

NIGERIA HIV/AIDS INDICATOR AND IMPACT SURVEY

# 2018 TECHNICAL REPORT

PARTNERS



### NIGERIA HIV/AIDS INDICATOR AND IMPACT SURVEY (NAIIS) 2018 TECHNICAL REPORT

#### **NAIIS 2018 COLLABORATING INSTITUTIONS**

Federal Ministry of Health, Nigeria (FMoH) National Agency for the Control of AIDS, Nigeria (NACA) National Population Commission, Nigeria (NPopC) National Bureau of Statistics, Nigeria (NBS) The United States Centers for Disease Control and Prevention (CDC) The Global Fund to Fight AIDS, Tuberculosis and Malaria (GF) Center for International Health, Education and Biosecurity (CIHEB) at the University of Maryland, Baltimore (UMB) ICF International African Field Epidemiology Network (AFENET) University of Washington (UW) The Joint United Nations Programme on HIV and AIDS (UNAIDS) World Health Organization (WHO) United Nations Children's Fund (UNICEF)

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### GLOSSARY OF TERMS

**90-90 targets:** According to the United Nations Programme on HIV and AIDS (UNAIDS), by 2020, 90% of all people living with human immunodeficiency virus (HIV) will know their HIV status; 90% of all people with diagnosed HIV will receive sustained antiretroviral therapy (ART); and 90% of all people receiving ART will have viral load suppression.

Acquired Immunodeficiency Syndrome (AIDS): AIDS is a disease that can develop after HIV causes severe damage to the immune system, leaving the body vulnerable to life-threatening conditions, such as infections and cancers.

Adolescents: Unless otherwise noted, adolescents are individuals aged 10-19 years. Young adolescents are individuals aged 10-14 years; older adolescents are individuals aged 15-19 years.

Adults: Unless otherwise noted, adults are individuals aged 15-64 years.

Antiretroviral (ARV): A type of medication used to treat HIV.

**Antiretroviral therapy (ART):** Treatment with ARV drugs that inhibit the ability of HIV to multiply in the body, leading to improved health and survival among people living with HIV.

**CD4+ T-Cells (CD4):** CD4+ T-cells are white blood cells that are an essential part of the human immune system. These cells are often referred to as T-helper cells. HIV attacks and kills CD4 cells, leaving the body vulnerable to a wide range of infections. The CD4 count is used to determine the degree of weakness of the immune system from HIV infection.

Children: Unless otherwise noted, children are individuals aged 0-14 years.

De facto household resident: A person who slept in the household the night prior to the survey.

*De jure* **population**: Individuals who are usual residents of the household, irrespective of whether they slept in the household on the night prior to the household interview.

**Emancipated minor:** As defined by law in Nigeria, an individual less than aged 18 years who is married or is free from any legally competent representative.

**Enumeration area (EA):** A limited geographic area defined by the National Population Commission (NPopC), the national statistical authority and the NAIIS primary sampling unit.

**Head of household:** The person who is recognized within the household as being the head and is aged 18 years and older or is considered an emancipated minor.

**Human Immunodeficiency Virus (HIV):** HIV is the virus that causes AIDS. The virus is passed from person to person through blood, semen, vaginal fluids and breast milk. HIV attacks CD4 cells in the body, leaving a person living with HIV vulnerable to illnesses that a healthy immune system would have eliminated.

**HIV incidence:** A measure of the frequency with which new cases of HIV occur in a population over a time period. The denominator is the population at risk; the numerator is the number of new cases that occur during a given time period.

**HIV prevalence:** The proportion of persons in a population who are living with HIV at a specific point in time.

HIV viral load (VL): The concentration of HIV in the blood, usually expressed as copies per milliliter (mL).

HIV viral load suppression: An HIV VL of less than 1,000 copies per mL.

**Household:** A person or group of persons related or unrelated to each other who live in the same compound (fenced or unfenced), share the same cooking arrangements and have one person whom they identify as head of that household.

**Informed consent:** Informed consent is a legal condition whereby a person can give consent based upon a clear understanding of the facts, implications and future consequences of an action. In order to give informed consent, the individual concerned must have adequate reasoning faculties and be in possession of all relevant facts at the time he or she gives consent.

**Male circumcision:** Male circumcision is the removal of some or the entire foreskin (prepuce) from the penis. Medically supervised adult male circumcision is a scientifically proven method for reducing a man's risk of acquiring HIV through heterosexual intercourse.

Nigeria: The Federal Republic of Nigeria.

**Prevention of mother-to-child HIV transmission (PMTCT):** Mother-to-child HIV transmission (MTCT) is when an HIV-positive woman passes the HIV virus to her baby during pregnancy, labor or delivery or while breastfeeding. The United Nations recommends effective PMTCT to include a four-fold approach: (1) primary prevention of HIV infection among women of childbearing age; (2) preventing unintended pregnancies among women living with HIV; (3) preventing HIV transmission from women living with HIV to their infants; and (4) providing appropriate treatment, care and support to mothers living with HIV and their children and families.

**Sexually transmitted infections (STIs):** STIs are infections transmitted from person-to-person through sexual contact. They are sometimes called sexually transmitted diseases.

**Tuberculosis:** Tuberculosis (TB) is a contagious bacterial infection caused by Mycobacterium tuberculosis which mostly affects the lungs.

Young adults: Unless otherwise noted, individuals aged 20-24 years are defined as young adults.

**Young people:** Defined in this survey as the population of individuals aged 15-24 years (including older adolescents and young adults).

# LIST OF ABBREVIATIONS

AFENET	African Field Epidemiology Network
AIDS	Acquired Immunodeficiency Syndrome
AIMS	Activity Information Management System
ANC	Antenatal care
ART	Antiretroviral therapy
ARV	Antiretroviral
CAPI	Computer Assisted Personal Interview
CDC	Centers for Disease Control and Prevention
CFR	Code of Federal Regulations
CHAID	Chi-square automatic interaction detection
CI	Confidence interval
CSPro	Census and Survey Processing System
DBS	Dried blood spot
DHS	Demographic and Health Survey
DNA	Deoxyribonucleic acid
DR	Drug resistance
EA	Enumeration area
EIA	Enzyme immunoassay
EID	Early infant diagnosis
FCT	Federal Capital Territory
FMoH	Federal Ministry of Health
FTPS	File Transfer Protocol Secure
GF	The Global Fund to Fight AIDS, Tuberculosis and Malaria
GoN	Government of Nigeria
НВТС	Home-based testing and counseling
HBsAg	Hepatitis B virus surface antigen
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HIV	Human immunodeficiency virus
HIVDR	Human immunodeficiency virus drug resistance
ICC	Intra-cluster correlation
IHVN	Institute of Human Virology Nigeria
IRB	Institutional review board

IVT	Infant virologic HIV testing
LAg	Limiting antigen
LGAs	Local Government Areas
MDRI	Mean duration of recent infection
mL	Milliliter
MS	Mass spectrometry
NACA	National Agency for the Control of AIDS
NAIIS	Nigeria HIV/AIDS Indicator and Impact Survey
NASCP	National AIDS and STI Control Program
NBS	National Bureau of Statistics
NCDC	Nigeria Centre for Disease Control
NHREC	National Health Research Ethics Committee
NPopC	National Population Commission
NRL	National Reference Laboratory
ODn	Normalized optical density
PCR	Polymerase chain reaction
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PFR	Proportion false recent
PHIA	Population-based HIV Impact Assessment
PLHIV	People living with HIV
PMTCT	Prevention of mother-to-child HIV transmission
POC	Point of care
PSU	Primary sampling unit
РТ	Proficiency test
PTID	Participant identification
QA	Quality assurance
QC	Quality control
RNA	Ribonucleic acid
RSEs	Relative standard errors
SOP	Standard operating procedure
ТВ	Tuberculosis
TNA	Total nucleic acid
UMB	University of Maryland, Baltimore
UNAIDS	Joint United Nations Programme on HIV/AIDS
VL	Viral load
VLS	Viral load suppression
WHO	World Health Organization
μL	Microliter

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### Foreword

The Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS) 2018 is the largest HV population-based survey conducted globally with a sample size of 83,909 households and 383,574 individuals and coverage across 36 states (and the Federal Capital Territory). NAIIS determined the HIV incidence, HIV prevalence, viral load suppression and risk behaviours. For the first time, we have estimated national HIV incidence and viral load suppression and the prevalence of hepatitis B and C virus infections. NAIIS also enabled determination of the effectiveness and population-level impact of HIV-related prevention, care and treatment interventions implemented in the country, and our progress towards the achievement of the UNAIDS 90-90-90 targets.

The findings show steady improvements in reducing HIV prevalence, when compared to previous survey estimates. However, gaps remain in awareness of HIV status. The results also show varied HIV prevalence across states and highlights the need for more responsive approaches that take into consideration the situation of the epidemic in each state. The findings in relation to new HIV infections point us towards the need to increase our efforts in targeted testing at community-level, especially in areas with high HIV prevalence and low testing coverage.

While significant progress has been achieved in the overall coverage of ART for People Living With HIV and viral load suppression for those on ART, sustained efforts will be required, to maintain the gains and continue to decrease the risk of transmission of HIV.

One of the key lessons from the results of this survey is that we must continue to invest in addressing the important gender dimensions of access to HIV services, especially noting the difficulties women often experience in accessing health services.

NAIIS reiterates the importance of measuring progress in achieving epidemic control and strengthening capacity at country-level to collect and use surveillance data to inform and improve interventions as it relates to HIV and AIDS as well as Hepatitis B and C infections.

Overall, the results from NAIIS 2018 have provided Government and her partners with critical information to guide policy, programme and funding priorities and have bolstered the joint commitment to achieving epidemic control in Nigeria.

**Dr. E. Osagie Ehanire** *MD, FWACS* Honourable Minister of Health

### **E**XECUTIVE **SUMMARY**

#### **Key Findings**

- Approximately 8 new cases of HIV infection occur annually per 10,000 adults (those aged 15-64 years), with HIV incidence highest among women and men aged 25-34 years (Table 6.A).
- Overall, HIV prevalence among adults was 1.4%, with 1.8% in women and 1.0% in men (Table 7.A).
- Overall, HIV viral load suppression (VLS) prevalence among adults was 43.1%: 45.5% in women and 38.8% in men (Table 10.A).

#### UNAIDS 90-90-90 Targets

- Diagnosed (antiretroviral (ARV)-adjusted awareness of HIV-positive status): Based on self-report and ARV detection data, it is estimated that in Nigeria, 46.9% of persons living with HIV (PLHIV) aged 15-64 years were already aware of their HIV status (50.3% among women living with HIV and 40.9% among men living with HIV). This varied across age groups ranging from 31.0% among young people aged 15-24 years to 52.8% among adults aged 35-49 years (Table 11.B).
- On treatment (ARV-adjusted treatment status): Based on self-report and ARV detection data, it is
  estimated that among the PLHIV aged 15-64 years who were aware of their HIV status, 96.4% were
  receiving antiretroviral therapy (ART) (95.8% of women and 97.8% of men) (Table 11.B).
- Viral load suppression (VLS): Of the 96.4% of PLHIV aged 15-64 years on ART, based on self-report and ARV detection data, 80.9% had VLS, ranging from 75.2% among those aged 25-34 years (76.9% among women and 65.8% among men) to 82.0% among those aged 35-49 years (84.4% among women and 77.4% among men) (Table 11.B).

#### **Other Key Findings**

- In Nigeria, 3.1% of households had at least one HIV-positive member (3.3% in rural and 2.8% in urban households) (Table 4.D).
- Among heads of households, 1.9% of heads of households were HIV-positive (3.4% of female heads of households were HIV-positive compared to 1.3% of male heads of household) (Table 4.F).
- HIV prevalence among women of childbearing age (aged 15-49 years) who were pregnant at the time of the survey was 1.1% (Table 7.B).
- Overall, 30.1% of the adult population reported that they had ever tested for HIV and received their results, while 10.2% indicated that they had tested in the 12 months preceding the survey and received their results (Table 8.C).
- Concordance between self-report of ART and detection of ARVs was high among adults, with 94.5% of those who reported current ART use having detectable ARVs in blood. However, self-report of HIV status was less accurate, with detection of ARVs in blood among 24.4% of those who reported that they had not been previously diagnosed with HIV (Table 9.F).
- Among all HIV-positive adults aged 15-64 years, VLS ranged from 31.2% in those aged 20-24 years to 55.6% in those aged 50-54 years (Table 10.B).
- Among adult PLHIV who self-reported not to be aware of their HIV status and did not have detectable ARVs in their blood, 10% of women and 8.0% of men had severe immunosuppression, with a CD4 count less than 200 cells/microliter (μL) (Table 12.B).
- Among HIV-positive adults who reported initiating ART within the 12 months prior to the survey, 95.2% reported that they were still taking ART at the time of the survey. Among those who reported initiating ART more than 12 months prior to the survey, 94.3% reported that they were still taking ART at the time of the survey (Table 12.C, Table 12.D).

- Among women of childbearing age (aged 15-49 years) who delivered in the three years preceding the survey, 76.3% had at least one antenatal care (ANC) visit (Table 13.A).
- Among women who delivered within the 12 months preceding the survey, 41.5% reported knowing their HIV status (Table 13.C).
- Among HIV-positive women who delivered within the 3 years preceding the survey, 84.3% of those who knew their HIV status received ARVs (Table 13.D).
- Among older adolescents (aged 15-19 years) and young adults (aged 20-24 years), 18.1% reported having sexual intercourse before the age of 15 years (20.1% among women and 14.9% among men) (Table 14.A).
- Among early adolescents aged 10-14 years, 1.4% correctly responded to all questions that assessed knowledge of HIV transmission and prevention (1.2% of women and 1.7% of men) (Table 14.B, Table 14.C, Table 14.D).
- Incidence of HIV infection among older adolescents (aged 15-19 years) and young adults (aged 20-24 years) was estimated to be 0.04% (95% confidence interval (CI): 0.01%-0.07%) (Table 6.A).
- HIV prevalence was 0.2% among older adolescents (aged 15-19 years) (0.3% in women and 0.1% in men) and 0.8% among young adults (aged 20-24 years) (1.3% in women and 0.3% in men) (Table 7.C).
- Progress on 90-90-90 targets among older adolescents (aged 15-19 years) and young adults (aged 20-24 years): Based on self-report and detection of ARVs in blood, 31.0% of HIV-positive persons aged 15-24 years were aware of their HIV-positive status prior to the survey (31.7% of women and 28.8% of men). Among those who had been previously diagnosed, 92.3% were on ART. Among those on treatment, 77.1% had VLS (Table 11.B).
- Among adults aged 15 to 64 years who reported having sex in the last 12 months, 14.0% of women and 33.5% of men reported having sex with a non-marital, non-cohabitating partner. Of these adults, 35.3% (26.3% of women and 39.7% of men) reported using a condom during their last sexual intercourse with a non-marital, non-cohabitating partner (Table 15.B, Table 15.C, Table 15.D).
- The overall prevalence of hepatitis B virus (HBV) infection among adults aged 15-64 years was 8.1%, with 10.3% in men and 5.8% in women (Table 16.A).
- The overall prevalence of hepatitis C virus (HCV) infection among adults aged 15-64 years was 1.1%, with 1.3% in men and 1.0% in women (Table 16.B).
- Overall, 9.9% of adult PLHIV had ever visited a clinic for tuberculosis (TB) evaluation. Among adult PLHIV who had ever visited a TB clinic, 40.4% were diagnosed with TB. Of these, 98.8% completed TB treatment (Table 16.C).

#### **Gaps and Unmet Needs**

- While overall HIV prevalence determined by NAIIS was lower than reported in previous surveys and estimates, HIV continues to be transmitted in Nigeria.
- Awareness of HIV status is low, only 46.9% of PLHIV either self-reported awareness of their HIV status or had detectable ARVs in their blood. This low rate of awareness hinders the achievement of 90-90-90 targets.

