



Government Expenditure on Human Resources for **HIV** in Nigeria

An Assessment of Government Expenditure on Human
Resources for HIV in Nigeria



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Table of Content

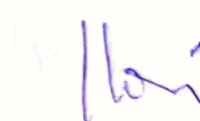
Foreword	3
Acknowledgment	4
List of Acronyms	5
Executive Summary	6
Introduction	7
Human Resource for Health in Nigeria	8
Purpose of the Assessment	9
Methodology	11
Data Analysis	13
Data Analysis Process	14
Limitations of the Study	15
Results	16
HIV Service Delivery	17
Human Resources for HIV in States	20
Other Findings	26
Discussions, Conclusions & Recommendations	27
Conclusion	28
Recommendations	29
Appendix A	30
Appendix B	34
Appendix C	37
References	38
List of Contributors	39

Foreword

Government expenditure is an important component of the HIV and AIDS funding landscape. Findings from NASA point to the fact that most HIV service provisions are offered by public or government entities. However, information on government expenditure on human resource for HIV service delivery is scanty as evident in all the NASA studies despite the much the government is putting into human resource for HIV & AIDS. This document presents findings on estimated government expenditure on human resources for HIV & AIDS obtained through a survey of officials of the States Ministries of Health (SMoH) and medical directors in charge of health facilities in the surveyed states.

The document provides a robust definition of human resources for health, followed by a comprehensive overview of the human resources for HIV & AIDS, and considers the reasons for the shortages in the supply of health care workers in Nigeria. The study also looked into the profile of the surveyed health facilities in terms of types and legal status, the pattern of clinical consultations, availability, and skill mix of health manpower in the surveyed health facilities. Information on the actual number of doctors, nurses, laboratory scientists, pharmacists and others in the health sector and estimates of government expenditure on human resources for HIV & AIDS is contained in this report. The Full Time Equivalent of health care providers for HIV&AIDS service delivery was also determined to facilitate the scientific estimation of government expenditure for human resources for HIV service delivery in Nigeria.

This report is a valuable resource on government investment in HIV and should be used by all stakeholders to inform programmatic or policy changes in Nigeria.



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Acknowledgement

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Furthermore, we wish to extend our sincere appreciation to the research team including the consultant, data analysts, research assistants and data entry personnel amongst others. Most of all, we thank the study participants in the States for their understanding and cooperation during this exercise.



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List of Acronyms

AIDS	Acquired immune deficiency syndrome
ART	Antiretroviral therapy
FMOH	Federal Ministry of Health
EID	Early Infant Diagnosis
FCT	Federal Capital Territory
FTE	Full Time Equivalent
HCW	Health care worker
HIV	Human Immune-deficiency Virus
HR	Human resources
HRH	Human Resources for Health
HTS	HIV Testing Services
KII	Key Informant Interview
NACA	National Agency for the Control of AIDS
NASA	National AIDS spending assessment
NGO	Non-governmental organization
PLWHA	People living with HIV/AIDS
USD	United States Dollar

Executive Summary

The Human Resources for Health are all people engaged in work actions whose primary intent is to improve health not limited to technical skills (WHO, 2002). To estimate the government expenditure on human resources for HIV services in Nigeria, the National Agency for the Control of AIDS (NACA) conducted a survey in health facilities and state ministries of health in 12 States. The study commenced with the training of field workers in Abuja, Federal Capital Territory (FCT). The field data collection was conducted in April 2024. This entailed interviewing senior managers from fifty-nine health facilities across the twelve states and senior managers in State Ministries of Health.

Literature review shows the registered health care professionals in Nigeria to include 86,548 medical doctors, 367,468 nurses and midwives. Medical laboratory scientists and pharmacists stand at 36,833, and 18,277 respectively (FMOH, 2022) amongst others, which fall below the World Health Organisation standards of 2.5 medical staff (physicians, nurses and midwives) per 1,000 population.

The analysis used Excel and Power Query to ensure the dataset's accuracy and consistency. Subsequently, R was utilized for advanced analytics, visualization, and interpretation of key findings. The health facilities surveyed comprised of about 75% public, private 19% and private non-profit 7%. The HIV clinics ranged from 0 to five clinics per week in most of the health facilities, while health workers had 43.6% Full Time equivalents (FTE). A total of 8,995 health workforce were working in the surveyed health facilities as at the time of conducting this survey comprising nurses and midwives 26.3%, medical doctors 14.2% and pharmacists 3.2% amongst others.

The study showed that government spend on average in each of the surveyed states N1,643,681,823, N1,872,130,465 and N2,010,487,119 for 2019, 2020 and 2021 respectively, even though there are variations across states. This study showed that estimated national expenditure on human resource for HIV service delivery stands at N60,816,227,453, N69,268,827,217 and N74,388,023,405 for 2019, 2020 and 2021. The USD equivalents are \$198,331,031, \$194,068,381 and \$186,268,087 for 2019, 2020 and 2021 respectively in 2019, 2020, and 2021 respectively.

Introduction

Background

The HIV & AIDS epidemic is a global public health issue with 39 million people living with the virus globally and 25.6 million in sub-Saharan Africa (UNAIDS, 2023). Nigeria has a generalised HIV epidemic and ranks fourth on the global burden of HIV with approximately 1.9 million individuals living with the virus (UNAIDS, 2023). The overall HIV prevalence within the general population aged 15–49 stands at 1.3% (NAIIS, 2018). The prevalence varied considerably among key population groups with brothel-based female sex workers reporting a prevalence of 15% in 2020 while men who have sex with men have seen an upward trajectory from 13.50% in 2007 to 25% in 2020 and people who inject drugs report prevalence of 5.6% in 2007 to 3.4% in 2014 only to rise to 10.9% in 2020 (IBBSS, 2020).

HIV&AIDS financing information provides a perspective on intervention costs, their beneficiaries and stakeholders involved in the activities. This information is useful for planning, resources allocation and readiness towards sustainability. Financing data have been sourced from the National AIDS Spending Assessment (NASA), National Health Accounts (NHA), expenditure reports of funding institutions and Assessment of Government Expenditure on Human Resources for HIV study report to account for a key component of government contribution to HIV&AIDS funding.

The country has conducted six rounds of NASA which is a comprehensive and systematic methodology to track the flow of resources for the AIDS response from the source (international donors, domestic public and private sectors) through the different agents to the beneficiaries for the period 2007 to 2021.

The assessment showed that total expenditure rose from USD299,246,290 in 2007, peaked at USD723,917,352 in 2013 and stands at USD437,756,619 in 2021. About 80% of HIV funding comes from international donors.

