of people in prisons had received information on HIV, less than a third had received any information on condoms and condom compatibles lubricants. In addition, only about a third had received any information on ARVs and on clean needles and syringes. This suggests that the focus of these interventions have largely been on HIV knowledge but not on comprehensive care and treatment. The implication of these is that people in prisons may not feel comfortable enough to want to undergo an HIV test given that there is limited information on the availability of lifelong care and treatment. In addition, while about a third had received any information on drugs, only a quarter had received any information on clean needles and syringe. This suggests that people in prisons have double exposure to HIV transmission via unprotected sex and sharing of injection paraphernalia. Given the close-knit setting of prisons, there thus exist a high risk of HIV and hepatitis transmission between people in prisons either sexually and/or by sharing of injection of paraphernalia. Furthermore, future studies should ascertain the proportion of people in prisons who have ever tested so as to estimate the testing gap within people in prisons.

5.9 Availability and Satisfaction with Quality of Services

The assessment of healthcare services showed that less than two-thirds of the respondents reported HIV testing and hepatitis services were available in their facilities. In addition, less than fifth confirmed the availability of sexual and reproductive health facilities and any harm reduction services. The absence of these services that mitigate the propagation of HIV highlights the gaps in HIV prevention interventions among prisons in Nigeria. However, the prison health system bridges this gap by linking with some general hospitals in the locality. Furthermore, less than two-fifths were aware of the availability of ARVs for the treatment of HIV and this suggests that people living with HIV/AIDS (PLWHA) may be receiving sub-optimal services following their incarceration. Within the purview of the UNAIDS 90:90:90 concept it is imperative that prisons are included in the HIV care and treatment programs in Nigeria and that providers capacity are built to provide comprehensive care and treatment including viral load monitoring for HIV positive clients in prisons.

Lastly, only about two-fifths of respondents were satisfied with the quality of services received at the prison health facility. Satisfaction was lowest in the south-south zone and highest in the north-east

zone. The low level of satisfaction with the prison healthcare facility may explain why about a fifth of respondents obtain treatment of their ailment from family and friends. Reasons for low level of satisfaction were obtained from the qualitative inquiries and include poor hygiene and sanitary conditions, inadequate water supply and attitude of the staff. In addition, the expanding population of the prison was also cited as a cause of poor health services as demands far outstrips supply.

6.0 Conclusion

This is the largest and first national assessment of HIV, hepatitis and TB among people in prisons in Nigeria and some important findings have been observed. First, HIV prevalence among people in prison was higher than that of the general population, but however follows the gender distribution of HIV among the general population. Second, drug use exists in prisons and for some people in prisons, injecting drug use was initiated in prisons. Thirdly, two key risk factors for HIV and hepatitis were observed among people in prisons in this study; unprotected sex and sharing of needles and injection equipment. Fourth, HIV and hepatitis risk perception were low despite the presence of key drivers of HIV and lastly, satisfaction with the quality of health services provided to people in prisons is low and must be improved. This calls for combination prevention interventions among people in prisons in Nigeria as well as dedicated efforts to improve the availability of sexual and reproductive health and harm reduction services for people in prisons in Nigeria.

HIV testing services should be made available in all prisons and each prison should be linked to a comprehensive treatment facility in the state to ensure that each all PLWHA have immediate access to lifelong ARVs while in prison and also monitoring of viral load. This will ensure that the prison HIV program is integrated into the national HIV program including viral load network and thus contribute to Nigeria's goals of attaining the UNAIDS 90:90:90.

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