#### **Programmatic Responses or Recommendations**

- To ensure 90-90-90 targets are met, the Government of Nigeria (GoN), supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and The Global Fund to Fight AIDS, Tuberculosis and Malaria (GF), is implementing an ART Surge to identify PLHIV who do not know their status or are not in treatment and to provide effective treatment to help all persons reach VLS.
  - o GoN is supporting an additional 100,000 PLHIV on treatment.
  - o PEPFAR is supporting an additional 500,000 PLHIV on treatment.
  - o GF is supporting an additional 110,000 PLHIV on treatment.
- States are helping to ensure efforts are successful by implementing policies that have been shown to improve access to services, including the removal of user fees for HIV-related services.

#### Conclusion

The results from NAIIS 2018 show varied HIV prevalence across states and underscore the need for effective approaches to addressing the epidemic, including targeted community-level testing efforts in areas with high HIV prevalence and low testing coverage.

In Nigeria, PLHIV on ART can achieve VLS, improving their lives and decreasing the risk of transmission of HIV. The results from NAIIS 2018 provide the Federal Ministry of Health (FMoH), the National Agency for the Control of AIDS, Nigeria (NACA) and their partners with critical information to reset the baseline data on HIV incidence and prevalence in Nigeria. The results have fostered cooperation and reinvigorated efforts across federal, state and international governments as well as donor and implementing organizations to halt the spread of HIV in Nigeria.

### **1.** INTRODUCTION

#### 1.1 Background

The Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS) was a Population-based HIV Impact Assessment (PHIA) conducted to measure important national and regional HIV-related indicators, including progress toward the achievement of the UNAIDS 90-90-90 targets (UNAIDS, 2014) and to guide policy and funding priorities. PHIAs are part of a multi-country project funded by the United States President's Emergency Plan for AIDS Relief (PEPFAR) to conduct national HIV-focused surveys that describe the status of the HIV epidemic.

With a projected 2016 population of over 180 million and an estimated 3.2 million people infected with HIV, Nigeria is estimated to have the second largest number of people living with HIV (PLHIV) in the world<sup>1</sup> and is among the six nations facing the triple threat of high HIV burden, low treatment coverage and slow decline in new HIV infections.<sup>2</sup> At the end of 2015, Nigeria had over 1,078 facilities providing ART services and over 853,992 PLHIV who had initiated ART.<sup>3</sup> On average, an estimated 180,000 people die annually from AIDS-related illnesses and about 180,000 children aged 17 years or younger are currently orphaned by AIDS in Nigeria.<sup>4</sup>

NAIIS was led by the Government of Nigeria (GoN) under the Federal Ministry of Health (FMoH) and National Agency for the Control of AIDS (NACA). The survey was conducted with funding from PEPFAR and The Global Fund to Fight AIDS, Tuberculosis and Malaria (GF) with technical assistance from the U.S. Centers for Disease Control and Prevention (CDC). The survey was implemented by the NAIIS Consortium and led by the University of Maryland, Baltimore (UMB) under the supervision of the NAIIS Technical Committee.

#### 1.2 Overview of NAIIS 2018

NAIIS, a household-based national survey, was conducted between July and December 2018 to assess the prevalence of HIV and related health indicators, including HBV and HCV infections. NAIIS offered home-based testing and counseling (HBTC) with return of results and collected information about households and individuals' background and the uptake of HIV care and treatment services. This survey is the first in Nigeria to estimate national HIV incidence and viral load suppression (VLS). The results provide information on national and regional progress toward control of the HIV epidemic. The survey also estimated the national prevalence of hepatitis B virus (HBV) infection, hepatitis C virus (HCV) infection, HBV/HIV co-infection and HCV/HIV co-infection.

Although previous HIV facility-based sentinel surveillance, population-based studies and programmatic data provided useful knowledge regarding Nigeria's HIV epidemic and HIV control efforts, current population-based information was critically needed to understand the current status of the epidemic and guide future interventions. NAIIS was designed to provide direct estimates of HIV infection risk and burden; the effectiveness and population-level impact of HIV-related prevention, care and treatment interventions implemented in the country; and Nigeria's progress toward the achievement of the UNAIDS 90-90-90 targets.

#### 1.3 Specific Objectives

The goal of the survey was to estimate incidence and prevalence of HIV in Nigeria, to assess the coverage and impact of HIV services at the population level and to characterize HIV-related risk behaviors using a nationally representative sample of persons aged 15-64 years.

#### **Primary Objectives**

To estimate using a household-based, nationally representative sample of adults aged 15-64 years:

- o National-level HIV incidence
- o National- and state-level HIV prevalence
- o National- and state-level prevalence of VLS; defined as HIV ribonucleic acid (RNA) less than 1,000 copies/mL of plasma

#### **Secondary Objectives**

To estimate among adults aged 15-64 years the:

- o Prevalence of HIV-related risk behaviors, knowledge and attitudes
- o Behavioral and demographic determinants of HIV incidence and prevalence
- o National prevalence of HBV infection
- o National prevalence of HCV infection
- o Prevalence of HIV/HBV co-infection among HIV-positive individuals
- o Prevalence of HIV/HCV co-infection among HIV-positive individuals

To estimate among the population of adults aged 15-64 and children aged 0-14 years the:

- Uptake of HIV-related services, especially prevention of mother-to-child HIV transmission (PMTCT)-related services and exposure to HIV interventions
- o Distribution of CD4 T-cell counts among HIV-positive individuals
- To estimate among children aged 0-14 years the:
  - National paediatric HIV prevalence

#### 1.4 References

1. Central Intelligence Agency. The World Fact Book. <u>https://www.cia.gov/library/publications/the-world-factbook/rankorder/2156rank.html</u>. Accessed March 10, 2019.

2. Joint United Nations Programme on HIV/AIDS (UNAIDS). The Gap Report. <u>http://www.unaids.org/sites/default/files/en/media/unaids/contentassets/documents/unaidspublication/2014/UNAIDS\_Gap\_report\_en.pdf</u>. Accessed March 10, 2019.

3. National Agency for the Control of AIDS (NACA), Nigeria. Fact Sheet Anti-Retroviral Therapy (ART). <u>http://naca.gov.ng/fact-sheet-anti-retroviral-therapy-art-2016/</u>. Accessed March 10, 2019.

4. Joint United Nations Programme on HIV/AIDS (UNAIDS). HIV and AIDS Estimates. <u>http://www.unaids.</u> <u>org/en/regionscountries/countries/nigeria</u>. Accessed March 10, 2019.

### 2. Survey Design and Methodology

NAIIS was a nationally representative, cross-sectional, two-stage, population-based survey of households across Nigeria. The target population was children (aged 0-14 years) and adults (aged 15-64 years) living in the community. The survey population excluded military bases and institutionalized children and adults.

#### 2.1 Study Area

Nigeria lies on the west coast of Africa between latitudes 4016' and 13053' north and longitudes 2040' and 14041' east. It occupies approximately 923,768 square kilometers of land stretching from the Gulf of Guinea on the Atlantic coast in the south to the fringes of the Sahara Desert in the north. The country's 2006 Population and Housing Census placed its population at 140,431,790. Nigeria is the most populous black nation in the world. Nigeria is comprised of 36 states and the Federal Capital Territory (FCT) (Figure 2.A) with 774 Local Government Areas (LGAs), categorized into six geopolitical zones (North West, North East, North Central, South West, South East and South South). Nigeria has more than 500 ethnic groups with the most populous being Hausa, Yoruba and Igbo.

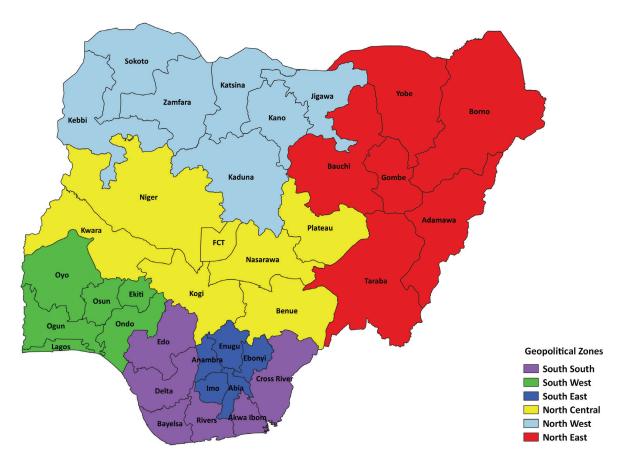


Figure 2.A The six geopolitical zones in Nigeria

#### 2.2 Sampling Methods

NAIIS sampled the population using a two-stage cluster sampling technique, selecting enumeration areas (EAs) followed by households. The sampling frame consisted of 662,855 EAs, a total of 28,900,478 households and 140,431,798 persons based on the 2006 Census, with an average number of households and persons per EA of 44 and 212, respectively. The EAs were mutually exclusive (non-overlapping). This ensured that all households and residents had an equal chance of being included in the survey. Given the variability in household size across Nigeria (range of 4.0 to 5.7 individuals per household), state differences in household size based on the 2006 Census were considered when calculating the number of EAs or primary sampling units (PSUs) to be selected in each state.

The sample size was calculated to provide a representative national estimate of HIV incidence and HIV prevalence among adults aged 15-64 years with a relative standard error (RSE) less than or equal to 9% and 2%, respectively, as well as representative national and state estimates of VLS prevalence among PLHIV with 95% confidence intervals (CIs) between 10% and 15%. The sample size also was calculated to provide HIV prevalence estimates at the state level. One-quarter of the households were randomly selected for inclusion of children, which was designed to provide a representative national estimate of paediatric HIV prevalence with an RSE less than or equal to 0.1205%. The target sample size was 140,974 adults and 31,629 children, for an overall total of 172,603 adults and children.

The first stage of sampling selected 4,035 EAs using a probability proportional to size method. The 4,035 EAs were stratified by Nigeria's 36 states and the FCT. An equal-size approach was proposed with an estimated sample size of 3,700 blood specimens from each state. This number of blood specimens was sufficiently large to obtain robust estimates of HIV prevalence for the population and VLS among HIV-positive individuals in most states. The second stage selected a random sample of households within each EA using an equal probability method. The number of households selected per cluster was 28.

At the request of Lagos State, the NAIIS sample design was adjusted to oversample Lagos State to obtain stable estimates of HIV prevalence in 20 LGAs. The sample of 2,900 responding households with an anticipated 3,677 blood draws among adults aged 15-64 years was increased to a sample of 4,800 responding households with an estimated 6,087 blood draws among adults aged 15-64 years. Lagos State was the only state with a change in the sample design. The evaluation of this "equal-size" approach to the 37 strata, with the larger sample for Lagos State, is presented in Table 2.A.

Table 2.A	Distribution of sampled e	numeration areas		
		Number of	Number of households sampled	Number of households
		households	for inclusion of	sampled for
	Total clusters sampled	sampled for the	children aged 0-14	hepatitis B and C
State	for the survey	survey	years	tests
Abia	101	2,828	601	233
Adamawa	88	2,464	582	265
Akwa Ibom	104	2,912	846	344
Anambra	100	2,800	875	347
Bauchi	87	2,436	845	411
Bayelsa	100	2,800	358	143
Benue	89	2,492	795	357
Borno	92	2,576	799	365
Cross River	106	2,968	641	242
Delta	103	2,884	888	356
Ebonyi	98	2,744	446	178
Edo	103	2,884	697	264
Ekiti	99	2,772	494	203
Enugu	105	2,940	717	275
FCT <sup>1</sup>	105	2,940	309	215
Gombe	86	2,408	424	203
Imo	101	2,828	828	342
Jigawa	89	2,492	811	354
Kaduna	89	2,492	1,133	513
Kano	82	2,296	1,615	817
Katsina	87	2,436	1,061	490
Kebbi	83	2,324	569	276
Коді	92	2,576	637	277
Kwara	95	2,660	470	191
Lagos	600	5,400	2,215	777
Nasarawa	89	2,492	349	204
Niger	89	2,492	735	337
Ogun	112	3,136	877	324
Ondo	105	2,940	756	291
Osun	102	2,856	727	304
Оуо	107	2,996	1,249	491
Plateau	90	2,520	602	261
Rivers	103	2,884	1,125	455
Sokoto	88	2,464	685	312

Table 2.ADistribution of sampled enumeration areas and households by state (continued)							
			Number of	Number of			
		Number of	households sampled	households			
		households	for inclusion of	sampled for			
	Total clusters sampled	sampled for the	children aged 0-14	hepatitis B and C			
State	for the survey	survey	years	tests			
Taraba	91	2,548	435	201			
Yobe	89	2,492	433	206			
Zamfara	86	2408	591	281			
Total	4,035	101,580	28,220	12,105			
<sup>1</sup> FCT – Federal Capital Territory.							

#### 2.3 Eligibility Criteria, Recruitment and Consent Procedures

The eligible survey population included:

- Adults aged 18-64 years and emancipated minors aged 15-17 years living in the selected households and adult visitors who slept in the selected household the night before the survey who were willing and able to provide written consent.
- Children and adolescents aged 10-17 years living in the selected households and visitors in the same age bracket who slept in the selected household the night before the survey who were willing and able to provide written assent and whose parents or guardians were willing and able to provide written permission for their participation.
- Children aged <10 years living in the selected households and child visitors in the same age bracket who slept in the selected household the night before the survey whose parents or guardians were willing and able to provide written consent for their participation.

Interviewers used tablets with an electronic informed consent form to collect consents from potential survey participants (Appendix H). All potential participants were given a printed copy of the consent form in either English, Hausa, Igbo or Yoruba, depending on their preference. Consent was recorded by signing or making a mark on the consent form on the tablet and on a printed copy retained by the participant. Consent processes were conducted in different stages. Written consent to participate in the survey was obtained from the identified household head, after which individual members were rostered during the household interview. Emancipated minors (aged 15-17 years) and adults provided written consent on the tablet separately for the interview and for participation in biomarker testing which included HBTC, return of rapid HIV test results, linkage to care (for identified positives) and CD4 counts during household visits. Receipt of test results was a requirement for participation in the biomarker component. If a participant did not want to receive his or her HIV test result, it was considered a refusal and the survey was concluded. Adults were also asked for written consent to store their blood specimens in a repository to perform additional tests in the future. Individuals with disabilities who were otherwise able to give written consent or provide a mark were offered survey participation. Procedures with illiterate participants or participants with a sight disability involved the use of an impartial witness, chosen by the potential participant, who also signed or made a mark on the consent form on the tablet and on the printed copy. If no witness could be identified, the potential participant or household, if the head of household was sight disabled or illiterate, was considered ineligible. Individuals who were unable to give consent due to cognitive impairment or intellectual disability were considered ineligible to participate.

Children aged 10-17 years were asked for assent to the interview and biomarker components after permission was granted by their parents or guardians. For minors below the age of assent (<10 years), consent was obtained from their parents or guardians for biomarker testing. In both cases, when a parent or guardian refused receipt of the child's HIV test result, it was considered a refusal and the survey was concluded.

#### 2.4 Survey Implementation

#### **Training of Field and Laboratory Staff**

Survey staff received training on all contents of the data collection instruments, tablet use, standard operating procedures (SOPs) and manuals. The training curriculum included:

- Survey objectives
- Advocacy, communication and social mobilization
- Survey design and methods
- Completion of survey forms
- Data collection

- Communication skills
- Staff responsibilities
- Recruitment of participants
- Informed consent procedures
- Ethical guidelines for research including participants' rights, privacy and confidentiality
- Blood collection for children and adults, including venipuncture and finger/heel stick
- Home-based HIV testing, HBV and HCV testing and counseling
- CD4 count measurement using point-of-care (POC) Pima<sup>™</sup> Analyzer
- Biosafety
- Referral of participants to health and social services
- Referrals for adverse events
- Safety procedures in the field
- Protocol deviations, adverse events and reporting of events
- Management and transportation of blood specimens

All laboratory staff were trained in specimen management, including specimen processing, labeling and quality assurance (QA). Central laboratory staff were trained in VL measurement, early infant diagnosis (EID), HIV confirmatory testing and HIV recency testing using the Limiting Antigen (LAg) Avidity enzyme immunoassay (EIA).