Government contributions rose from 11% in 2007 to 23% in 2013 and declined to 17% in 2018 and 3.9% in 2021. By programme areas, most of the resources went into care and treatment at 45.1% in 2007, 49.2% in 2009, peaked at 61.5% in 2015 and dropped to 44.8% in 2018 and stands at 59.8% in 2021. HIV prevention services was 12.6% of total expenditure in 2007, peaked at 25% in 2014 and 2016 followed by a decline to 12.74% in 2018 and 8.9% in 2021. A significant level of HIV&AIDS services was provided by government entities at 12.5% in 2007, peaked at 90% in 2015 and declined to 61% in 2018 and 32% in 2021. Private non-profit organisations provided 47.9% of HIV&AIDS services in 2007, peaked at 65% in 2009 and reached 38% in 2018 and 49% in 2021.

The health facilities surveyed in the 2011 assessment on government expenditure on human resources were about 60% public, 31% private non-profit and others. 95% of these facilities offered dedicated HIV clinics. The survey reported 33.3% of Full Time Equivalent (FTE) for doctors which means the proportion of time expended on HIV, which is slightly above the 25% reported in literatures. The study used 25% FTE for other health workers and 33.3% for doctors. The workforce in the surveyed facilities were 80% nurses, 12.4% doctors, 4.3% laboratory workers and 3.1% pharmacists. The cost of human resources for HIV services was estimated at N10, 531,258,729 (\$65,820,992) which was part of government contributions (NACA, 2011).

Human Resource for Health in Nigeria

Health has been defined as the “state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO, 1946). Human Resource for Health are all people engaged in work actions whose primary intent is to improve health (WHO, 2022). The human resource for health is not limited to technical skills only but also skills needed to support systems and linkages that facilitate the application of technical skills to ensure patient safety. They are also critical in the attainment of the goal of the universal health coverage and equitable access to essential health services. Health service delivery in Nigeria follows a three-tier level of care: primary, secondary, and tertiary. Correspondingly these levels of care are being managed by two ownerships namely public and private. About 75% of all health workers work in public health facilities while about 25% of them work in private health facilities. Most surgical, dental, mental health and rehabilitation professionals work in secondary and tertiary facilities (FMoH, 2022).

There are disparities in human resources for health across the different levels of health care delivery and between rural and urban areas. In Nigeria, the health workforce is estimated at 400,000 people with responsibility to take care of about 220 million population. The ratio of health workers to population are 4 doctors to 10,000 and 88 nurses to 100,000 (FMoH, 2023). These figures fall below the WHO minimum standard which “estimates that at least 2.5 medical staff (physicians, nurses and midwives) per 1,000 people are needed to provide adequate coverage with primary care interventions” (WHO, 2006). In estimating the potential supply gap of doctors and nurses, a study projected a population increase from 178.5 million in 2014 to 272.5 million in 2030 and estimated doctors, nurses, and midwives required to be 515,668 on average (Oladimeji Adebayo et al). Required doctors is estimated to be 124,394, nurses and midwives 391,274 and the deficit for doctors and nurses was found to be between 30.86-33.45% and 26.09-29.5% respectively.

“

Nigeria needs to improve on the health workforce supply to tackle the heavy disease burden and turn the tide of health indicators in the positive direction

Oladimeji Adebayo et al

Purpose of the Assessment

Rationale

The assessment of Government Expenditure on Human Resources for HIV in Nigeria provides information on costs and expenditure for related services for the period 2019, 2020 and 2021 to align with NASA. The information generated forms part of the comprehensive HIV&AIDS financing assessment through NASA for the corresponding period.

The information on government expenditure on human resources for HIV was not captured in the NASA study as it entailed additional technical and logistical requirements. So, this study supplements the information on the HIV financing landscape in Nigeria provided in the NASA report. The output of this study in combination with the data generated from the NASA exercise provides a holistic financing situation and will be usable for further analysis at the country, regional and global levels.

The information from this survey provides current and adequate information on government spending on human resources for HIV services in Nigeria. This is useful not only in the context of reporting and accountability for expended resources but more importantly for planning and advocacy towards future resource allocation.

Purpose of the Assessment

Goal

The goal of the assessment is to estimate government expenditure on human resource for HIV&AIDS service delivery towards sustainable resource use in programming and coordination.

Objectives

The study objectives are:



01

To ascertain government expenditure on human resources for HIV & AIDS



02

To provide information on human resources for HIV & AIDS

Research Question

Question	Information required for answer
Identify government expenditure on human resources	Categories of healthcare workers offering services to HIV patients and full-time equivalent and remuneration dedicated to HIV care at health facility and state government level

Methodology

Study Design

The study is a cross-sectional survey of 12 states with two states randomly selected from the six geopolitical zones of the country. The states are outlined in Table 1 below.

Sample Size

The study used a multi-staged sampling approach where **five health facilities per state are randomly selected in the 12 States**. These are made up of four public and one private for profit or private nonprofit health facilities. Sampling is at a confidence level and confidence interval of 95% and 5% respectively.

Table 1: List of states surveyed

S/N	State	Geopolitical Zone	Number of Survey Sites
1	Akwa Ibom	South South	5
2	Edo	South South	5
3	Benue	North Central	5
4	Kwara	North Central	5
5	Enugu	South East	5
6	Imo	South East	5
7	Sokoto	North West	5
8	Kano	North West	5
9	Borno	North East	5
10	Bauchi	North East	5
11	Lagos	South West	5
12	Oyo	South West	5

Methodology

Data Collection Tools

The survey instruments were developed to capture both qualitative and quantitative information from senior managers of State Ministries of Health (SMoHs) and the selected healthcare facilities in the state and configured into Kobo Collect platform. The survey instruments used are State Ministry of Health and Healthcare Facility Questionnaires (refer to Appendices A and B).

Study Procedure

Form Design

The survey instrument was designed and implemented within the Kobo Collect platform to capture relevant data pertaining to government expenditures. The form was meticulously crafted to ensure clarity, consistency, and comprehensiveness in data collection.

Training of Data Collectors

The field data collectors were trained on the survey objectives, overview of government expenditure on human resources for HIV and its importance in the National AIDS Spending Assessment (NASA). The participants were taken through demonstrations on how to interface with government officials at the State Ministries of Health and healthcare facilities to obtain the required information. The survey tools were thoroughly discussed with roleplays to ensure the data collectors understood what is expected to be collected. Training covered various aspects including the usage of the KoboCollect application, form design, data entry protocols, and troubleshooting common issues.

Training of Data Collectors

Equipped with smartphones or tablets, trained enumerators were deployed to various geographic locations to conduct the survey. Field officers utilised the Kobo Collect platform to input responses directly into the electronic forms which eliminated the need for paper-

based documentation and minimised errors associated with manual data entry.

Data Collection

The data collectors administered the questionnaires to senior managers at the SMoH headquarters and the selected health facilities. Kobo Collect platform was used for the data collection.

Data Management

The data management processes were conducted to ensure proper processing, security, confidentiality and storage of the collected data. Upon completion of each survey session, enumerators synchronized the collected data with the central server using the Kobo Collect platform. Data transmission was securely encrypted to safeguard confidentiality and integrity during transit. The centralised data management system facilitated real-time monitoring of data collection progress and allowed for seamless aggregation of survey responses.