#### Survey Staff

Fieldwork was conducted by 1,935 field staff composed of 190 team leaders, 380 interviewers, 380 counselors, 380 drivers, 190 community trackers and 415 field laboratorians. Field teams included a team lead, a tracker, two interviewers, two counselors, two field laboratory technicians and two drivers. All teams consisted of male and female staff who spoke the languages used in the study areas to which they were deployed. The field teams were supervised by a director and field implementation was supported by five zonal technical advisors. Three of these five technical advisors oversaw two zones each. Other technical advisors included the HIV Linkage to Care Lead and the National Linkage to Care Advisor. NAIIS staff included 14 field coordinators managed by a central staff team, who guided and oversaw data collection activities, performed quality checks and provided technical support (Appendix D).

In addition, the laboratory staff were organized at different levels (two senior technical lab advisors, four technical lab advisors, 12 zonal and sub-zonal lab coordinators and 18 lab logisticians). A total of 105 satellite laboratory technicians and 10 central lab specialists processed specimens and performed additional procedures for HIV-1 VL, infant virologic HIV testing (IVT)/EID, quality control (QC) and QA.

#### **Pilot Survey**

After training all field teams, a pilot was conducted, including informed consent, data collection and management, HIV testing and counseling and laboratory activities in 191 EAs with 25 households per EA of the sampling frame, a total of 4,775 households. Participants in the pilot were informed that they were participating in a pilot. Data collected from these households were not included in the survey. Information gathered from the pilot survey was used to modify survey collection instruments and field procedures. All changes in the questionnaire after the pilot were agreed upon by the FMoH/NACA in consultation with stakeholders and approved by the appropriate institutional review boards (IRBs).

#### **Community Sensitization and Mobilization**

Prior to data collection, community sensitization and mobilization were conducted to maximize community support and participation in the survey. Advocacy, communication, sensitization and mobilization activities began four months before fieldwork commenced with a high-level national launch meeting that included key national and regional leaders, mass media and other stakeholders. Activities leveraged existing structures conducted by the state and local government-based mobilization teams in each EA prior to data collection to facilitate ownership of the survey. The mobilization teams held community sensitization meetings, dialogues and rallies; distributed printed information, education and communication materials such as posters, leaflets, flyers and brochures; and conducted house-to-house interpersonal communications with selected households and other community residents. Community mobilization data were captured using paper-based data collection tools and entered into Encuesta, an electronic data collection application.

#### **Supervision**

Field supervisors provided ongoing supervision throughout NAIIS field implementation. Field supervisors supported teams by organizing supplies ensured transport of blood specimens, coordinated community-mobilization efforts, provided technical troubleshooting and checked the quality of household procedures and data collected. During monitoring visits, daily monitoring forms were used for household and individual outcome tracking and verifying completeness of interviews. Household revisits were used to verify results. Assessment of the quality of survey procedures, including adherence to protocol and standard operating procedures (SOPs) and identification of challenges, resolutions and responses to challenges with data collection, was also observed by the monitoring teams. Regular debriefing sessions were held between field-based supervisors and monitoring teams. External monitoring teams, including GoN staff, Orphan Reach (formerly QED Clinical Services), state implementation teams and international monitors, periodically (bi-monthly and monthly) observed data collection activities in the field and laboratories to ensure quality and provide technical support, quality checks and controls. Monitoring reports were circulated to collaborating institutions and the NAIIS Technical Committee. As necessary, survey practices were amended to respond to problems identified during monitoring.

#### **Electronic Monitoring System**

The Activity Information Management System (AIMS) was used to monitor survey progress. Assignment and tracking of devices to staff was managed by the AIMS inventory module. The AIMS dashboard provided a daily comprehensive overview of the data uploaded into the NAIIS server, e.g., data collection coverage, EA completion status, sampled households, household and eligible household member response rates, biomarkers and overall progress towards the achievement of the target sample. Field data quality was reviewed by 30 data monitors who utilized Voice Over Internet Protocol systems to interact with the field teams and correct identified errors. The data monitors were situated at the central office.

#### Survey Instrument and Procedure for Data Collection

Survey instruments comprised of questionnaires and laboratory forms were built into a Computer Assisted Personal Interviewing (CAPI) system where the interviewer uses a tablet to administer and record the interview responses. NAIIS interview staff used Android tablets with Census and Survey Processing System (CSPro) software. All tablets were encrypted and password-protected to ensure confidentiality. The questionnaires were translated into the three major Nigerian languages, Hausa, Igbo and Yoruba. The questionnaire was administered in English and the three major Nigerian languages. Household, individual interview, counseling and field laboratory data were recorded using CAPI. The household questionnaire included modules on head of household eligibility; household schedule, including orphan status; and household characteristics (Appendix E). The individual adult questionnaire was administered to participants aged 15-64 years and included modules on socio-demographic characteristics; marriage; reproduction; children; male circumcision (men only); sexual activity; HIV testing; HIV status, care and treatment; tuberculosis and other health issues; and gender norms (Appendix F). Participants who self-reported their HIV-positive status were asked questions about their HIV care experiences. Parents or guardians responded to questions on their children's (aged 0-14 years) health, participation in HBTC services and, if the child was reported to have and HIV-positive status, their child's HIV care experiences as a part of the adult interview. The individual adolescent questionnaire was administered to participants aged 10-14 years and included modules on socio-demographic characteristics; parental support; alcohol and drugs; condoms; sexual behaviors; HIV knowledge; HIV risk perception; HIV testing; HIV stigma; and social norms, intention to abstain, self-efficacy and assertiveness (Appendix G).

#### 2.5 Laboratory

A detailed description of the NAIIS laboratory methodology is available in Appendix B of this report.

All field test results were returned to participants the same day as the survey interview. All participants, whether HIV-positive or HIV-negative, received two copies of the written test results. Identified HIV-positive participants were referred to health facilities of their choice that offered HIV care and treatment services. Emancipated minors received their results directly. For children aged 10-17 years, results were received by the parents or guardians with the child present, only after receiving parental or guardian permission and child assent. Test results for children aged 0-9 years were disclosed and returned to parents or guardians.

#### Satellite, Mobile and Central Laboratories

A total of 94 satellite laboratories were activated to support NAIIS. Three mobile laboratories supported areas with security challenges or difficult topography. The EAs were mapped and linked to specific satellite and mobile laboratories based on proximity. The Nigeria Centre for Disease Control (NCDC) National Reference Laboratory (NRL) was designated as the central reference laboratory and biorepository for the survey. Trained lab specialists at each satellite and mobile laboratory performed HIV confirmatory tests, conducted QA tests and processed whole blood specimens into plasma aliquots and dried blood spot (DBS) cards for temporary storage at -20°C. HIV rapid test QA was conducted on the first 50 specimens tested by each field laboratory technician. All HIV-positive specimens, whether identified in the field or during QA, underwent confirmatory testing using the Geenius™ HIV 1/2 Supplemental Assay (Bio-Rad, Hercules, California, United States). A positive Geenius™ HIV 1/2 result defined an HIV positive test result for the survey. Specimens that were HIV positive from the HBTC and HIV negative on Geenius™ HIV 1/2 were retested using Western blot and Total Nucleic Acid (TNA) PCR. Central laboratory procedures included HIV VL testing, HIV TNA PCR for infant virologic testing and for confirmation of status of those who self-reported an HIV-positive status but tested HIV negative in HBTC, HIV recency testing, HIV drug resistance testing and long-term storage of specimens at -80°C.

The survey conducted household revisits for investigation of discrepancies between the results of tests in the field and in the laboratory. The specimens collected during the revisit underwent comprehensive retesting in the laboratory. For each case, an analysis of the nature of the discrepancy and potential sources of error was performed to determine the definitive HIV status for the participant and for analysis.

#### 2.6 Data Processing and Analysis

During the household data collection, questionnaire and laboratory data were transmitted between tablets via Bluetooth connection. This facilitated synchronization of household rosters and ensured data collection for each participant followed the correct pathway. All field data collected in CSPro and the Laboratory Data Management System (LDMS) were transmitted to a central server using File Transfer Protocol Secure (FTPS) over a 4G or 3G telecommunication provider at least once a day. Questionnaire data cleaning was conducted using CSPro and SAS 9.4 (SAS Institute Inc., Cary, North Carolina, United States). Laboratory data were cleaned and merged with the final questionnaire database using unique specimen barcodes and study identification numbers.

All results presented in the technical report were based on weighted estimates unless otherwise stated. Analysis weights accounted for sample selection probabilities and adjusted for nonresponse and noncoverage. Nonresponse adjusted weights were calculated for households, individual interviews and individual blood draws in a hierarchical form. Adjustment for nonresponse for initial individual and blood-level weights was based on the development of weighting adjustment cells defined by a combination of variables that were potential predictors of response and HIV status. The nonresponse adjustment cells were defined based on data from the household interview for the adjustment of individual-level weights and from both the household and individual interviews for the adjustment of blood specimen-level weights. Post-stratification adjustment calibrated the nonresponse-adjusted individual and blood weights to make the sum of each set of weights conform to national population totals by sex and five-year age groups.

Descriptive analyses of response rates, characteristics of respondents, HIV prevalence, CD4 count distribution, HIV testing, self-reported HIV status, self-reported ART, VLS, PMTCT indicators, HBV, HCV and sexual behavior were conducted using SAS 9.4.

Incidence estimates were based on the number of HIV infections identified as recent with the HIV-1 LAg Avidity plus VL algorithm and ARV algorithm and obtained using the formula recommended by the WHO Incidence Working Group and Consortium for Evaluation and Performance of Incidence Assays and with assay performance characteristics of a mean duration of recent infection (MDRI) = 130 days (95% CI: 118, 142), a time cutoff (T) = 1.0 year and percentage false recent (PFR) = 0.00.

#### 2.7 Ethical Considerations

All survey procedures were aligned with recommendations from the ethics and regulatory board. Human subject review was conducted by the CDC IRB, the UMB IRB and the Nigerian National Health Research Ethics Committee.

#### **Informed Consent**

The informed consent/assent read to potential participants contained all information required to make an informed decision as to whether to participate, including all elements of informed consent as required by United States 45 Code of Federal Regulations (CFR) 46.116 and 21 CFR 50.25(a)(b). Consent forms (Appendix H) were used for household interviews of adults aged 18-64 years and individual interviews and blood draw for individuals aged 18-64 years. Parental/guardian permission forms were used for interviews and blood draw of minors aged 10-17 years prior to individual assent. Assent forms were used for interviews and biomarkers for minors aged 10-17 years. Parental/guardian permission forms were used for blood draw for minors aged 0-9 years.

### 3. Response Rate

#### 3.1 Background

Household response rates were calculated using the American Association for Public Opinion Research Response Rate 4 method<sup>1</sup> as the number of complete and incomplete household interviews among all eligible households, and those estimated to be eligible among those with unknown eligibility (households not located, not attempted or unreachable). Vacant and destroyed households, nonresidential units and household units with no eligible respondents were considered not eligible and excluded from the calculation.

Individual interview response rates were calculated as the number of individuals interviewed divided by the number of individuals eligible to participate in the survey. Blood draw response rates for adults were calculated as the number of adults who provided a blood specimen divided by the number of adults who were interviewed. Blood draw response rates for children were calculated as the number of children who provided a blood specimen divided by the number of children who provided a blood specimen divided by the number of children were calculated as the number of children who provided a blood specimen divided by the number of children were calculated as the number of children who provided a blood specimen divided by the number of children eligible to participate in the survey.

#### 3.2 Results

Tables 3.A and 3.B describe the household, individual interview and blood draw response rates.

#### 3.2.1 Key Findings

- A total of 101,267 households were selected, 89,345 were occupied and 83,909 completed the household interview (Table 3.A).
- For adults aged 15-64 years, interview response rate was 91.6% for women and 88.2% for men; blood draw response rate was 92.9% for women and 93.6% for men (Table 3.B).
- For adolescents aged 10-14 years, interview response rate was 86.8% for women and 86.2% for men; blood draw response rate was 91.2% for women and 92.3% for men (Table 3.B).
- For children aged 0-9 years, blood draw response rate was 68.5% for women and men (Table 3.B).

#### 3.3 References

1. American Association for Public Opinion Research (AAPOR). Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. 9th edition. <u>http://www.aapor.org/AAPOR\_Main/media/publications/Standard-Definitions20169theditionfinal.pdf</u>. Accessed March 10, 2019.

Table 3.A         Household response rates								
Place of residence by number of households selected, occupied and interviewed and household								
response rates (unweighted), NAIIS 2018	response rates (unweighted), NAIIS 2018							
	Place of residence							
Result	Urban	Rural	Total					
Household interviews								
Households selected	43,932	57,335	101,267					
Households occupied	39,288	50,057	89,345					
Households interviewed	36,314	47,595	83,909					
Household response rate <sup>1</sup> (unweighted)	90.1	88.3	89.1					
<sup>1</sup> Household response rate was calculated using the American Association for Public Opinion Research								
(AAPOR) Response Rate 4 (RR4) method:								
http://www.aapor.org/AAPOR_Main/media/publications/Standard-Definitions20169theditionfinal.pdf								

Table 3.BInterview and blood draw	w respons	e rates				
Place of residence and sex by number of interviews <sup>1</sup> and blood draws <sup>2</sup> (unweighter	0		nd respons	se rates for i	individual	
	Place of residence					
	U	Irban	F	Rural	Total	
Result	Males	Females	Males	Females	Males	Females
Eligible individuals, aged 0-9 years						
Number of eligible individuals	6,748	6,584	10,183	9,622	16,931	16,206
Blood draw response rate <sup>2</sup>	68.7	67.6	68.4	69.2	68.5	68.5
Eligible individuals, aged 10-14 years						
Number of eligible individuals	2,775	2,724	3,469	3,357	6,244	6,081
Interview response rate <sup>1</sup>	86.3	87.7	86.2	86.1	86.2	86.8
Blood draw response rate <sup>2</sup>	92.5	91.0	92.2	91.4	92.3	91.2
Eligible individuals, aged 15-24 years						
Number of eligible individuals	12,923	15,037	16,990	20,479	29,913	35,516
Interview response rate <sup>1</sup>	84.3	89.4	85.6	89.7	85.0	89.6
Blood draw response rate <sup>2</sup>	93.2	92.9	93.3	93.3	93.2	93.1
Eligible individuals, aged 15-49 years						
Number of eligible individuals	34,223	41,520	44,838	55,486	79,061	97,006
Interview response rate <sup>1</sup>	84.8	91.2	89.5	91.4	87.5	91.3
Blood draw response rate <sup>2</sup>	92.9	92.7	93.9	93.3	93.5	93.0
Eligible individuals, aged 15-64 years						
Number of eligible individuals	40,559	48,116	53,882	64,439	94,441	112,555
Interview response rate <sup>1</sup>	85.4	91.3	90.4	91.7	88.2	91.6
Blood draw response rate <sup>2</sup>	92.9	92.4	94.0	93.3	93.6	92.9

<sup>1</sup>Interview response rate – number of individuals interviewed/number of eligible individuals. <sup>2</sup>Blood draw response rate – number of individuals who provided blood/number of individuals interviewed.

### 4. SURVEY HOUSEHOLD CHARACTERISTICS

#### 4.1 Background

Household compositions are described in terms of sex of the head of household and size of the household. The age structure of the *de facto* household population (i.e., persons who slept in the household the night before) is described by sex as well as urban/rural residence.