Data Quality Assurance

Throughout the data collection process, quality assurance measures were implemented to ensure the accuracy and integrity of the collected data. Supervisors conducted checks, reviewed completed forms, and provided feedback to data collectors to address any discrepancies or issues promptly.

Monitoring and Support

Continuous monitoring and technical support were provided throughout the data collection phase to address any challenges or technical issues encountered by the survey team. Regular communication channels were established to facilitate prompt resolution of queries and ensure smooth operation of the data collection process.

Data Analysis

The data analysis plan which is the framework that outlines how the collected data will be organised, analysed and interpreted was developed in line with the objectives of the assessment as outlined below:

Objective	Variable	Study Tool	Study Tool Number	Statistic	Output
To Ascertain the government expenditure on human resources for HIV and AIDS	Salary of category of health workers	State Ministry of Health questionnaire	No 31A-P(ii)	Mean	Average salary
		Federal Ministry of Health questionnaire	No 31A-P(ii)	Mean	Average salary
	Training expenditure	State Ministry of Health questionnaire	No 34		
		Federal Ministry of Health questionnaire			
	Number of human resources working on HIV by category	State Ministry of Health questionnaire	No 31A-P(i)		
		Federal Ministry of Health questionnaire	No 31A-P(i)		
	Percentage of expenditure for HIV	Health facility questionnaire	No 38	Mean	Average proportion of time spent for HIV
		State Ministry of Health questionnaire	No 32		
	Total government expenditure			Product	Total government expenditure

Data Analysis Process

The data analysis phase of the survey involved cleaning, preparing and analysing the raw data collected through Kobo Collect platform. Excel and Power Query were employed for data cleaning and preparation to ensure the dataset's accuracy and consistency. Subsequently, R was utilised for advanced analytics, visualization, and interpretation of key findings.

Data Visualization

- R was used to develop a variety of charts, graphs, tables, and summaries to visually represent key findings and trends in government expenditure.
- Visualizations enhanced interpretability and facilitated communication of insights to stakeholders.

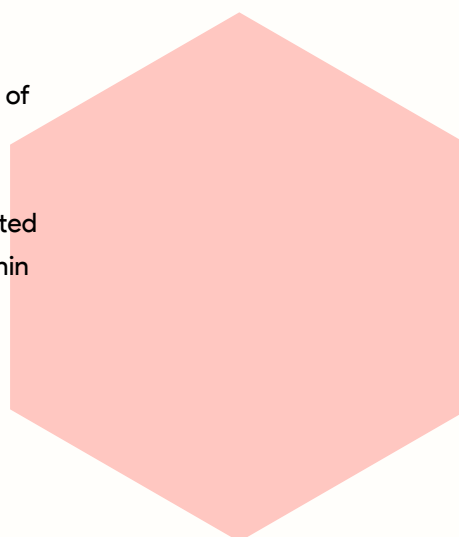
Key Steps in Data Analysis Process

Data Cleaning and Preparation

- Raw data underwent comprehensive cleaning procedures in Excel, including removal of duplicates, handling missing values, and standardizing formats.
- Quality control checks were conducted to ensure data integrity, consistency, and adherence to predefined criteria.
- Data transformation techniques were applied to standardize variables and prepare the dataset for analysis.

Data Analysis Techniques

- Descriptive statistics provided summary measures of central tendency, variability, and distribution.
- Exploratory Data Analysis (EDA) techniques facilitated insights into patterns, trends, and relationships within the expenditure dataset.



Limitations of the Study

Inaccessibility of state government salary scale

It was difficult to obtain the government salary scale that contains information about the salary amounts of different categories of workers. Such a document would have been an authoritative source of information on the remuneration of health workers and would have made the task of obtaining financial data easier for the data collectors.

Incomplete Financial Data

The process of obtaining financial data was cumbersome posing challenges in accessing accurate and comprehensive information. Kwara, Edo, Akwa Ibom, and Lagos states had to be excluded from state-level analysis due to the unavailability of the required data as at the time it was needed. Facility-level data was available for all the study states and were analysed as appropriate.

Insufficient stakeholder Engagement

A robust engagement with the various stakeholders connected to the study would have put them in readiness for the data collection and given them ample time to source the required information from relevant parties. Due to logistics and timing constraints, this was not done adequately which impaired the output from the data collection exercise.



Results

The following presents some of the findings from the survey.

Table 2: Profile of the Surveyed Health Facilities

Characteristic	Sub-Group	No of Facilities	(%)
Type of health Facility	Federal Government	3	5.08%
	State Govt	31	52.54%
	Local Govt	13	22.03%
	Faith-based	4	6.78%
	Private	8	13.56%
Legal Status of Organization	Public	44	74.58%
	Private for profit	11	18.64%
	Private not for profit	4	6.78%
Position of Respondent	Top Management	32	54.24%
	Middle Management	20	33.90%
	Junior Management	5	8.47%
	Junior Staff	2	3.39%
Length of Service	Over one year	56	94.92%
	One year	2	3.39%
	Less than one year	1	1.69%
Total		59	100.00 %

The table above shows that the surveyed health facilities were comprised of 75% public, 18.6% private for profit and 6.8% private not for profit facilities. 54.2% of respondents were Top Management with 95% of respondents having over one year experience in service.

HIV Service Delivery

Table 3: The number PLHIVs in the surveyed health facilities

State	No of PLHIVs on treatment in surveyed health facilities	Total PLHIVs on treatment in the state in 2024	% of PLHIVs on treatment in surveyed health facilities against the total PLHIVs on treatment in the State
Akwa Ibom	11,882	158,773	7.48%
Bauchi	3,185	26,773	11.90%
Benue	18,206	189,043	9.63%
Borno	7,512	20,694	36.30%
Edo	11,554	24,995	46.23%
Enugu	3,325	47,502	7.00%
Imo	14,425	43,599	33.09%
Kano	3,190	35,151	9.08%
Kwara	4,868	12,868	37.83%
Lagos	5,543	116,112	4.77%
Oyo	7,228	28,571	25.30%
Sokoto	6,666	14,881	44.80%
Total	97,584	718,962	13.57%

Table 3 shows that 46.23% and 44.80% of the total number of PLHIVs in Edo and Sokoto respectively were in the five health facilities visited in each of the two states. 13.57% of the total PLHIVs in the 12 states were in the health facilities analysed.

Table 4: Length of consultation time

	0 - 10 min	11 - 20 mins	21 - 30 mins	> 30 mins
n = 49 (%)	10 (20.41%)	18 (36.73%)	6 (26.53%)	8 (16.33%)

Table 4 shows that 18 health facilities (36.73%) reported consultation times of 11 - 20 minutes. Only 20% of facilities report consultation times of 0 - 10 minutes.