#### 4.2 Household Composition

NAIIS documented 83,909 heads of households for all states (Table 4.A). Approximately 57% of the surveyed households resided in rural areas.

#### 4.3 Results

The NAIIS households' characteristics and distributions are detailed in Tables 4.A to 4.F and Figures 4.A to 4.E.

#### 4.3.1 Key Findings

- Among the *de facto* household population, 47.9% were men and 52.1% were women (Table 4.B).
- Nationally, 29.4% of heads of household were women and 70.6% were men. Among heads of households, 3.4% of female heads of households were HIV-positive compared to 1.3% of male heads of household (Table 4.A, Table 4.F).
- Among all households, 3.1% had at least one HIV-positive member. Of households with at least one HIV-positive member, 87.9% had one HIV-positive member and 11.2% had two HIV-positive members (Table 4.D, Table 4.E).

Percent distr	ibution of	household			of residenc	e and sex, N	AIIS 2018		
			Place of r	residence				Total	
		Urban			Rural		Total		
<b>.</b>	Male	Female	Total	Male	Female	Total	Male	Female	Total
State	Percent	Percent	Number	Percent	Percent	Number	Percent	Percent	Number
Abia	59.1	40.9	829	60.5	39.5	1,760	60.0	40.0	2,589
Adamawa	78.3	21.7	641	84.8	15.2	1,489	83.1	16.9	2,130
Akwa Ibom	67.7	32.3	316	60.1	39.9	2,232	61.3	38.7	2,548
Anambra	60.0	40.0	1,941	54.7	45.3	399	59.2	40.8	2,340
Bauchi	91.5	8.5	287	96.2	3.8	1,937	95.6	4.4	2,224
Bayelsa	54.9	45.1	586	56.8	43.2	1,777	56.4	43.6	2,363
Benue	64.8	35.2	329	67.5	32.5	1,916	67.2	32.8	2,245
Borno	72.0	28.0	564	80.5	19.5	281	74.7	25.3	845
Cross River	62.6	37.4	493	67.3	32.7	1,905	66.5	33.5	2,398
Delta	50.9	49.1	1,018	50.8	49.2	1,483	50.8	49.2	2,501
Ebonyi	58.3	41.7	478	56.8	43.2	2,133	57.1	42.9	2,611
Edo	53.0	47.0	1,417	64.3	35.7	1,151	57.4	42.6	2,568
Ekiti	56.6	43.4	1,886	63.1	36.9	598	58.0	42.0	2,484
Enugu	64.0	36.0	721	54.4	45.6	1,724	57.0	43.0	2,445
FCT <sup>1</sup>	65.6	34.4	2,112	83.6	16.4	184	67.2	32.8	2,296
Gombe	91.3	8.7	649	92.1	7.9	1,606	91.9	8.1	2,255
Imo	59.4	40.6	740	63.5	36.5	1,796	62.3	37.7	2,536
Jigawa	90.0	10.0	1,142	95.6	4.4	1,091	92.6	7.4	2,233
Kaduna	82.1	17.9	1,173	87.7	12.3	842	84.4	15.6	2,015
Kano	86.6	13.4	1,219	95.9	4.1	686	89.9	10.1	1,905
Katsina	82.3	17.7	304	90.1	9.9	1,629	88.7	11.3	1,933
Kebbi	84.3	15.7	362	89.6	10.4	1,584	88.7	11.3	1,946
Коді	56.6	43.4	1,310	64.3	35.7	947	59.9	40.1	2,257
Kwara	60.3	39.7	1,155	76.3	23.7	1,010	67.5	32.5	2,165
Lagos	58.4	41.6	3,369	64.4	35.6	449	58.7	41.3	3,818
Nasarawa	78.8	21.2	659	82.0	18.0	1,447	80.9	19.1	2,106
Niger	75.0	25.0	472	87.7	12.3	1,809	85.5	14.5	2,281
Ogun	53.9	46.1	1,465	61.6	38.4	878	56.6	43.4	2,343
Ondo	55.1	44.9	1,207	61.7	38.3	1,339	58.8	41.2	2,546
Osun	51.1	48.9	2,233	63.8	36.2	337	52.9	47.1	2,570
Оуо	53.9	46.1	1,891	71.9	28.1	825	58.9	41.1	2,716
Plateau	62.4	37.6	781	74.8	25.2	1,534	70.8	29.2	2,315
Rivers	66.9	33.1	775	66.1	33.9	1,449	66.4	33.6	2,224

Table 4.A         Household composition by state, place of residence and sex of head of household (continued)										
Percent distribution of household heads by state, place of residence and sex, NAIIS 2018										
		Urban			Rural		Total			
	Male Female Total		Male	Male Female Total			Female	Total		
State	Percent	Percent	Number	Percent	Percent	Number	Percent	Percent	Number	
Sokoto	85.3	14.7	594	86.1	13.9	1,320	85.8	14.2	1,914	
Taraba	78.3	21.7	397	84.0	16.0	1,959	83.0	17.0	2,356	
Yobe	87.4	12.6	368	92.2	7.8	1,393	91.0	9.0	1,761	
Zamfara	83.9	16.1	431	85.8	14.2	696	85.0	15.0	1,127	
Total	65.7	34.3	36,314	75.1	24.9	47,595	70.6	29.4	83,909	
<sup>1</sup> FCT – Federal Capital Territory.										

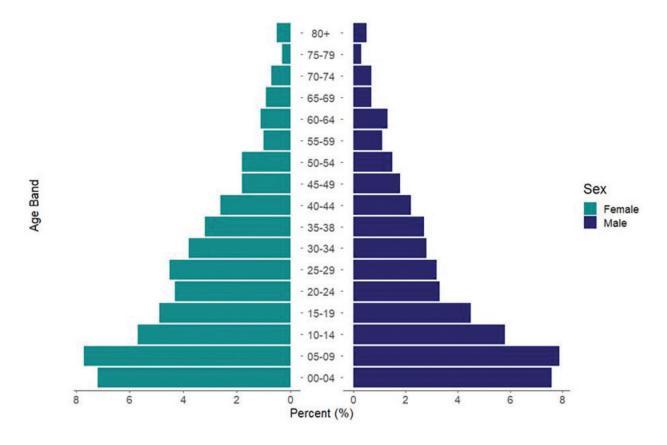


Figure 4.A Distribution of the *de facto* population by sex and age, NAIIS 2018

Table 4.B	Distributio	on of <i>de facto</i> h	ousehold popu	lation by sex and	d age				
Percent distribution of <i>de facto</i> household population by sex and five-year age group, NAIIS 2018									
_	Μ	ales	Fen	nales	Total				
Age (years)	Percent	Number	Percent	Number	Percent	Number			
0-4	7.6	28,284	7.2	27,122	14.8	55,406			
5-9	7.9	29,850	7.6	28,473	15.5	58,323			
10-14	5.8	22,235	5.7	21,353	11.5	43,588			
15-19	4.5	17,146	4.9	18,898	9.4	36,044			
20-24	3.3	12,768	4.3	16,619	7.6	29,387			
25-29	3.2	12,669	4.5	17,410	7.7	30,079			
30-34	2.8	10,870	3.8	14,397	6.6	25,267			
35-39	2.7	10,337	3.2	12,389	5.9	22,726			
40-44	2.2	8,389	2.6	10,022	4.8	18,411			
45-49	1.8	6,883	1.8	7,272	3.6	14,155			
50-54	1.5	6,002	1.8	6,892	3.3	12,894			
55-59	1.1	4,356	1.0	3,988	2.1	8,344			
60-64	1.3	5,024	1.1	4,670	2.4	9,694			
65-69	0.7	2,690	0.9	3,863	1.6	6,553			
70-74	0.7	2,695	0.7	2,851	1.4	5,546			
75-79	0.3	1,393	0.3	1,311	0.7	2,704			
≥80	0.5	2,131	0.5	2,322	1.1	4,453			
Total	47.9	183,722	52.1	199,852	100.0	383,574			

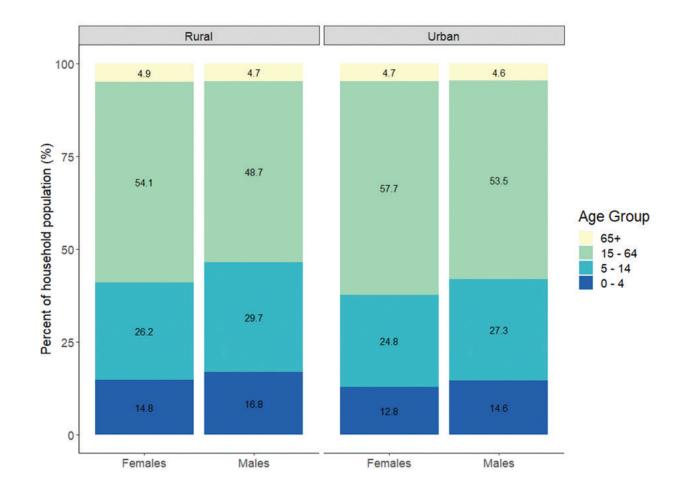


Figure 4.8 Household population by age, sex and residence, NAIIS 2018

Table 4.	С	Distributi	ion of de	e <i>facto</i> hou	sehold	oopulation	by sex, age and place of residence								
Percent distribution of the <i>de facto</i> household population by sex, age and place of residence, NAIIS 2018															
	Urban							Rural							
	Μ	Males Females		Total		Males		Females		Total					
Age (years)	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number	Per- cent	Number			
0-4	14.6	10,516	12.8	10,299	13.7	20,815	16.8	17,768	14.8	16,823	15.8	34,591			
5-14	27.3	19,998	24.8	19,769	26.0	39,767	29.7	32,087	26.2	30,057	27.9	62,144			
15-64	53.5	40,559	57.7	48,117	55.7	88,676	48.7	53,885	54.1	64,440	51.5	118,325			
≥65	4.6	3,601	4.7	4,316	4.7	7,917	4.7	5,308	4.9	6,031	4.8	11,339			
Total	100.0	74,674	100.0	82,501	100.0	157,175	100.0	109,048	100.0	117,351	100.00	226,399			

Table 4.D	Prevalen	ice of H	IIV-affe	cted hous	eholds							
Percentage of h place of resider			at least	one <i>de fa</i> o	<i>cto</i> housel	nold m	nembei	r who test	ed HIV po	sitive k	by state	e and
		Ur	ban	an Rural Total								
Socio- demographic characteristics	Percent	LCL <sup>1</sup>	UCL <sup>2</sup>	Number	Percent	LCL <sup>1</sup>	UCL <sup>2</sup>	Number	Percent	LCL1	UCL <sup>2</sup>	Number
State												
Abia	4.9	3.3	6.6	766	5.2	4.1	6.3	1,550	5.1	4.2	6.1	2,316
Adamawa	4.9	3.2	6.6	599	1.9	1.0	2.9	1,402	2.7	1.8	3.6	2,001
Akwa Ibom	7.8	5.5	10.1	293	9.8	8.2	11.3	1,915	9.4	8.0	10.8	2,208
Anambra	5.0	3.5	6.6	1,674	5.8	3.0	8.7	331	5.1	3.7	6.5	2,005
Bauchi	1.9	0.0	3.8	275	1.2	0.6	1.8	1,864	1.3	0.8	1.9	2,139
Bayelsa	3.7	2.0	5.4	533	3.1	2.3	4.0	1,545	3.3	2.5	4.1	2,078
Benue	9.7	5.0	14.3	316	9.4	7.4	11.4	1,771	9.4	7.7	11.3	2,087
Borno	2.3	0.9	3.8	509	2.0	0.0	4.2	261	2.2	1.1	3.4	770
Cross River	3.2	1.2	5.2	452	3.9	2.9	5.0	1,702	3.8	2.9	4.8	2,154
Delta	3.6	2.5	4.8	875	3.2	1.9	4.4	1,220	3.4	2.5	4.3	2,095
Ebonyi	2.3	0.9	3.7	442	2.0	1.3	2.7	1,959	2.0	1.4	2.7	2,401
Edo	3.2	2.2	4.1	1,229	3.4	2.1	4.6	983	3.2	2.6	4.0	2,212
Ekiti	1.3	0.7	1.9	1,500	1.1	0.1	2.1	480	1.3	0.8	1.8	1,980
Enugu	2.4	1.2	3.6	655	4.5	3.3	5.7	1,448	3.9	3.0	4.9	2,103
FCT <sup>3</sup>	3.3	2.3	4.2	1,904	4.2	0.6	7.7	177	3.3	2.4	4.3	2,081
Gombe	5.4	3.4	7.5	630	2.4	1.0	3.8	1,545	3.2	2.0	4.5	2,175
Imo	3.0	1.4	4.6	661	4.8	3.3	6.3	1,533	4.2	3.1	5.4	2,194
Jigawa	1.0	0.4	1.5	1,083	0.6	0.0	1.2	1,040	0.8	0.4	1.2	2,123
Kaduna	3.2	1.7	4.7	1,117	1.7	0.4	2.9	805	2.6	1.6	3.6	1,922
Kano	1.5	0.5	2.6	1,064	1.0	0.2	1.7	634	1.3	0.6	2.1	1,698
Katsina	1.1	0.0	2.6	280	0.5	0.1	1.0	1,496	0.6	0.2	1.1	1,776
Kebbi	3.2	1.1	5.2	339	0.8	0.4	1.3	1,471	1.3	0.7	1.9	1,810
Kogi	1.9	0.9	2.9	1,133	2.1	0.9	3.2	831	2.0	1.3	2.7	1,964
Kwara	2.1	1.1	3.1	973	1.7	0.8	2.5	845	1.9	1.2	2.6	1,818
Lagos	2.6	2.0	3.2	3,046	5.0	2.7	7.3	384	2.8	2.3	3.3	3,430
Nasarawa	4.0	2.4	5.5	623	4.8	3.4	6.2	1,359	4.6	3.6	5.6	1,982
Niger	3.3	0.9	5.7	448	1.6	1.0	2.3	1,679	1.9	1.2	2.6	2,127
Ogun	3.1	2.1	4.1	1,235	2.4	0.9	3.9	688	2.9	2.0	3.7	1,923
Ondo	1.7	0.7	2.8	1,016	2.1	1.2	3.0	1,138	1.9	1.2	2.6	2,154
Osun	1.7	1.1	2.4	1,713	1.4	0.0	2.9	250	1.7	1.1	2.3	1,963
Оуо	1.9	1.2	2.6	1,575	1.1	0.3	1.9	643	1.7	1.1	2.3	2,218
, Plateau	5.1	3.5	6.8	, 746	2.7	2.0	3.5	1,458	3.5	2.7	4.3	2,204

Table 4.D	Prevalen	ce of H	IIV-affe	cted hous	eholds (co	ontinu	ed)					
Percentage of h place of reside			at least	one <i>de fa</i> o	<i>cto</i> housel	hold m	nembei	r who test	ed HIV po	sitive k	by state	and
		Ur	ban			Ru	ural			Тс	otal	
Socio- demographic characteristics	Percent	LCL <sup>1</sup>	UCL <sup>2</sup>	Number	Percent	LCL <sup>1</sup>	UCL <sup>2</sup>	Number	Percent	LCL1	UCL <sup>2</sup>	Number
State												
Rivers	5.4	3.4	7.5	696	7.9	6.2	9.6	1,279	7.0	5.7	8.4	1,975
Sokoto	0.7	0.0	1.5	528	0.9	0.3	1.5	1,217	0.8	0.3	1.3	1,745
Taraba	8.0	4.2	11.8	384	7.0	5.2	8.7	1,881	7.1	5.6	8.7	2,265
Yobe	1.4	0.0	2.9	331	0.7	0.2	1.2	1,321	0.8	0.3	1.4	1,652
Zamfara	0.2	0.0	0.6	389	1.0	0.3	1.8	641	0.7	0.2	1.2	1,030
Wealth quintile												
Lowest	1.2	0.6	1.7	1,528	1.8	1.5	2.1	12,272	1.7	1.5	2.0	13,800
Second	2.0	1.4	2.6	2,677	2.8	2.4	3.2	11,466	2.6	2.3	3.0	14,143
Middle	2.9	2.4	3.5	5,620	4.4	3.9	4.9	10,337	3.8	3.5	4.2	15,957
Fourth	3.0	2.6	3.5	9,936	5.0	4.3	5.6	6,261	3.7	3.4	4.1	16,197
Highest	3.0	2.6	3.4	12,271	4.8	3.8	5.9	2,410	3.3	2.9	3.6	14,681
Total	2.8	2.6	3.1	32,032	3.3	3.1	3.6	42,746	3.1	2.9	3.2	74,778
<sup>1</sup> LCL – lower co												
<sup>2</sup> UCL – upper co												
<sup>3</sup> FCT – Federal	Capital Tei	ritory.										