Table 5: Total number of health workers in the surveyed health facilities

Staff Category	Akwa Ibom	Bauchi	Benue	Borno	Edo	Enugu	Imo	Kano	Kwara	Lagos	Oyo	Sokoto	Grand Total
Specialist doctors	60 (7.3%)	13 (3.7%)	2 (1.8%)	13 (3.8%)	23 (5.3%)	0 (0.0%)	2 (3.3%)	1 (1.1%)	269 (8.9%)	47 (2.7%)	77 (4.4%)	1 (0.5%)	508 (5.6%)
Medical doctors	98 (11.9%)	13 (3.7%)	10 (8.9%)	34 (9.9%)	23 (5.3%)	5 (9.4%)	7 (11.7%)	7 (7.6%)	337 (11.2%)	142 (8.1%)	93 (5.3%)	4 (2.2%)	773 (8.6%)
Pharmacists	54 (6.5%)	13 (3.7%)	10 (8.9%)	10 (2.9%)	12 (2.7%)	3 (5.7%)	3 (5.0%)	2 (2.2%)	48 (1.6%)	72 (4.1%)	40 (2.3%)	18 (9.7%)	285 (3.2%)
Nurses (including public health nurses)	103 (12.5%)	44 (12.5%)	6 (5.4%)	81 (23.5%)	134 (30.7%)	9 (17.0%)	8 (13.3%)	2 (2.2%)	88 (2.9%)	294 (16.7%)	157 (8.9%)	22 (11.8%)	948 (10.5%)
Nurse midwives	202 (24.5%)	41 (11.6%)	18 (16.1%)	13 (3.8%)	96 (22.0%)	0 (0.0%)	8 (13.3%)	7 (7.6%)	709 (23.6%)	197 (11.2%)	117 (6.6%)	15 (8.1%)	1423 (15.8%)
Laboratory scientists	55 (6.7%)	32 (9.1%)	6 (5.4%)	11 (3.2%)	14 (3.2%)	4 (7.5%)	7 (11.7%)	6 (6.5%)	91 (3.0%)	37 (2.1%)	157 (8.9%)	16 (8.6%)	436 (4.8%)
Nutritionists	2 (0.2%)	11 (3.1%)	0 (0.0%)	1 (0.3%)	2 (0.5%)	0 (0.0%)	0 (0.0%)	4 (4.3%)	12 (0.4%)	10 (0.6%)	77 (4.4%)	1 (0.5%)	120 (1.3%)
Medical record clerks (data officers)	56 (6.8%)	19 (5.4%)	21 (18.8%)	50 (14.5%)	25 (5.7%)	1 (1.9%)	7 (11.7%)	11 (12.0%)	136 (4.5%)	37 (2.1%)	154 (8.7%)	13 (7.0%)	530 (5.9%)
Radiographers	1 (0.1%)	3 (0.9%)	0 (0.0%)	6 (1.7%)	4 (0.9%)	0 (0.0%)	0 (0.0%)	2 (2.2%)	31 (1.0%)	5 (0.3%)	120 (6.8%)	0 (0.0%)	172 (1.9%)
HIV Counsellors	67 (8.1%)	21 (6.0%)	14 (12.5%)	44 (12.8%)	23 (5.3%)	1 (1.9%)	6 (10.0%)	13 (14.1%)	16 (0.5%)	26 (1.5%)	157 (8.9%)	10 (5.4%)	398 (4.4%)
Programme managers	2 (0.2%)	4 (1.1%)	0 (0.0%)	4 (1.2%)	6 (1.4%)	0 (0.0%)	3 (5.0%)	4 (4.3%)	10 (0.3%)	8 (0.5%)	92 (5.2%)	2 (1.1%)	135 (1.5%)
Pharmacy assistants	53 (6.4%)	20 (5.7%)	5 (4.5%)	19 (5.5%)	14 (3.2%)	1 (1.9%)	5 (8.3%)	11 (12.0%)	34 (1.1%)	21 (1.2%)	40 (2.3%)	0 (0.0%)	223 (2.5%)
Laboratory technicians	4 (0.5%)	29 (8.2%)	10 (8.9%)	15 (4.4%)	14 (3.2%)	0 (0.0%)	2 (3.3%)	12 (13.0%)	51 (1.7%)	32 (1.8%)	157 (8.9%)	9 (4.8%)	335 (3.7%)
Administrative officers	43 (5.2%)	17 (4.8%)	1 (0.9%)	12 (3.5%)	19 (4.3%)	0 (0.0%)	0 (0.0%)	9 (9.8%)	54 (1.8%)	53 (3.0%)	157 (8.9%)	16 (8.6%)	381 (4.2%)
Social workers	8 (1.0%)	22 (6.3%)	1 (0.9%)	31 (9.0%)	7 (1.6%)	0 (0.0%)	0 (0.0%)	1 (1.1%)	50 (1.7%)	8 (0.5%)	50 (2.8%)	1 (0.5%)	179 (2.0%)
Attendants, security, etc	18 (2.2%)	50 (14.2%)	8 (7.1%)	0 (0.0%)	21 (4.8%)	29 (54.7%)	2 (3.3%)	0 (0.0%)	1073 (35.7%)	773 (43.9%)	117 (6.6%)	58 (31.2%)	2149 (23.9%)
Total	826 (100.0%)	352 (100.0%)	112 (100.0%)	344 (100.0%)	437 (100.0%)	53 (100.0%)	60 (100.0%)	92 (100.0%)	3009 (100.0%)	1762 (100.0%)	1762 (100.0%)	186 (100.0%)	8995 (100.0%)

HIV Service Delivery

Across all surveyed facilities, almost a quarter (23.9%) of all staff were attendants, security and other support staff. Nurse midwives (15.8%) and nurses (10.5%) were the other staff category with a significant share of the staff strength indicating their pivotal roles in healthcare provision. Akwa Ibom (11.9%), Imo (11.7%) and Kwara (11.2%) states had a significant proportion of their facility staff as medical doctors. However, shortages in specialized roles like radiographers and nutritionists highlight potential areas for improvement in resource allocation.

Estimation of time spent on HIV care

- Number of dedicated HIV clinics per week range 1 – 5 days
- Number of clinic days in these 60 health facilities = 161 clinic days per week, which translate to approximately (161/60 health facilities) three clinic days per week
- Working hours are 8 per day but it is assumed that 6.5hrs are for contact with patient while 1.5hrs are for break and administration duties.
- Average clinic hours per week = Total number clinic days in the 60 Health Facilities * Number of hours per day/ 40 ($161 \times 6.5 / 60 = 17.44$ hours per week for HIV)
- Full Time Equivalents (FTE) = Average working hrs. per week/Total working hours per week*100 ($17.44/40 \times 100 = 43.6\%$)



Human Resources for HIV in the States

This section presents the findings on health care workforce in eight states that were surveyed and relevant state-level data were obtained. The expenditure for human resources for HIV services is based on the annual salary, 43.6% of doctor's Full-Time Equivalent (FTE) and 25% FTE for other healthcare workers. These estimates focus on out-patient HIV service and do not include in-patient care.