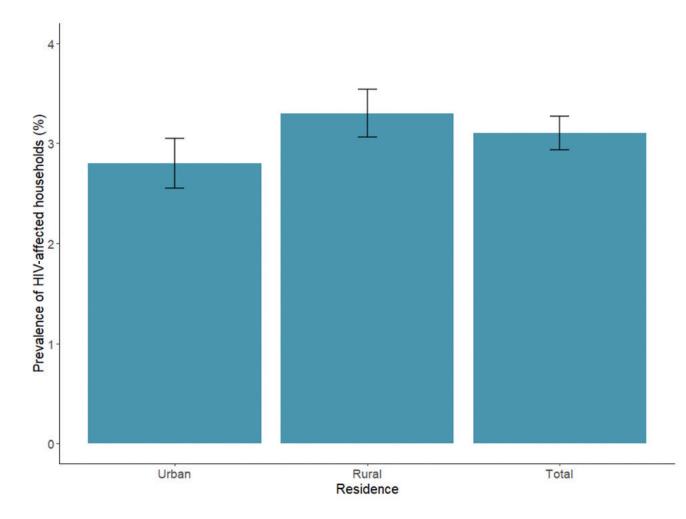


Figure 4.C Prevalence of HIV-affected households by place of residence, NAIIS 2018

Percent distribution of hous ber of HIV-positive househo				•	sehold memb	per by num					
			Place o	of residence							
Urban Rural Total											
Number of HIV-positive household members	Percent	Number	Percent	Number	Percent	Number					
1	88.5	855	87.4	1,276	87.9	2,131					
2	10.8	104	11.4	170	11.2	274					
3	*	5	*	15	*	20					
≥4	*	0	*	0	*	0					
Total	100.0	964	100.0	1,461	100.0	2,425					

Table 4.F Prevale	nce of households wit	h an HIV-positive l	nead of household	
Percentage of househol place of residence, NAII	•	head of househol	d by sex of head of	household and
Socio-demographic characteristics	Percent	LCL <sup>1</sup>	UCL <sup>2</sup>	Number
Sex of head of household				
Male	1.3	1.2	1.5	43,827
Female	3.4	3.1	3.8	18,398
Place of residence				
Urban	1.9	1.7	2.1	26,394
Rural	2.0	1.8	2.2	35,831
Total	1.9	1.8	2.1	62,225
<sup>1</sup> LCL – lower confidence				
<sup>2</sup> UCL – upper confidence	e interval.			

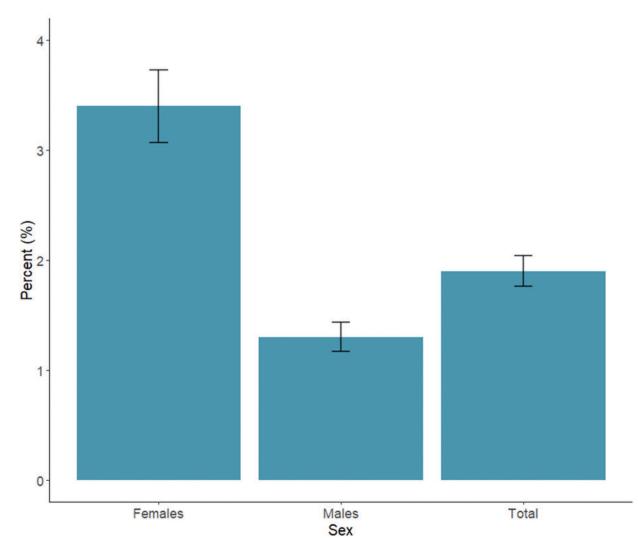


Figure 4.E Prevalence of households with an HIV-positive head of household by sex, NAIIS 2018

# 5. SURVEY RESPONDENT CHARACTERISTICS

### 5.1 Background

This chapter summarizes the basic demographic and socioeconomic characteristics of survey respondents (children (aged  $\leq$ 14 years), adolescents (aged 10-14 years) and adults (aged 15-64 years). The key indicators in this report are stratified according to these characteristics.

#### 5.2 Demographic Characteristics of the Adult Population

The distribution of the adult population showed a variation between rural (51.8%) and urban (48.2%) dwellers but no variation by sex (Table 5.A).

#### 5.3 Results

Tables 5.A to 5.C present the demographic characteristics of NAIIS respondents.

#### 5.3.1 Key Findings

- Among adult respondents, 87.3% were aged 15-49 years (Table 5.A).
- Among children, 35.5% were aged 5-9 years (Table 5.B).
- Among adult respondents, 57.5% were either married or living together with a higher proportion among women (64.1%) than men (51.2%) (Table 5.A).
- Among adult respondents, 41.8% attained secondary education while 18.0% had no education (Table 5.A).

Table 5.A Demographic chara	acteristics o	of the adult	population			
Percent distribution of <i>de facto</i> pop	-	ed 15-64 yea	rs by sex an	d other sele	cted socio-	
demographic characteristics, NAIIS 2						
		ales		nales		tal
Socio-demographic characteristics	Percent	Number	Percent	Number	Percent	Numbe
Place of residence						
Urban	48.1	34,635	48.2	43,953	48.2	78,588
Rural	51.9	48,705	51.8	59,112	51.8	107,817
Marital status						
Never married	46.8	34,157	25.9	24,339	36.6	58,496
Married or living together	51.2	47,079	64.1	67,382	57.5	114,461
Divorced or separated	1.5	1,346	3.1	3,289	2.3	4,635
Widowed	0.6	619	6.9	7,939	3.7	8,558
Type of union						
In polygynous union	9.3	8,611	22.7	23,041	15.9	31,652
Not in polygynous union	41.6	38,139	41.2	43,889	41.5	82,028
Not currently in union	49.0	36,122	36.1	35,567	42.7	71,689
Education <sup>1</sup>						
No education	10.6	9,878	25.7	27,876	18.0	37,754
Primary	16.0	14,588	18.4	20,078	17.2	34,666
Secondary	46.1	36,387	37.3	37,606	41.8	73,993
Tertiary	18.8	15,976	11.2	11,825	15.1	27,801
Others	8.4	6,443	7.4	5,561	7.9	12,004
Wealth quintile						
Lowest	17.9	15,831	17.6	18,465	17.8	34,296
Second	18.7	16,154	18.9	19,956	18.8	36,110
Middle	19.7	17,529	20.1	22,201	19.9	39,730
Fourth	21.1	17,573	21.4	22,311	21.3	39,884
Highest	22.6	16,253	22.0	20,132	22.3	36,385
Age (years)						
15-19	19.8	14,323	19.5	16,669	19.7	30,992
20-24	16.4	11,111	16.2	15,141	16.3	26,252
25-29	13.9	11,322	13.8	16,022	13.8	27,344
30-34	12.1	9,680	12.0	13,295	12.0	22,975
35-39	10.4	9,187	10.4	11,477	10.4	20,664
40-44	8.5	7,380	8.5	9,275	8.5	16,655
45-49	6.6	6,166	6.6	6,714	6.6	12,880
50-54	5.2	5,432	5.4	6,418	5.3	11,850
55-59	4.0	4,011	4.3	3,673	4.2	7,684
		.,		-,		9,109

Cable 5.ADemographic characteristics of the adult population (continued)												
Percent distribution of <i>de facto</i> population aged 15-64 years by sex and other selected socio- demographic characteristics, NAIIS 2018												
Males Females Total												
Socio-demographic characteristics	io-demographic characteristics Percent Number Percent Number Percent Num											
Total 15-24 years	36.2	25,434	35.8	31,810	36.0	57,244						
Total 15-49 years	87.7	69,169	86.9	88,593	87.3	157,762						
Total 15-64 years	100.0	83,340	100.0	103,065	100.0	186,405						
<sup>1</sup> Education categories refer to the hi	ghest level o	of education	attended, w	hether that	level was co	ompleted.						

Table 5.B Demog	graphic charac	teristics of th	e paediatric	population (0	-14 years old	)
Percent distribution of socio-demographic cha	<b>J</b> 1 1	0	14 years by s	sex and other	selected	
	Ma	lles	Ferr	nales	То	otal
Socio-demographic characteristics	Percent	Number	Percent	Number	Percent	Number
Age						
0-17 months	8.5	2,131	8.1	2,021	8.3	4,152
18-59 months	24.0	6,089	23.3	5,748	23.6	11,837
5-9 years	35.0	8,628	36.0	8,366	35.5	16,994
10-14 years	32.6	5,385	32.6	5,280	32.6	10,665
Place of residence						
Urban	48.1	9,104	49.2	8,943	48.6	18,047
Rural	51.9	13,129	50.8	12,472	51.4	25,601
Geopolitical zone						
North West	40.9	6,588	42.0	6,495	41.4	13,083
North East	14.6	3,761	13.5	3,470	14.1	7,231
North Central	9.2	3,196	9.0	3,039	9.1	6,235
South East	7.7	2,591	7.9	2,496	7.8	5,087
South South	10.1	2,706	10.3	2,718	10.2	5,424
South West	17.5	3,391	17.3	3,197	17.4	6,588
Total 0-4 years	32.4	8,220	31.4	7,769	31.9	15,989
Total 0-14 years	100.0	22,233	100.0	21,415	100.0	43,648

#### Percent distribution of the *de facto* population aged 10-14 years by sex and selected sociodemographic characteristics, NAIIS 2018 Females Males Total Socio-demographic characteristics Number Percent Percent Number Percent Number Place of residence Urban 46.1 2,394 47.4 2,388 46.8 4,782 Rural 5,883 53.9 2,991 52.6 2,892 53.2 Geopolitical zone North West 28.7 30.5 29.6 2,961 1,455 1,506 North East 15.2 15.5 1,682 15.8 850 832 North Central 13.4 786 12.6 741 13.0 1,527 South East 11.0 675 11.0 630 11.0 1,305 South South 12.3 735 12.8 742 12.5 1,477 South West 18.7 884 18.0 829 18.4 1,713 5,280 Total 10-14 years 100.0 5,385 100.0 100.0 10,665

### Table 5.C Demographic characteristics of the young adolescent population

# 6. HIV INCIDENCE

### 6.1 Background

HIV incidence, the measure of new HIV infections in a population over time, provides important information on the status of the HIV epidemic. HIV incidence can be used for effective targeted HIV prevention planning in groups that are most vulnerable to recent HIV infection and to measure the impact of HIV prevention interventions. For the purposes of this analysis, HIV incidence among adults aged 15-64 years is expressed as the cumulative incidence or risk of new infections in a 12-month period, a close approximation to the instantaneous incidence rate (Appendix B). NAIIS was not powered to estimate incidence at the sub-national level or across sub-groups.

#### 6.2 Results

Tables 6.A and 6.B present HIV incidence in Nigeria at the time of the survey.

### 6.2.1 Key Findings

- The annual incidence of HIV among adults aged 15-64 years was 0.08% (women 0.12%, men 0.05%). This corresponds to 8 new infections per 10,000 persons per year (Table 6.A).
- Annual HIV incidence peaked at 0.22% among women aged 25-34 years and at 0.10% among men in the same age group (Table 6.A).

Annual incidence of HIV among persons aged 15-64 years by sex and age using LAg/VL<sup>1</sup> algorithm, NAIIS 2018

	Ma	ales	Fem	ales	Total			
Age (years)	Percentage annual incidence <sup>2</sup>	annual 95% Cl <sup>3</sup> incidence <sup>2</sup>		95% Cl <sup>3</sup>	Percentage annual incidence <sup>2</sup>	95% Cl <sup>3</sup>		
15-24	0.03	(0.00,0.07)	0.05	(0.01,0.10)	0.04	(0.01,0.07)		
25-34	0.10	(0.01,0.19)	0.22	(0.08,0.37)	0.16	(0.07,0.25)		
35-49	0.05	(0.00,0.15)	0.10	(0.02,0.18)	0.08	(0.02,0.14)		
15-49	0.06	(0.02,0.10)	0.12	(0.07,0.17)	0.09	(0.05,0.12)		
15-64	0.05	(0.02,0.09)	0.12	(0.07,0.17)	0.08	(0.05,0.12)		

<sup>1</sup> LAg/VL: Limiting antigen/viral load.

<sup>2</sup> Relates to <u>Global AIDS Monitoring indicator 3.1: HIV incidence.</u>

<sup>3</sup> 95% CI (confidence interval) indicates the interval within which the true population parameter is expected to fall 95% of the time.

Table 6.B	Annual HIV	incidence usin	g LAg/VL/ARV <sup>1</sup>	testing algorith	ım						
Annual incidence of HIV per 10,000 among persons aged 15-64 years by sex and age using LAg/VL/ ARV <sup>1</sup> algorithm, NAIIS 2018											
	М	ales	Fen	nales	Тс	otal					
Age (years)	Percentage annual incidence <sup>2</sup>	95% Cl <sup>3</sup>	Percentage annual incidence <sup>2</sup>	95% Cl <sup>3</sup>	Percentage annual incidence <sup>2</sup>	95% Cl <sup>3</sup>					
15-24	0.03	(0.00,0.07)	0.05	(0.01,0.10)	0.04	(0.01,0.07)					
25-34	0.10	(0.01,0.19)	0.21	(0.07,0.35)	0.15	(0.07,0.24)					
35-49	0.05	(0.00,0.15)	0.10	(0.02,0.18)	0.08	(0.01,0.14)					
15-49	0.06	(0.02,0.10)	0.11	(0.06,0.16)	0.08	(0.05,0.12)					
15-64	0.05	(0.02,0.09)	0.11	(0.06,0.16)	0.08	(0.05,0.11)					
<sup>1</sup> LAg/VL/AR	V: Limiting antig	gen/viral load/a	ntiretrovirals.								

<sup>2</sup> Relates to <u>Global AIDS Monitoring indicator 3.1: HIV incidence</u>.

<sup>3</sup> 95% CI (confidence interval) indicates the interval within which the true population parameter is expected to fall 95% of the time.

# 7. HIV PREVALENCE

### 7.1 Background

This chapter presents representative estimates of HIV prevalence among adults aged 15-64 years at the national and state level by selected demographic and behavioral characteristics. HIV prevalence testing was conducted in each household using a serological rapid diagnostic testing algorithm based on Nigeria's National HIV Testing Guidelines, with laboratory confirmation of seropositive specimens using a supplemental assay. Appendix A describes the sample design and Appendix B describes the NAIIS HIV testing methodology. Appendix C provides estimates of sampling errors.

### 7.2 Results

Tables 7.A to 7.C and Figures 7.A to 7.D present HIV prevalence data from the survey.

### 7.2.1 Key Findings

- HIV prevalence among adults aged 15-64 years was 1.4%. This was lower among men (1.0%) than women (1.8%) and lower in urban (1.3%) areas than in rural (1.5%) areas (Table 7.A).
- HIV prevalence among adults aged 15-49 years was 1.3%. This was lower among men (0.8%) than women (1.7%) and lower in urban (1.1%) than in rural (1.4%) areas (Table 7.B).
- Among adults aged 15-49 years, Akwa Ibom State had the highest HIV prevalence (4.8%) followed by Benue State (4.3%) and Rivers State (3.6%) (Table 7.B).
- Among adults aged 15-49 years, Jigawa and Katsina States had the lowest prevalence at 0.3% each (Table 7.B).

Table 7.A HIV prevalence	-		-					aged 15-6	-	ctorict		115 2010
	among pe		ales	-04 years i	by sex and		nales	o-uemogra			otal	113 2018
Socio- demographic characteristics	Per- centage HIV positive	LCL <sup>1</sup>	UCL <sup>2</sup>	Number	Per- cent- age HIV positive	LCL1	UCL <sup>2</sup>	Number	Per- centage HIV positive	LCL <sup>1</sup>	UCL <sup>2</sup>	Number
Place of												
residence												
Urban	0.9	0.8	1.0	32,172	1.6	1.5	1.8	40,618	1.3	1.1	1.4	72,790
Rural	1.0	0.9	1.2	45,798	1.9	1.8	2.1	55,128	1.5	1.4	1.6	100,926
State												
Abia	1.7	1.2	2.3	2,306	2.2	1.7	2.7	3,461	2.0	1.6	2.4	5,767
Adamawa	0.8	0.5	1.1	2,601	1.4	0.8	2.0	2,685	1.1	0.7	1.4	5,286
Akwa Ibom	2.9	2.1	3.7	1,939	6.7	5.5	7.8	2,442	4.8	4.0	5.5	4,381
Anambra	1.8	1.1	2.4	1,922	2.6	1.8	3.4	2,731	2.2	1.6	2.8	4,653
Bauchi	0.4	0.1	0.7	2,921	0.6	0.2	1.0	3,203	0.5	0.2	0.8	6,124
Bayelsa	1.4	0.9	2.0	1,722	2.1	1.5	2.7	2,170	1.7	1.3	2.2	3,892
Benue	3.5	2.6	4.3	2,156	6.3	5.0	7.6	2,410	4.8	3.9	5.7	4,566
Borno	1.0	0.2	1.8	795	1.2	0.5	1.9	1,020	1.1	0.5	1.7	1,815
Cross River	1.6	1.1	2.0	2,116	2.1	1.4	2.7	2,501	1.8	1.3	2.3	4,617
Delta	1.2	0.6	1.8	1,580	2.2	1.5	2.9	2,349	1.7	1.3	2.2	3,929
Ebonyi	0.7	0.4	1.0	2,400	0.9	0.6	1.2	4,013	0.8	0.6	1.0	6,413
Edo	1.2	0.7	1.6	1,891	2.3	1.7	3.0	2,427	1.8	1.4	2.2	4,318
Ekiti	0.3	0.1	0.6	1,606	1.1	0.6	1.6	2,007	0.7	0.4	1.0	3,613
Enugu	1.3	0.7	1.8	1,806	2.2	1.6	2.8	2,950	1.8	1.3	2.2	4,756
FCT <sup>3</sup>	0.8	0.4	1.1	2,271	2.2	1.5	2.9	2,360	1.4	1.0	1.8	4,631
Gombe	0.8	0.4	1.2	3,283	1.6	1.0	2.3	3,256	1.2	0.7	1.6	6,539
Imo	1.3	0.7	1.9	2,190	2.0	1.5	2.6	3,253	1.7	1.2	2.1	5,443
Jigawa	0.1	0.0	0.3	2,766	0.5	0.2	0.8	2,936	0.3	0.2	0.5	5,702
Kaduna	0.6	0.3	1.0	2,471	1.4	0.8	2.0	2,782	1.0	0.6	1.4	5,253
Kano	0.4	0.1	0.6	2,125	0.7	0.3	1.2	2,262	0.6	0.3	0.9	4,387
Katsina	0.2	0.0	0.5	1,915	0.4	0.0	0.7	2,209	0.3	0.1	0.5	4,124
Kebbi	0.4	0.1	0.7	1,975	0.8	0.4	1.3	2,268	0.6	0.3	0.9	4,243
Kogi	0.5	0.1	0.8	1,846	1.2	0.8	1.7	2,345	0.8	0.5	1.2	4,191
Kwara	0.4	0.2	0.7	1,913	1.3	0.8	1.8	2,164	0.8	0.5	1.2	4,077
Lagos	0.8	0.5	1.2	3,111	1.9	1.4	2.3	4,391	1.3	1.0	1.6	7,502
Nasarawa	1.3	0.9	1.7	2,566	2.4	1.7	3.0	2,802	1.8	1.3	2.2	, 5,368
Niger	0.4	0.2	0.6	2,802	1.0	0.6	1.3	, 3,147	0.6	0.4	0.9	, 5,949
Ogun	0.9	0.5	1.3	1,424	1.9	1.2	2.5	2,160	1.4	1.0	1.8	3,584
Ondo	0.8	0.3	1.2	1,777	1.3	0.7	1.8	2,317	1.0	0.6	1.4	4,094

Table 7.A	HIV preva	lence	by dem	ographic o	characteris	stics, p	ersons	aged 15-64	4 years (co	ontinu	ed)	
HIV prevalence	among pe		-	-64 years b	by sex and	selecte	ed socio	o-demogra	phic chara	cterist	ics, NA	IIS 2018
		Ma	ales			Fen	nales					
Socio- demographic characteristics	Per- centage HIV positive	LCL <sup>1</sup>	UCL <sup>2</sup>	Number	Per- cent- age HIV positive	LCL <sup>1</sup>	UCL <sup>2</sup>	Number	Per- centage HIV positive	LCL <sup>1</sup>	UCL <sup>2</sup>	Number
Osun	0.7	0.4	1.1	1,515	1.0	0.6	1.5	2,122	0.9	0.6	1.2	3,637
Оуо	0.8	0.4	1.3	1,822	1.0	0.5	1.4	2,296	0.9	0.6	1.2	4,118
Plateau	0.6	0.3	0.9	2,370	2.3	1.7	2.9	2,904	1.5	1.1	1.8	5,274
Rivers	2.8	1.8	3.7	1,791	4.6	3.6	5.7	2,164	3.6	2.9	4.3	3,955
Sokoto	0.4	0.1	0.7	1,956	0.4	0.1	0.7	2,080	0.4	0.2	0.6	4,036
Taraba	1.7	1.3	2.2	3,119	3.6	2.6	4.6	3,653	2.6	2.0	3.3	6,772
Yobe	0.5	0.1	0.8	2,153	0.3	0.0	0.5	2,147	0.4	0.1	0.6	4,300
Zamfara	0.3	0.0	0.7	1,048	0.5	0.2	0.9	1,359	0.4	0.1	0.7	2,407
Marital status												
Never married	0.4	0.4	0.5	31,791	1.3	1.1	1.4	22,743	0.7	0.6	0.8	54,534
Married or living together	1.3	1.2	1.4	44,216	1.4	1.3	1.6	62,473	1.4	1.3	1.5	106,689
Divorced or separated	3.3	2.1	4.5	1,264	5.6	4.7	6.5	3,053	4.8	4.1	5.6	4,317
Widowed	6.9	4.5	9.4	572	5.1	4.5	5.8	7,385	5.3	4.6	5.9	7,957
Type of union												
In polygynous union	1.0	0.8	1.3	8,262	1.2	1.0	1.4	21,569	1.2	1.0	1.3	29,831
Not in polygynous union	1.4	1.2	1.5	35,658	1.6	1.4	1.7	40,496	1.5	1.3	1.6	76,154
Not currently in union	0.6	0.5	0.7	33,627	2.4	2.2	2.6	33,181	1.3	1.2	1.4	66,808
<b>Education</b> <sup>₄</sup>												
No												
education	0.8	0.6	1.0	9,159	1.3	1.1	1.5	25,614	1.1	1.0	1.3	34,773
Primary	1.3	1.1	1.6	13,706	2.5	2.3	2.8	18,838	2.0	1.8	2.1	32,544
Secondary	1.0	0.9	1.1	34,040	1.9	1.7	2.1	35,248	1.4	1.3	1.5	69,288
Tertiary	0.9	0.7	1.1	14,897	1.9	1.6	2.2	10,866	1.3	1.1	1.5	25,763
Others	0.4	0.2	0.7	6,121	0.6	0.3	0.9	5,086	0.5	0.3	0.7	11,207

Table 7.A	HIV preva	lence	by dem	ographic o	characteris	stics, p	ersons	aged 15-6	4 years (co	ontinue	ed)	
HIV prevalence	among pe	rsons a	nged 15	-64 years k	by sex and	select	ed soci	o-demogra	phic chara	cterist	ics, NA	IIS 2018
		Males			Females				Total			
Socio- demographic characteristics	Per- centage HIV positive	LCL1	UCL <sup>2</sup>	Number	Per- cent- age HIV positive	LCL <sup>1</sup>	UCL <sup>2</sup>	Number	Per- centage HIV positive	LCL <sup>1</sup>	UCL <sup>2</sup>	Number
Wealth quintile												
Lowest	0.6	0.4	0.7	14,989	1.0	0.8	1.2	17,055	0.8	0.7	0.9	32,044
Second	0.8	0.6	1.0	15,230	1.5	1.3	1.7	18,500	1.1	1.0	1.3	33,730
Middle	1.1	0.9	1.3	16,324	2.3	2.1	2.6	20,667	1.7	1.5	1.9	36,991
Fourth	1.1	0.9	1.3	16,468	2.2	1.9	2.4	20,835	1.6	1.5	1.8	37,303
Highest	1.1	0.9	1.4	14,959	1.8	1.5	2.0	18,689	1.4	1.3	1.6	33,648
Pregnancy status												
Currently pregnant	NA	NA	NA	NA	1.1	0.9	1.4	7,039	NA	NA	NA	NA
Not currently pregnant	NA	NA	NA	NA	1.8	1.7	1.9	87,531	NA	NA	NA	NA
Total 15-64 years	1.0	0.9	1.0	77,970	1.8	1.7	1.9	95,746	1.4	1.3	1.4	173,716
<sup>1</sup> LCL – lower col <sup>2</sup> UCL – upper co <sup>3</sup> FCT – Federal ( <sup>4</sup> Education cate NA – not applic	nfidence li onfidence l Capital Terr gories refe	mit. imit. ritory.										

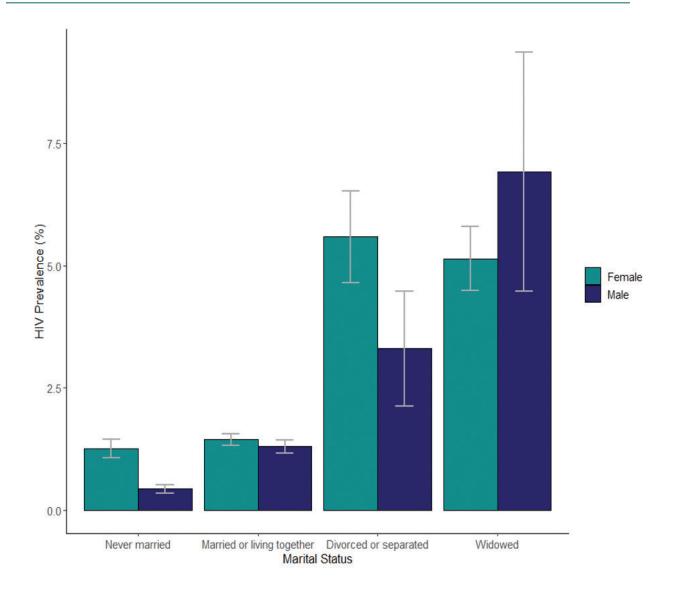


Figure 7.A HIV prevalence by marital status, persons aged 15-64 years, NAIIS 2018

Table 7.B	•		-		characteris							
HIV prevalence	among pe	ersons	aged 15	5-49 years	by sex and	selecte	ed socio	-demogra	ohic chara	cterist	ics, NAI	IS 2018
		Ma	ales			Fem	ales			Т	otal	
Socio- demographic characteristics	Percent HIV positive	LCL1	UCL <sup>2</sup>	Number	Percent HIV positive	LCL <sup>1</sup>	UCL <sup>2</sup>	Number	Percent HIV positive	LCL <sup>1</sup>	UCL <sup>2</sup>	Number
Place of residence												
Urban	0.7	0.6	0.9	26,969	1.6	1.4	1.8	35,072	1.1	1.0	1.3	62,041
Rural	0.9	0.8	1.1	37,698	1.9	1.7	2.0	47,347	1.4	1.3	1.5	85,045
States												
Abia	1.6	0.9	2.2	1,706	2.3	1.7	2.9	2,658	2.0	1.5	2.4	4,364
Adamawa	0.8	0.4	1.1	2,205	1.4	0.8	2.0	2,414	1.1	0.7	1.4	4,619
Akwa Ibom	2.8	1.9	3.6	1,590	6.9	5.8	8.1	2,024	4.8	4.0	5.6	3,614
Anambra	1.6	0.9	2.3	1,521	2.8	1.9	3.7	2,192	2.2	1.5	2.9	3,713
Bauchi	0.4	0.1	0.7	2,480	0.4	0.1	0.7	2,894	0.4	0.2	0.6	5,374
Bayelsa	1.3	0.8	1.9	1,514	2.0	1.3	2.6	1,907	1.6	1.2	2.1	3,421
Benue	2.7	1.9	3.5	1,790	6.2	4.9	7.4	2,073	4.3	3.5	5.2	3,863
Borno	1.1	0.3	2.0	675	1.2	0.6	1.9	901	1.2	0.5	1.9	1,576
Cross River	1.2	0.7	1.6	1,787	2.0	1.3	2.6	2,169	1.6	1.1	2.0	3,956
Delta	0.9	0.4	1.4	1,289	2.4	1.6	3.1	1,976	1.7	1.2	2.2	3,265
Ebonyi	0.5	0.2	0.9	1,823	0.9	0.6	1.2	3,260	0.7	0.5	1.0	5,083
Edo	1.0	0.5	1.4	1,512	2.2	1.5	2.8	2,014	1.6	1.1	2.0	3,526
Ekiti	0.2	0.0	0.5	1,266	1.0	0.5	1.4	1,600	0.6	0.3	0.8	2,866
Enugu	1.2	0.6	1.9	1,420	2.4	1.7	3.2	2,316	1.9	1.3	2.4	3,736
FCT <sup>3</sup>	0.6	0.2	1.0	1,974	2.1	1.4	2.8	2,148	1.3	0.9	1.7	4,122
Gombe	0.7	0.3	1.1	2,861	1.6	1.0	2.2	2,929	1.1	0.6	1.5	5,790
Imo	1.0	0.4	1.5	1,596	1.9	1.4	2.5	2,451	1.5	1.0	2.0	4,047
Jigawa	0.1	0.0	0.3	2,284	0.5	0.2	0.8	2,674	0.3	0.1	0.5	4,958
Kaduna	0.5	0.1	0.8	2,151	1.3	0.7	2.0	2,505	0.9	0.5	1.3	4,656
Kano	0.3	0.1	0.5	1,805	0.7	0.3	1.1	2,060	0.5	0.2	0.8	3,865
Katsina	0.2	0.0	0.5	1,554	0.3	0.0	0.6	2,001	0.3	0.0	0.5	3,555
Kebbi	0.4	0.1	0.8	1,636	0.8	0.4	1.3	2,087	0.6	0.3	0.9	3,723
Kogi	0.4	0.1	0.8	1,529	1.3	0.8	1.9	1,954	0.9	0.5	1.2	3,483
Kwara	0.4	0.1	0.7	1,585	1.4	0.8	1.9	1,814	0.8	0.5	1.2	3,399
Lagos	0.7	0.3	1.1	2,635	1.7	1.3	2.2	3,787	1.2	0.9	1.5	6,422
Nasarawa	1.1	0.7	1.5	2,285	2.3	1.7	2.9	2,510	1.6	1.2	2.1	4,795
Niger	0.3	0.1	0.6	2,388	0.9	0.6	1.3	2,898	0.6	0.4	0.9	5,286
Ogun	0.5	0.1	0.8	1,145	1.6	1.0	2.2	1,790	1.1	0.7	1.4	2,935