Table 6: Estimated annual salaries in the surveyed states.

State	Year	Specialist doctors	Medical doctors	Nurses (including public health)	Nurse-midwife	Laboratory scientist
Bauchi	2019	-	96,000,000	1,130,400,000	153,600,000	104,400,000
	2020	-	105,600,000	1,135,200,000	153,600,000	108,000,000
	2021	-	110,400,000	1,137,600,000	158,400,000	108,000,000
Benue	2019	115,200,000	866,304,000	31,800,000	2,140,000,800	97,200,000
	2020	345,599,996	1,050,000,050	62,400,000	1,600,000,416	183,600,000
	2021	460,008,000	1,152,000,000	81,900,000	3,100,000,822	301,999,992
Borno	2019	180,000,000	114,480,000	313,344,000	112,200,000	6,120,000
	2020	15,000,000	114,480,000	313,344,000	112,200,000	6,120,000
	2021	15,000,000	114,480,000	313,344,000	112,200,000	6,120,000
Enugu	2019	100,000,000	839,999,980	24,000,000	2,000,000,000	90,000,000
	2020	100,000,000	982,978,700	24,000,000	2,000,000,000	90,000,000
	2021	460,800,000	1,151,999,970	79,999,998	3,000,000,000	300,000,000
Imo	2019	-	58,337,160	57,915,840	57,915,840	25,266,012
	2020	-	58,337,160	57,915,840	43,436,880	24,614,232
	2021	-	58,334,640	57,915,840	43,436,880	24,614,232
Kano	2019	39,600,000	84,700,000	139,920,000	253,440,000	31,500,000
	2020	46,200,000	119,350,000	163,680,000	198,360,000	31,500,000
	2021	79,200,000	159,600,000	195,000,000	237,600,000	37,500,000
Oyo	2019	44,569,440	3,699,263,520	13,596,985,440	-	1,243,543,392
	2020	356,555,520	3,476,416,320	13,378,481,424	-	1,735,512,912
	2021	53,854,740	3,164,430,240	13,351,150,512	-	2,637,433,008
Sokoto	2019	67,602,384	651,193,056	2,198,718,618	365,957,472	123,461,410
	2020	95,770,044	704,569,536	2,344,506,456	626,293,072	204,349,920
	2021	61,968,852	757,946,016	2,424,838,530	611,416,752	236,279,595
Total		2,636,928,976	19,691,200,348	52,614,360,498	17,080,058,934	7,757,134,705

Continued

State	Year	Laboratory technician/technologist	Radiographer	Pharmacist	Pharmacy assistant
Bauchi	2019	556,200,000	100,800,000	55,200,299	13,200,000
	2020	559,800,000	1,056,000,000	69,600,000	13,200,000
	2021	561,600,000	105,600,000	69,600,000	13,200,000
Benue	2019	237,100,088	21,600,000	504,000,000	85,999,995
	2020	287,040,000	324,000,000	702,000,000	97,900,008
	2021	312,000,110	32,400,000	1,080,000,000	126,000,006
Borno	2019	40,800,000	-	5,400,000	75,600,000
	2020	40,800,000	-	5,400,000	75,600,000
	2021	40,800,000	-	5,400,000	75,600,000
Enugu	2019	120,000,000	7,980,000	300,000,000	85,999,998
	2020	120,000,000	7,980,000	270,000,000	85,999,998
	2021	311,952,000	22,800,000	990,000,000	126,000,000
Imo	2019	3,973,200	-	10,387,272	1,154,952
	2020	3,973,200	-	10,135,272	1,154,952
	2021	3,973,200	-	10,135,272	1,154,952
Kano	2019	176,400,000	9,600,000	72,960,000	36,000,000
	2020	176,400,000	13,200,000	79,800,000	42,300,000
	2021	176,400,000	19,800,000	108,360,000	49,500,000
Oyo	2019	-	218,644,992	710,596,224	-
	2020	-	437,294,592	1,161,563,760	-
	2021	-	95,658,192	901,920,096	-
Sokoto	2019	676,226,581	31,432,618	151,397,784	73,111,701
	2020	708,342,883	26,942,244	165,719,196	106,855,563
	2021	947,430,909	26,942,244	200,499,768	101,231,586
Total		6,061,212,171	2,558,674,882	7,640,074,943	1,286,763,711

Continued

State	Year	Social workers	HIV Counsellor	Nutritionist	Medical records clerk (data officers)
Bauchi	2019	23,856,000	16,848,000	16,200,008	112,320,000
	2020	23,856,000	16,846,002	16,200,008	112,320,000
	2021	25,560,000	16,848,000	16,200,008	112,320,000
Benue	2019	183,999,970	227,999,016	22,500,000	185,000,051
	2020	163,999,962	288,000,000	27,000,000	216,000,000
	2021	178,000,076	204,001,200	37,200,000	270,000,000
Borno	2019	-	-	-	384,000,000
	2020	-	-	-	384,000,000
	2021	-	-	-	384,000,000
Enugu	2019	80,000,000	319,833,266	22,500,000	184,999,914
	2020	80,000,000	319,833,266	22,500,000	184,999,914
	2021	178,000,000	189,999,960	37,200,000	270,000,000
Imo	2019	-	-	1,242,444	4,764,564
	2020	-	-	1,242,444	3,400,236
	2021	-	-	1,242,444	4,764,564
Kano	2019	55,380,000	23,184,000	17,160,000	94,500,000
	2020	58,500,000	27,600,000	23,400,000	106,200,000
	2021	72,540,000	27,600,000	30,240,000	118,800,000
Oyo	2019	95,658,192	-	560,283,696	68,327,280
	2020	54,661,824	-	546,618,240	2,979,069,408
	2021	68,327,280	-	628,610,976	1,822,060,800
Sokoto	2019	93,206,436	29,017,098	94,112,136	1,264,257,252
	2020	93,206,436	29,017,098	90,020,304	1,351,935,048
	2021	99,361,578	29,017,098	96,158,052	1,515,977,376
Total		1,628,113,754	1,765,644,004	2,307,830,760	12,134,016,407