Table 7.B	-				characteris			-			-	6 2010
HIV prevalence	among pe		aged 15 ales	o-49 years	by sex and		ed socio nales	-demograp	phic chara		ics, NAI otal	15 2018
Socio- demographic characteristics	Percent HIV positive	LCL1	UCL <sup>2</sup>	Number	Percent HIV positive	LCL1	UCL <sup>2</sup>	Number	Percent HIV positive	LCL1	UCL <sup>2</sup>	Numbe
Ondo	0.6	0.2	1.0	1,463	1.1	0.6	1.6	1,924	0.9	0.5	1.2	3,387
Osun	0.7	0.3	1.1	1,230	1.0	0.5	1.5	1,742	0.8	0.5	1.2	2,972
Оуо	0.8	0.3	1.2	1,468	0.9	0.4	1.3	1,916	0.8	0.5	1.1	3,384
Plateau	0.4	0.2	0.7	2,045	2.3	1.6	2.9	2,582	1.3	1.0	1.7	4,627
Rivers	2.6	1.6	3.5	1,520	4.7	3.6	5.9	1,885	3.6	2.8	4.3	3,405
Sokoto	0.4	0.1	0.7	1,549	0.4	0.1	0.7	1,902	0.4	0.1	0.7	3,451
Taraba	1.7	1.2	2.1	2,712	3.4	2.5	4.3	3,279	2.5	1.9	3.1	5,991
Yobe	0.5	0.1	0.9	1,821	0.3	0.0	0.5	1,959	0.4	0.1	0.7	3,780
Zamfara	0.4	0.0	0.8	853	0.5	0.1	0.9	1,224	0.4	0.1	0.8	2,077
Marital status								·				·
Never married	0.4	0.3	0.5	31,494	1.2	1.0	1.4	22,341	0.7	0.6	0.8	53,835
Married or living together	1.2	1.1	1.4	31,925	1.4	1.3	1.6	54,824	1.3	1.2	1.5	86,749
Divorced or												
separated	3.2	1.8	4.6	912	5.8	4.7	6.8	2,447	4.9	4.1	5.8	3,359
Widowed	6.8	3.1	10.5	223	9.1	7.7	10.5	2,726	8.9	7.6	10.2	2,949
Type of union												
In polygynous union Not in	1.1	0.8	1.4	5,130	1.1	1.0	1.3	18,592	1.1	1.0	1.3	23,722
polygynous union	1.2	1.0	1.4	26,586	1.6	1.5	1.8	35,873	1.4	1.3	1.5	62,45
Not currently in union	0.5	0.4	0.6	32,629	2.3	2.0	2.5	27,514	1.2	1.1	1.3	60,143
Education⁴												
No												
education	0.8	0.5	1.0	6,719	1.2	1.0	1.4	19,915	1.1	0.9	1.2	26,63
Primary	1.1	0.9	1.3	9,748	2.6	2.3	2.9	14,651	1.9	1.7	2.1	24,39
Secondary	0.9	0.7	1.0	31,247	1.8	1.7	2.0	33,513	1.3	1.2	1.4	64,76
Tertiary	0.7	0.6	0.9	12,357	1.8	1.5	2.2	9,693	1.1	1.0	1.3	22,05
Others	0.4	0.1	0.6	4,570	0.6	0.3	0.9	4,573	0.5	0.3	0.7	9,143

Table 7.B	HIV prev	alence	by den	nographic	characteris	stics, pe	ersons a	aged 15-49	years (co	ontinue	ed)	
HIV prevalence	among pe	ersons	aged 15	5-49 years	by sex and	selecte	ed socio	-demogra	ohic chara	cterist	ics, NAI	IS 2018
		Ma	ales			Ferr	nales			Т	otal	
Socio- demographic characteristics	Percent HIV positive	LCL <sup>1</sup>	UCL <sup>2</sup>	Number	Percent HIV positive	LCL1	UCL <sup>2</sup>	Number	Percent HIV positive	LCL1	UCL <sup>2</sup>	Number
Wealth quintile												
Lowest	0.5	0.4	0.6	12,206	1.0	0.8	1.1	15,076	0.7	0.6	0.9	27,282
Second	0.7	0.5	0.9	12,673	1.4	1.2	1.6	16,078	1.0	0.9	1.2	28,751
Middle	0.9	0.7	1.1	13,583	2.3	2.1	2.6	17,320	1.6	1.4	1.8	30,903
Fourth	1.0	0.8	1.2	13,772	2.1	1.9	2.4	17,793	1.5	1.4	1.7	31,565
Highest	1.0	0.7	1.2	12,433	1.7	1.5	2.0	16,152	1.3	1.2	1.5	28,585
Pregnancy status												
Currently pregnant	NA	NA	NA	NA	1.1	0.9	1.4	6,991	NA	NA	NA	NA
Not currently												
pregnant	NA	NA	NA	NA	1.8	1.7	1.9	74,326	NA	NA	NA	NA
Total 15-49												
years	0.8	0.7	0.9	64,667	1.7	1.6	1.9	82,419	1.3	1.2	1.4	147,086
years <sup>1</sup> LCL – lower co <sup>2</sup> UCL – upper co <sup>3</sup> FCT – Federal <sup>4</sup> Education cate	nfidence li onfidence Capital Ter	imit. limit. ritory.						· · ·				147,0

NA – not applicable.

Table 7.C HI	V prevalence by s	ex and age	· · · · · · · · · · · · · · · · · · ·			
HIV prevalence am	iong persons ageo	l 0-64 years	by sex and age,	NAIIS 2018		
	Male	S	Fema	ales	Тс	otal
	Percentage		Percentage		Percentage	
Age	HIV positive	Number	HIV positive	Number	HIV positive	Number
0-17 months	0.1	1,159	0.3	1,132	0.2	2,291
18-59 months	0.1	3,937	0.1	3,697	0.1	7,634
5-9 years	0.1	6,505	0.1	6,276	0.1	12,781
10-14 years	0.2	4,972	0.2	4,816	0.2	9,788
15-19 years	0.1	13,344	0.3	15,553	0.2	28,897
20-24 years	0.3	10,368	1.3	14,058	0.8	24,426
25-29 years	0.7	10,592	1.8	14,878	1.2	25,470
30-34 years	1.0	9,067	2.2	12,326	1.6	21,393
35-39 years	1.4	8,623	3.1	10,705	2.2	19,328
40-44 years	1.7	6,904	2.6	8,645	2.2	15,549
45-49 years	2.2	5,769	2.7	6,254	2.4	12,023
50-54 years	2.3	5,053	2.3	5,933	2.3	10,986
55-59 years	1.6	3,773	2.4	3,339	2.0	7,112
60-64 years	1.4	4,477	1.5	4,055	1.4	8,532
Total 0-4 years	0.1	5,096	0.2	4,829	0.1	9,925
Total 0-14 years	0.1	16,573	0.2	15,921	0.1	32,494
Total 15-24 years	0.2	23,712	0.8	29,611	0.5	53,323
Total 15-49 years	0.8	64,667	1.7	82,419	1.3	147,086
Total 15-64 years	1.0	77,970	1.8	95,746	1.4	173,716

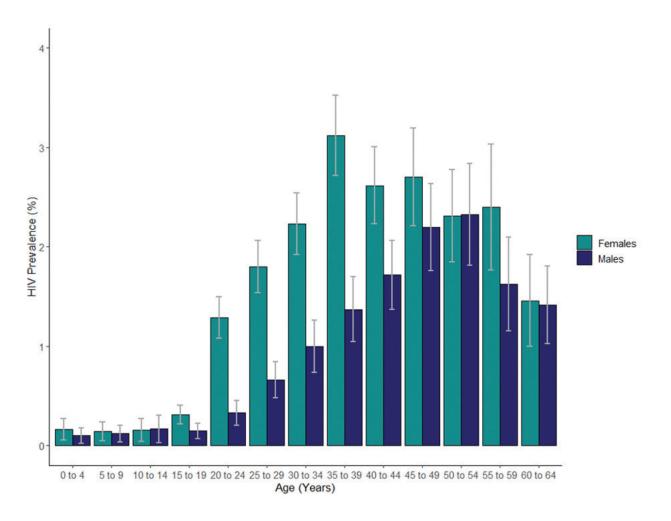


Figure 7.B HIV prevalence by sex and age, NAIIS 2018

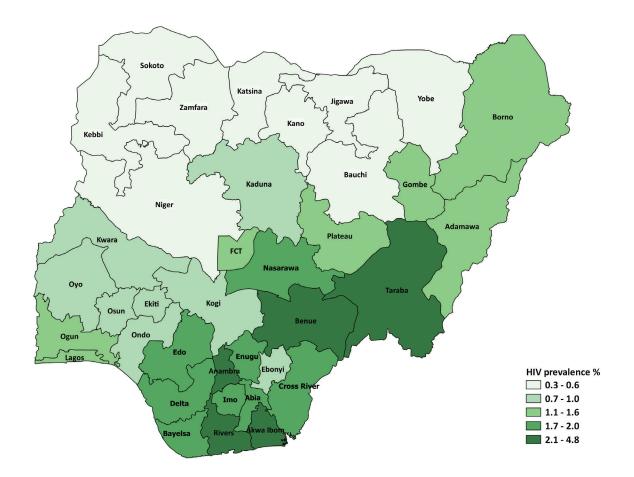


Figure 7.C HIV prevalence among adults aged 15-64 years by state, NAIIS 2018

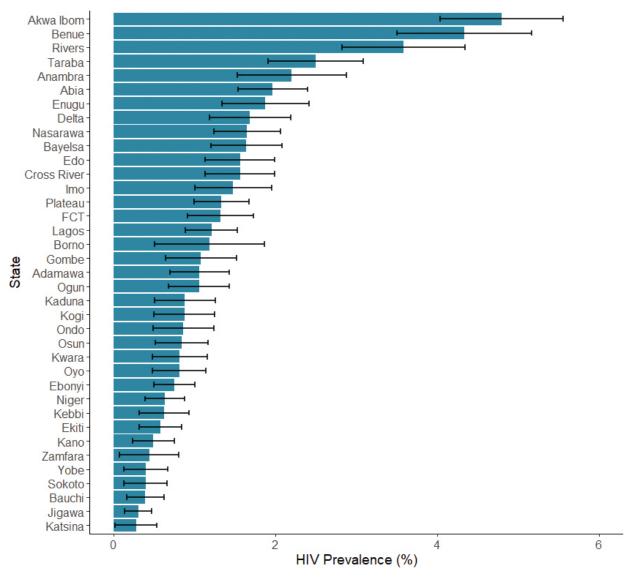


Figure 7.D HIV prevalence among adults aged 15-49 years by state, NAIIS 2018

# 8. Self-Reported HIV Testing

### 8.1 Background

HIV testing is necessary for awareness of HIV status and is a critical component of HIV epidemic control. Awareness of HIV-positive status is the first step to engagement with HIV care and treatment services, accessing ART, prevention counseling for HIV-positive and HIV-negative individuals to reduce risk of HIV transmission or acquisition and access to screening services for other co-morbidities.

#### 8.2 Results

Tables 8.A to 8.C and Figure 8.A show the results of receipt of HIV test results ever and in the last 12 months.

### 8.2.1 Key Findings

- Among adults aged 15-64 years, 30.1% self-reported ever having received HIV test results (32.6% among women and 27.7% among men) (Tables 8.A, 8.B and 8.C).
- Among adults aged 15-64 years, 36.8% in urban areas self-reported ever having received HIV test results compared to 23.8% in rural areas (Table 8.C).

# Table 8.ASelf-reported HIV testing: Men

Percentage of men aged 15-64 years who ever received an HIV test result and received an HIV test result in the past 12 months, by result of NAIIS HIV test and selected socio-demographic characteristics, NAIIS 2018

	Ever received	HIV test result		est result in past oonths
Socio-demographic	210.1000100			
characteristics	Percent	Number	Percent	Number
NAIIS HIV test result				
HIV positive	54.6	824	16.9	800
HIV negative	27.2	75,836	9.1	74,072
Not tested	30.6	5,247	14.7	5,124
Place of residence				
Urban	32.8	34,049	11.2	33,065
Rural	23.0	47,858	8.0	46,931
Geopolitical zone				
North West	11.2	14,969	4.1	14,892
North East	19.9	15,243	6.6	15,055
North Central	32.9	16,621	14.0	16,225
South East	46.2	11,174	13.4	10,682
South South	40.5	11,891	14.8	11,567
South West	33.8	12,009	10.7	11,575
Marital status				
Never married	19.8	33,676	7.8	33,115
Married or living together	34.5	46,189	11.0	44,907
Divorced or separated	36.5	1,321	12.4	1,284
Widowed	44.0	603	11.6	576
Type of union				
In polygynous union	21.1	8,422	7.4	8,289
Not in polygynous union	37.3	37,456	11.9	36,327
Not currently in union	20.6	35,600	7.9	34,975
Education <sup>1</sup>				
No education	8.3	9,627	2.6	9,541
Primary	22.5	14,276	6.3	13,920
Secondary	26.5	35,801	9.0	34,963
Tertiary	54.6	15,790	20.8	15,191
Others	8.1	6,358	2.7	6,329

Table 8.A Self-reporte	d HIV testing: Mer	(continued)		
Percentage of men aged 15- test result in the past 12 mo characteristics, NAIIS 2018				
			Received HIV t	est result in past
	Ever received	HIV test result	12 m	onths
Socio-demographic				
characteristics	Percent	Number	Percent	Number
Wealth quintile				
Lowest	9.8	15,549	3.5	15,428
Second	16.9	15,875	6.0	15,646
Middle	25.3	17,245	8.4	16,844
Fourth	33.7	17,257	11.2	16,743
Highest	47.4	15,981	16.9	15,335
Age (years)				
15-19	6.3	14,095	2.0	13,981
20-24	21.0	10,967	8.7	10,790
25-29	32.1	11,146	13.0	10,887
30-34	39.0	9,547	14.7	9,293
35-39	40.4	9,041	14.2	8,775
40-44	39.7	7,250	11.9	7,040
45-49	37.1	6,071	10.5	5,870
50-54	32.9	5,293	8.1	5,139
55-59	31.5	3,904	8.5	3,777
60-64	26.9	4,593	6.6	4,444
Total 15-24 years	13.0	25,062	5.0	24,771
Total 15-49 years	27.2	68,117	9.8	66,636
Total 15-64 years	27.7	81,907	9.5	79,996
<sup>1</sup> Education categories refer to t	he highest level of ea	ducation attended, wh	ether that level was	completed.