Continued

State	Year	Administrative officers	Programme manager	Others	Total
Bauchi	2019	3,840,000	9,408,000	2,400,000	2,394,672,307
	2020	3,840,000	9,408,000	2,400,000	3,385,870,010
	2021	3,840,000	9,408,000	2,400,000	2,450,976,008
Benue	2019	280,000,080	171,000,000	-	5,169,704,000
	2020	305,000,085	205,000,002	-	5,857,540,519
	2021	327,000,030	250,000,014	-	7,912,510,250
Borno	2019	300,000,000	18,000,000	-	1,549,944,000
	2020	300,000,000	18,000,000	-	1,384,944,000
	2021	300,000,000	18,000,000	-	1,384,944,000
Enugu	2019	279,999,960	171,000,000	-	4,626,313,118
	2020	279,999,960	171,000,000	-	4,739,291,838
	2021	326,970,000	249,986,000	-	7,695,707,928
Imo	2019	2,428,740	1,242,444	2,520,525	227,148,993
	2020	2,428,740	1,242,444	2,520,525	210,401,925
	2021	2,428,740	1,242,684	2,520,525	211,763,973
Kano	2019	103,740,000	14,400,000	-	1,152,484,000
	2020	122,540,000	12,528,000	7,920,000	1,229,478,000
	2021	139,680,000	18,792,000	7,128,000	1,477,740,000
Oyo	2019	423,581,328	-	3,193,717,680	23,855,171,184
	2020	293,900,400	-	2,982,109,392	27,402,183,792
	2021	320,655,024	-	3,060,482,832	26,104,583,700
Sokoto	2019	77,199,360	129,020,408	2,420,272,764	8,446,187,078
	2020	77,199,360	129,020,408	3,311,999,388	10,065,746,956
	2021	75,691,560	120,223,562	3,989,161,764	11,294,145,242
Total		4,351,963,367	1,727,921,966	18,987,553,395	160,229,452,821

In Table 6 above, Oyo state had the highest estimated salaries for the nurses category in the amount of N13,596,985,440 in 2019 while Imo had the lowest of N1,242,444 for the nutritionists group in 2019. Overall, the eight states had a total estimated salaries of N160,229,452,821 for all categories of health workers for the years 2019 to 2021.

Table 7: Estimated total annual salaries and government expenditure on HR for HIV services across the selected states.

Staff Category	No of Staff	Total Estimated Annual Salary	Estimated Government HR Expenditure for HIV*	2020			2021		
				No of Staff	Total estimated annual salary	Estimated government HR expenditure for HIV*	No of Staff	Total estimated annual salary	Estimated government HR expenditure for HIV*
Specialist doctors	78	546,971,824	238,479,715	260	959,125,560	418,178,744	443	1,130,831,592	493,042,574
Medical doctors	2,492	6,410,277,716	2,794,881,084	2,430	6,611,731,766	2,882,715,050	2,296	6,669,190,866	2,907,767,218
Nurses (including public health nurses)	14,156	17,493,083,898	4,373,270,975	14,078	17,479,527,720	4,369,881,930	14,121	17,641,748,880	4,410,437,220
Nurse-midwife	2,834	5,083,114,112	1,270,778,528	3,020	4,733,890,368	1,183,472,592	3,432	7,263,054,454	1,815,763,614
Laboratory scientist	1,293	1,721,490,814	430,372,704	1,781	2,383,697,064	595,924,266	2,652	3,651,946,827	912,986,707
Laboratory technician /technologist	1,355	1,810,699,869	452,674,967	1,407	1,896,356,083	474,089,021	1,661	2,354,156,219	588,539,055
Radiographer	263	390,057,610	97,514,403	460	1,865,416,836	466,354,209	167	303,200,436	75,800,109
Pharmacist	851	1,809,941,579	452,485,395	1,285	2,464,218,228	616,054,557	1,193	3,365,915,136	841,478,784
Pharmacy assistant	488	371,066,646	92,766,662	519	423,010,521	105,752,630	542	492,686,544	123,171,636
Social workers	449	532,100,598	133,025,150	405	474,224,222	118,556,056	502	621,788,934	155,447,234
HIV Counsellor	485	616,881,380	154,220,345	537	681,296,366	170,324,092	355	467,466,258	116,866,565
Nutritionist	593	733,998,284	183,499,571	586	726,980,996	181,745,249	677	846,851,480	211,712,870
Medical records clerk (data officers)	1,341	2,298,169,061	574,542,265	3,958	5,337,924,606	1,334,481,152	3,065	4,497,922,740	1,124,480,685
Administrative officers	2,440	1,470,789,468	367,697,367	2,090	1,384,908,545	346,227,136	2,272	1,496,265,354	374,066,339
Programme manager	94	514,070,852	128,517,713	99	546,198,854	136,549,714	118	667,652,260	166,913,065
Others (Attendants, Security, etc)	17,909	5,618,910,969	1,404,727,742	20,265	6,306,949,305	1,576,737,326	22,769	7,061,693,121	1,765,423,280
Total	47,121	47,421,624,680	13,149,454,584	53,180	54,275,457,040	14,977,043,723	56,265	58,532,371,101	16,083,896,952



*43.6% and 25% of doctors' and other health workers' total estimated annual salary respectively were applied to derive estimated government HR expenditure for HIV.



Table 7 above presents data on staff categories, including the number of staff, total annual salary, and estimated government expenditure on human resources for HIV-related services from 2019 - 2021. Across the eight states, total staff strength increased from 47,121 in 2019 to 56,265 in 2021. Similarly, estimated government expenditure on human resources for HIV-related services increased from N13,149,454,584 in 2019 to 16,083,896,952 in 2021.



Other findings include variations in the number of staff and associated expenditures across different categories and time periods. For instance, administrative officers, medical doctors, and nurse-midwives consistently represent significant portions of both staff and expenditure, reflecting their essential roles in healthcare delivery. However, there are fluctuations in numbers and expenditures across time periods, suggesting potential shifts in healthcare priorities or resource allocation strategies. There is an apparent percentage increase in estimated government expenditure over time, suggesting a growing commitment to HIV-related services. Additionally, specialist doctors and pharmacists also command substantial expenditures, indicating the importance of specialized medical services in healthcare systems.

Table 8: Summary of estimated government expenditure in the states, average per state and national estimates in Naira and USD.

Year	Total Estimated Annual Salary	Estimated Government HR Expenditure for HIV	Estimated Government Expenditure Per State*	Estimated Government Expenditure for All States**	Estimated Government Expenditure for All States in USD***	USD to NGN Exchange Rate
2019	47,421,624,680	13,149,454,584	1,643,681,823	60,816,227,453	198,331,031	USD1 = 306.64
2020	54,275,457,040	14,977,043,723	1,872,130,465	69,268,827,217	194,068,381	USD1 = 356.93
2021	58,532,371,101	16,083,896,952	2,010,487,119	74,388,023,405	186,268,087	USD1 = 399.36

* Estimated Government HR Expenditure for HIV divided by eight states

** Estimated Government Expenditure Per State multiplied by 36+1 states

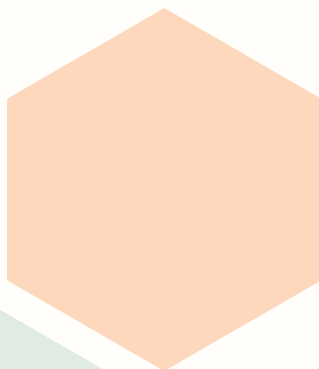
*** Estimated Government Expenditure for All States divided by the exchange rate

Table 8 above presents data on total annual salaries, estimated government expenditure for the states, estimated government expenditure per state, and total estimated government expenditure for all states in Nigerian Naira (NGN) across three years (2019, 2020, and 2021). There is an increase in total annual salary and estimated government expenditure over the years, reflecting potential growth in healthcare investments. Specifically, there was a 22% increase in the estimated government expenditure for all 36+1 states from N60,816,227,453 in 2019 to N74,388,023,405 in 2021. Although in US dollars, there was a decrease in expenditure due to the increase in exchange rates over the period, the data underscores the government's commitment to healthcare spending as evidenced by the steady increase in investments over the years.

Other Findings

The facility personnel, enumerated their barriers toward effective HIV service delivery to include amongst others:

- Inadequate provision of working tools including HIV rapid test kits and lack of supportive supervision to cushion the gap observed in capacity between the national and the sub-regional levels.
- While coordination of HIV implementation at the national level is robust the same cannot be said of the sub-regional level where they are absent or weak.
- There is an observed downward decline of HTS among the general population, which affects the identification of people who know their HIV status within the population
- There are concerns of shortages of human resources for HIV service delivery due to attrition, not to mention the complete absence of incentives.
- Paediatrics' HIV service delivery has challenges in the areas of case finding, retention, early infant diagnosis (EID) and viral load sample collection at birth.
- There was a call for centralization of biometric capturing of HIV clients for effective coordination.



Discussions, Conclusions & Recommendations

This survey for the assessment of government expenditure on human resources for HIV services was commissioned to collect and analyse estimated expenditure on human resources for HIV service delivery in twelve states including State Ministries of Health (SMoH) headquarters and five health facilities in each of the 12 states. The assessment received reported data from eight SMoH headquarters and 60 health facilities. The sixty health facilities surveyed had 13.57% of the total PLHIVs in the twelve states. The facilities were 75% public which is in line with the 65% reported in the 2011 government human resources expenditure for HIV baseline study. The respondents were 54% top management staff and 95% had spent more than one year working. This is a testament to the veracity of the reported data. Most of the health facilities run dedicated ART clinics and 84% reported a consultation time of 30 minutes or less for patients.

A range of 0 to 5 clinic days per week was reported, which translated to a total of 161 clinic days in the 60 health facilities in the twelve states which is approximately 3 clinic days per week which is within the same range as reported in the 2011 baseline study. This gives 17.25 hours per week spent on HIV service delivery, giving a 43.6% Full Time Equivalent as compared to the 33.33% in the 2011 study. The FTE of 43.6% was used to estimate the government expenditure on human resources for HIV services for medical doctors while 25% was used for other health workers based on the 2011 study.

The study showed nurses and midwives constitute the highest proportion of health workers at 33% although support staff composed of attendants, security, etc were 39% of the total workforce across the three years.

It also showed that government spend on average in each of the eight surveyed states N1,643,681,823, N1,872,130,465 and N2,010,487,119 for 2019, 2020 and 2021 respectively on HIV, even though there are variations across states. Therefore, the estimated national expenditure on human resource for HIV service delivery stands at N60,816,227,453, N69,268,827,217 and N74,388,023,405 for 2019, 2020 and 2021 respectively. The USD equivalents are \$198,331,031, \$194,068,381 and \$186,268,087 for 2019, 2020 and 2021 respectively.

The USD equivalents are
\$198,331,031, \$194,068,381
and \$186,268,087 for 2019,
2020 and 2021 respectively.

Conclusion

The human resource situation for HIV services in Nigeria is complex, with several challenges and ongoing efforts to address them. The Nigeria healthcare workforce faces a significant shortage of healthcare workers trained to provide HIV services. This shortage is exacerbated by the high burden of HIV in the country, with over 1.9 million people living with the virus.

There is also an uneven distribution of healthcare workers, with rural areas often being underserved compared to urban centres which has 80% or more of the workers in most cases (FMoH, 2022). Some of the factors influencing the challenges of the healthcare workforce include skilled healthcare professionals often migrating to other countries in search of better opportunities leading to a 'brain drain' that depletes the already limited human resources for health in Nigeria, higher salaries abroad, better working conditions, and opportunities for professional development influences the decision to migrate from Nigeria.

Tackling the challenges of the healthcare workforce should follow a multifaceted approach that includes more in-service training (IST) to improve the quality and coverage of HIV&AIDS and health services and sustained financial investments which is necessary to recruit, train, and retain healthcare workers. Also, adequate healthcare facilities and equipment which are essential to support the workforce and provide quality care should be provided.

In addressing these challenges, the recommendations from the National HIV and AIDS Strategic Framework 2021-2025 which outlines goals and objectives to strengthen the healthcare workforce for HIV services should be implemented. Also, international support initiatives such as the President's Emergency Plan for AIDS Relief and the Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM) are crucial.



Recommendations

State government salary scale should be made publicly available and accessible

Just as the salary scale of the federal government is publicly available on the website of the National Salaries, Incomes and Wages Commission (NSIWC) and the Revenue Mobilisation, Allocation and Fiscal Commission (RMAFC), state governments should publish the salary information of public employees as a matter of public interest, transparency and fiscal responsibility.

Streamline bureaucracy involved in accessing government financial information

The process and timeline involved in obtaining access to government financial information should be streamlined and straightforward. Complicated steps, red tape and long turnaround time make it tasking to access information that is useful for informing decision making in the overall interest of both policy makers and the general populac

Stakeholder engagements should be robust

It is important to adequately engage stakeholders and all parties involved in an activity. This will enable implementation to be smooth, hitch free and yield expected results. Sufficient logistics, funding and time should be dedicated to this aspect of programme planning and implementation.

Appendix A

Human resources for HIV services: State ministry of health questionnaire

Introduction

Good morning/afternoon/evening My name is _____

I am representing the National Agency for the Control of AIDS (NACA) in collaboration with FMOH. NACA is carrying out a National AIDS Spending Assessment (NASA) to determine and track the financial resources spent on HIV/AIDS in Nigeria. As part of the NASA project, we are conducting a survey to ascertain the expenditure on Human Resources for HIV /AIDS services.

In order to strengthen the national assessments of HIV and AIDS related spending and help inform the planning and coordination of HIV programmes in Nigeria, we would like to ask you some questions about Human Resources for HIV services in your state.

Name and signature of Interviewer _____

Date _____

A	Administrative Information Ensure that the respondent is the person in-charge of the HIV services or the person most knowledgeable about HIV/AIDS services in the state.	
21	Interviewee's name:	
22	Phone number of respondents	
23	State	
24	Ministry/Department	
25	Title/position of respondent	
26	What is your position in the organisation? Circle one	a. Top Management b. Middle Management c. Junior Management ³

B	Human Resources for HIV services			
	MEDICAL TEAM			
31	What is the total number of staff in each category of healthcare workers in the state and their total annual salary ?			
	Staff category	2019	2020	2021
A	Specialist doctors	i. Number: ii. Total annual salary for all:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:

Appendix A

B	Medical doctors	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:
NURSING TEAM				
C	Nurses (including public health nurses)	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:
D	Nurse-midwife	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:
LABORATORY				
E	Laboratory scientist	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:
F	Laboratory technician/technologist	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:
G	Radiographer	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:
PHARMACY TEAM				
H	Pharmacist	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:
I	Pharmacy assistant	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:
PSYCHOSOCIAL TEAM AND NUTRITIONIST				
J	Social workers	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:
K	HIV Counsellor	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:
L	Nutritionist	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:
ADMINISTRATIVE TEAM				
M	Medical records clerk (data officers)	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:	i. Number: ii. Total annual salary:

Appendix A

N	Administrative officers	i. Number:	i. Number:	i. Number:
		ii. Total annual salary:	ii. Total annual salary:	ii. Total annual salary:
O	Programme manager	i. Number:	i. Number:	i. Number:
		ii. Total annual salary:	ii. Total annual salary:	ii. Total annual salary:
P	Others	i. Number:	i. Number:	i. Number:
		ii. Total annual salary:	ii. Total annual salary:	ii. Total annual salary:
32			What is the total number of hours per week contributed by employees (staff in each category) to HIV/AIDS care?	
			MEDICAL TEAM	
A	Specialist doctors			
B	Medical doctors			
			NURSING TEAM	
C	Nurses (including public health nurses)			
D	Nurse-midwife			
			LABORATORY TEAM	
E	Laboratory scientist			
F	Laboratory technician/technologist			
G	Radiographer			
			PHARMACY TEAM	
H	Pharmacist			
I	Pharmacy assistant			
			PSYCHOSOCIAL TEAM & NUTRITIONISTS	
J	Social workers			
K	HIV Counsellors			
L	Nutritionists			
			ADMINISTRATIVE TEAM	
M	Medical records clerk (data officers)			
N	Administrative officers			

Appendix A

O	Programme manager	
P	Others	
33	What is the Full-time equivalent (FTE) of staff dedicated to HIV care?	
34	What is the amount spent on staff training in the past one year?	
C	HIV Services	
35	What are the best aspects of the HIV services that is provided in this state (List max 3)	
36	What are the aspects of the HIV services that need to be improved (list max 3)	
37	Do you have any suggestions about improving HIV services? (list max 3)	
This is the end of the questionnaire survey. Thank you for your co-operation		

Appendix B

Human resources for HIV services: Health facility questionnaire

Introduction

Good morning/afternoon/evening My name is _____

I am representing the National Agency for the Control of AIDS (NACA) in collaboration with FMOH. NACA is carrying out a National AIDS Spending Assessment (NASA) to determine and track the financial resources spent on HIV/AIDS in Nigeria. As part of the NASA project, we are conducting a survey to ascertain the expenditure on Human Resources for HIV&AIDS services.

In order to strengthen the national assessments of HIV and AIDS related spending and help inform the planning and coordination of HIV programmes in Nigeria, we would like to ask you some questions about Human Resources for HIV services in your state.

Name and signature of Interviewer _____

Date _____

A	Administrative Information Ensure that the respondent is the person in-charge of the HIV services or the person most knowledgeable about HIV/AIDS services in the health facility	
21	Respondent's position	
22	State	
23	Name of health facility	
24	What type of organisation is this in terms of ownership? <i>Circle one</i>	a. Federal Government 1 e. Faith-based 5 b. State Govt2f. Other c. Local Govt3 d. Private 4
25	What is the legal status of your organisation? (may choose more than one)	a. Public b. Private for profit c. Private not for profit
26	Title/position of respondent	
27	What is your position in the organisation? <i>Circle one</i>	a. Top Management1 b. Middle Management2 c. Junior Management3 d. Junior Staff4
28	How long have you been working in this health facility?	a. Less than one year1 b. One year c. Over one year

Appendix B

B	HIV Service delivery	
	From this point on, I would like to ask you some questions about the delivery of the HIV Service in this organisation/facility	
31	How many people living with HIV/AIDS (PLWHA) are managed by your facility? <i>Check record to verify figures</i>	
32	Do you hold dedicated outpatient HIV clinics for PLWHA in your facility?	a. Yes, dedicated outpatient HIV clinics b. No, patients are seen as part of general Outpatient clinic (<i>if no, go to Q44</i>)
33	How many clinic days per week are designated for HIV/AIDS services in this facility?	
34	How many hours per day is spent in running each of these clinics on the average?	
35	In providing an ART service, please give an estimate of the time that is currently spent per ART patient visit on an average day? <i>length of consultation time(minutes)</i>	(Number of minutes)
36	Ideally, how much time would you have liked to spend with a patient on ART?	
37	What is the average number of patients with HIV/AIDS that attend OPD visits per day?	
38	What is the total number of HIV/AIDS clinic hours offered each week?	
39	On average, how many patients are seen and served via HIV clinics each week?	
40	What is the total number of patients seen at the HIV clinics in the past 3 months ?	<i>Please check records</i>
41	On average, how many times is each patient on ART seen by a doctor in a year?	

Appendix B

C	Human Resources for HIV services	
51	How many employees (persons) are working at this health facility site?	
53	Please describe the composition of the team that provide HIV care at this health facility?	
54	What is the total number of hours per week contributed by employees (staff in each category) to HIV/AIDS care?	
	MEDICAL TEAM	
A	Specialist doctors	
B	Medical doctors	
	NURSING TEAM	
C	Nurses (including public health nurses)	
D	Nurse-midwife	
	LABORATORY TEAM	
E	Laboratory scientist	
F	Laboratory technician/technologist	
G	Radiographer	
	PHARMACY TEAM	
H	Pharmacist	
I	Pharmacy assistant	
	PSYCHOSOCIAL TEAM & NUTRITIONISTS	
J	Social workers	
K	HIV counsellors	
L	Nutritionist	
	ADMINISTRATIVE TEAM	
M	Medical records clerk (data officers)	
N	Administrative officers	
O	Programme manager	
P	Others	
55	What is the amount spent on staff training in the past one year?	
This is the end of the questionnaire survey. Thank you for your co-operation		

Appendix C

S/N	Activity	Timeline	Responsible Person
1	Development of Concept note	4-5th March 2024	RME, NACA
2	Engagement of consultant	6 th -8 th March 2024	NACA
3	Development of implementation plan	7th March 2024	Consultant
4	Field tools development	12 th -13 th March 2024	Consultant/NACA Technical team
5	Training of field data collectors	14 th -15 th March 2024	Consultant/NACA Technical team
6	Field Data Collection	18 th -30 th March, 2024	NACA Staff
7	Data Entry	1 st – 10 th April,2024	Data entry clerks
8	Data cleaning/analysis	11 th -13 th April, 2024	Consultant
9	Data validation	18 th April 2024	Consultant
10	Presentation of draft report	22 nd April,2024	Consultant
11	Final report	26 th April 2024	Consultant

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