Г

# Table 8.B Self-reported HIV testing: Women

Percentage of women aged 15-64 years who ever received an HIV test result and received an HIV test result in the past 12 months, by result of NAIIS HIV test and selected socio-demographic characteristics, NAIIS 2018

	Ever received	HIV test result	Received HIV test result in past 12 months		
Socio-demographic			<u> </u>		
characteristics	Percent	Number	Percent	Number	
NAIIS HIV test result					
HIV positive	59.2	1,840	19.5	1,762	
HIV negative	32.1	90,372	10.4	87,151	
Not tested	33.0	6,988	15.6	6,742	
Place of residence					
Urban	41.0	42,498	13.6	40,481	
Rural	24.7	56,702	8.5	55,174	
Geopolitical zone					
North West	16.5	16,808	4.6	16,570	
North East	21.5	15,756	7.2	15,369	
North Central	30.7	18,757	12.5	18,070	
South East	49.6	17,063	16.4	16,149	
South South	43.9	14,869	15.5	14,412	
South West	42.5	15,947	14.1	15,085	
Marital status					
Never married	22.2	23,862	9.2	23,304	
Married or living together	36.5	64,457	11.8	61,897	
Divorced or separated	45.6	3,180	14.6	3,035	
Widowed	29.9	7,602	7.9	7,326	
Type of union					
In polygynous union	22.5	21,942	6.5	21,348	
Not in polygynous union	44.0	42,077	14.6	40,134	
Not currently in union	25.6	34,644	9.4	33,665	
Education <sup>1</sup>					
No education	12.9	26,139	3.9	25,652	
Primary	30.0	19,317	8.4	18,605	
Secondary	39.2	36,707	13.7	35,201	
Tertiary	69.6	11,641	26.7	10,896	
Others	14.7	5,302	3.8	5,212	

# Table 8.BSelf-reported HIV testing: Women (continued)Percentage of women aged 15-64 years who ever received an HIV test result and received an

HIV test result in the past 12 months, by result of NAIIS HIV test and selected socio-demographic characteristics, NAIIS 2018

	Ever received	HIV test result		/ test result in months
Socio-demographic characteristics	Percent	Number	Percent	Number
Wealth quintile				
Lowest	12.4	17,407	3.7	17,136
Second	18.8	19,071	6.1	18,597
Middle	29.3	21,415	9.7	20,689
Fourth	40.7	21,649	13.8	20,725
Highest	55.0	19,658	19.3	18,508
Age (years)				
15-19	11.4	16,232	5.0	16,039
20-24	33.7	14,610	13.8	14,090
25-29	45.0	15,401	17.1	14,730
30-34	45.4	12,733	15.2	12,184
35-39	45.5	11,040	13.5	10,537
40-44	36.8	8,914	9.2	8,558
45-49	33.9	6,464	8.8	6,216
50-54	26.6	6,119	7.0	5,903
55-59	26.4	3,529	7.4	3,388
60-64	20.3	4,158	4.1	4,010
Total 15-24 years	21.4	30,842	8.9	30,129
Total 15-49 years	33.7	85,394	11.6	82,354
Total 15-64 years	32.6	99,200	10.9	95,655
<sup>1</sup> Education categories refer to	o the highest level of edu	ucation attended, whe	ther that level was o	completed.

### Table 8.CSelf-reported HIV testing: Total

Percentage of HIV-positive persons aged 15-64 years who ever received an HIV test result and received an HIV test result in the past 12 months, by result of NAIIS HIV test and selected socio-demographic characteristics, NAIIS 2018

	Ever received	HIV test result		/ test result in months
Socio-demographic			publ 12	
characteristics	Percent	Number	Percent	Number
NAIIS HIV test result				
HIV positive	57.6	2,664	18.6	2,562
HIV negative	29.5	166,208	9.7	161,223
Not tested	31.8	12,235	15.2	11,866
Place of residence				
Urban	36.8	76,547	12.4	73,546
Rural	23.8	104,560	8.2	102,105
Geopolitical zone				
North West	13.7	31,777	4.3	31,462
North East	20.7	30,999	6.9	30,424
North Central	31.9	35,378	13.3	34,295
South East	48.0	28,237	15.0	26,831
South South	42.2	26,760	15.1	25,979
South West	38.1	27,956	12.3	26,660
Marital status				
Never married	20.7	57,538	8.3	56,419
Married or living together	35.6	110,646	11.4	106,804
Divorced or separated	42.5	4,501	13.9	4,319
Widowed	31.0	8,205	8.2	7,902
Type of union				
In polygynous union	22.1	30,364	6.8	29,637
Not in polygynous union	40.5	79,533	13.2	76,461
Not currently in union	22.7	70,244	8.6	68,640
<b>Education</b> <sup>1</sup>				
No education	11.5	35,766	3.5	35,193
Primary	26.4	33,593	7.4	32,525
Secondary	32.1	72,508	11.0	70,164
Tertiary	60.0	27,431	22.9	26,087
Others	11.0	11,660	3.2	11,541

### Table 8.C Self-reported HIV testing: Total (continued)

Percentage of HIV-positive persons aged 15-64 years who ever received an HIV test result and received an HIV test result in the past 12 months, by result of NAIIS HIV test and selected socio-demographic characteristics, NAIIS 2018

Ever received	HIV test result	Received HIV test result in past 12 months		
Percent	Number	Percent	Number	
11.0	32,956	3.6	32,564	
17.8	34,946	6.0	34,243	
27.3	38,660	9.0	37,533	
37.2	38,906	12.5	37,468	
51.0	35,639	18.1	33,843	
8.8	30,327	3.5	30,020	
27.1	25,577	11.1	24,880	
38.3	26,547	14.9	25,617	
42.1	22,280	14.9	21,477	
42.9	20,081	13.9	19,312	
38.3	16,164	10.6	15,598	
35.6	12,535	9.7	12,086	
29.8	11,412	7.6	11,042	
29.0	7,433	8.0	7,165	
23.5	8,751	5.4	8,454	
17.1	55,904	6.9	54,900	
30.4	153,511	10.6	148,990	
30.1	181,107	10.2	175,651	
	Percent  11.0  17.8  27.3  37.2  51.0  8.8  27.1  38.3  42.1  42.9  38.3  35.6  29.8  29.0  23.5  17.1  30.4	11.0 $32,956$ $17.8$ $34,946$ $27.3$ $38,660$ $37.2$ $38,906$ $51.0$ $35,639$ $8.8$ $30,327$ $27.1$ $25,577$ $38.3$ $26,547$ $42.1$ $22,280$ $42.9$ $20,081$ $38.3$ $16,164$ $35.6$ $12,535$ $29.8$ $11,412$ $29.0$ $7,433$ $23.5$ $8,751$ $17.1$ $55,904$ $30.4$ $153,511$	Ever received HIV test result         past 12           Percent         Number         Percent           11.0         32,956         3.6           17.8         34,946         6.0           27.3         38,660         9.0           37.2         38,906         12.5           51.0         35,639         18.1           8.8         30,327         3.5           27.1         25,577         11.1           38.3         26,547         14.9           42.1         22,280         14.9           42.9         20,081         13.9           38.3         16,164         10.6           35.6         12,535         9.7           29.8         11,412         7.6           29.0         7,433         8.0           23.5         8,751         5.4           17.1         55,904         6.9           30.4         153,511         10.6	

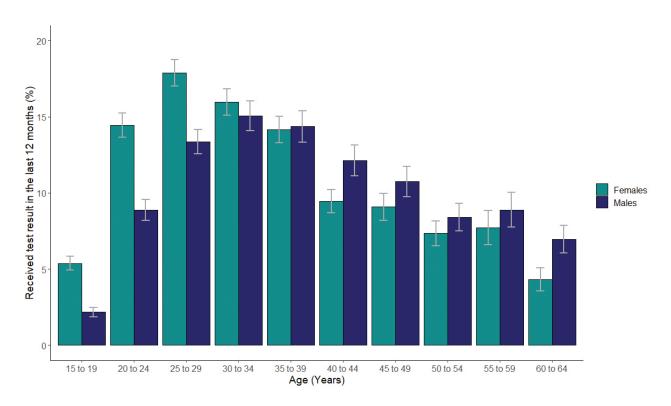


Figure 8.A Proportion of adults aged 15-64 years who self-report receiving HIV test results in the last 12 months by sex and age, NAIIS 2018

# 9. HIV DIAGNOSIS AND TREATMENT

### 9.1 Background

Recent studies have proven that treating PLHIV at higher CD4 counts improves immune recovery, decreases the incidence of non-AIDS events and comorbidities and mortality and reduces sexual and vertical transmission. In 2016, after an extensive review of evidence of both the clinical and population-level benefits of expanding ART, WHO changed its recommendation to support a policy of "Treatment for All," regardless of CD4 count.<sup>1,2</sup> In Nigeria, the "test and treat" policy was adopted in December 2016. NAIIS determined the presence of four ARVs (efavirenz, lopinavir, nevirapine and atazanavir) in blood as markers of the first- and second-line regimens prescribed in Nigeria at the time of the survey.

### 9.2 Results

Tables 9.A to 9.F and Figure 9.A describe ART uptake in Nigeria during NAIIS.

# 9.2.1 Key Findings

- Among HIV- positive adults aged 15-64 years, 71.1% self-reported being unaware of their HIV status (Table 9.C).
- Of HIV- positive adults aged 15-64 years, 25.9% reported being on ART (Table 9.C).
- The percentage of HIV- positive adults aged 15-64 years unaware of their HIV status was higher in rural areas (74.0%) than urban areas (67.4%) (Table 9.C).
- Among individuals who self-reported an HIV- positive status and being on ART, 94.5% had ARVs detected in their blood. Among those who self-reported an HIV- positive status and not being on ART, 42.0% had ARVs detected in their blood (Table 9.F).
- Among those who self-reported not being previously diagnosed, 24.4% had ARVs detected in their blood (Table 9.F).

### 9.3 References

1. World Health Organization. *Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection*. Geneva: World Health Organization; 2016.

https://www.who.int/hiv/pub/arv/arv-2016/en/. Accessed March 10, 2019.

2. World Health Organization. *Treat all: Policy adoption and implementation status in countries.* Geneva: World Health Organization; 2017. <u>http://apps.who.int/iris/bitstream/handle/10665/259532/WHO-HIV-2017.58-eng.pdf;jsessionid=B3857967C208CC9E4093EEA9CEDC3A0C?sequence=1</u>. Accessed March 10, 2019.

Percent distribution of HIV-posi and selected socio-demographi	•		self-reported H	IV and treatn	nent status
		Aware of H	HIV status		
Socio-demographic	Unaware of				
characteristics	HIV status	Not on ART	On ART <sup>1</sup>	Total	Number
Place of residence					
Urban	72.7	1.4	26.0	100.0	310
Rural	73.0	1.9	25.1	100.0	518
Geopolitical zone					
North West	66.5	1.0	32.5	100.0	55
North East	76.2	0.8	23.0	100.0	137
North Central	50.9	1.5	47.6	100.0	185
South East	78.4	2.9	18.7	100.0	147
South South	79.7	2.1	18.2	100.0	217
South West	79.6	1.0	19.4	100.0	87
Marital status					
Never married	90.0	0.7	9.3	100.0	160
Married or living together	68.8	2.0	29.1	100.0	589
Divorced or separated	60.9	2.3	36.7	100.0	42
Widowed	64.3	0.0	35.7	100.0	36
Type of union					
In polygynous union	69.3	4.6	26.2	100.0	90
Not in polygynous union	68.4	1.6	29.9	100.0	496
Not currently in union	81.9	0.9	17.3	100.0	238
Education <sup>2</sup>					
No education	82.6	0.3	17.1	100.0	75
Primary	73.0	1.5	25.4	100.0	199
Secondary	77.7	1.6	20.7	100.0	365
Tertiary	55.3	2.9	41.8	100.0	163
Others	*	*	*	*	26
Wealth quintile					
Lowest	76.4	1.1	22.5	100.0	101
Second	67.5	2.2	30.4	100.0	141
Middle	70.3	2.7	27.1	100.0	205
Fourth	71.9	1.2	26.8	100.0	203
Highest	77.6	1.2	21.2	100.0	178

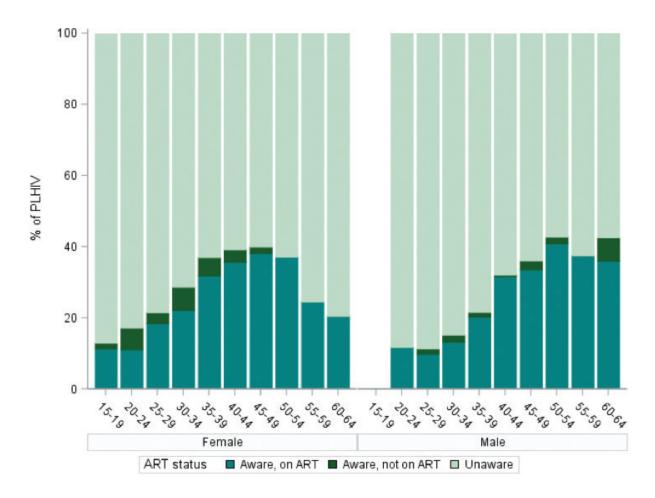
	reatment status: Men (co								
	of HIV-positive men aged 1 emographic characteristics		self-reported H	IIV and treatn	nent status				
		Aware of HIV status							
Socio-demographic	Unaware of								
characteristics	HIV status	Not on ART	On ART <sup>1</sup>	Total	Number				
Age (years)									
15-19	*	*	*	*	23				
20-24	88.3	0.0	11.7	100.0	37				
25-29	88.7	1.5	9.8	100.0	72				
30-34	84.8	2.0	13.2	100.0	88				
35-39	78.4	1.3	20.3	100.0	116				
40-44	67.8	0.4	31.7	100.0	129				
45-49	63.9	2.5	33.6	100.0	123				
50-54	57.2	1.9	40.9	100.0	111				
55-59	62.5	0.0	37.5	100.0	62				
60-64	57.4	6.6	36.0	100.0	67				
Total 15-24 years	91.1	1.2	7.7	100.0	60				
Total 15-49 years	77.3	1.5	21.2	100.0	588				
Total 15-64 years	72.9	1.7	25.5	100.0	828				
<sup>2</sup> Education categories completed.	S Monitoring indicator 1. refer to the highest level that an estimate is based seed.	of education at	ttended, whetl	ner that level	was				

Table 9.BHIV treatment status: WomenPercent distribution of HIV-positive women aged 15-64 years by self-reported HIV and treatment status and selected socio-demographic characteristics, NAIIS 2018								
Socio-demographic characteristics	Unaware of HIV status	Not on ART	On ART <sup>1</sup>	Total	Number			
Place of residence								
Urban	64.4	4.5	31.1	100.0	736			
Rural	74.6	3.1	22.4	100.0	1,096			
Geopolitical zone								
North West	68.6	7.2	24.2	100.0	112			
North East	67.7	0.9	31.4	100.0	252			
North Central	59.9	1.9	38.2	100.0	447			
South East	69.3	5.2	25.4	100.0	317			
South South	80.3	4.5	15.2	100.0	481			
South West	67.1	2.5	30.4	100.0	223			
Marital status								
Never married	77.3	3.7	19.0	100.0	302			
Married or living together	71.7	3.8	24.5	100.0	972			
Divorced or separated	62.4	6.0	31.5	100.0	191			
Widowed	62.7	2.3	35.0	100.0	362			
Type of union								
In polygynous union	74.1	0.5	25.4	100.0	285			
Not in polygynous union	70.8	5.2	24.0	100.0	677			
Not currently in union	68.2	3.6	28.2	100.0	855			
Education <sup>2</sup>								
No education	78.3	2.6	19.1	100.0	359			
Primary	72.7	2.5	24.8	100.0	503			
Secondary	66.0	4.6	29.4	100.0	722			
Tertiary	64.6	3.0	32.4	100.0	209			
Others	69.7	13.7	16.6	100.0	34			
Wealth quintile								
Lowest	82.8	2.7	14.4	100.0	207			
Second	68.8	1.8	29.4	100.0	310			
Middle	70.4	5.6	24.0	100.0	493			
Fourth	66.5	3.0	30.5	100.0	476			
Highest	69.1	3.9	27.0	100.0	346			

Table 9.BHIV treatPercent distribution of HI	ment status: Women		self-reported H	IV and treat	nent status
and selected socio-demo					
		Aware of HIV status			
Socio-demographic	Unaware of				
characteristics	HIV status	Not on ART	On ART <sup>1</sup>	Total	Numbe
Age (years)					
15-19	87.0	1.6	11.3	100.0	58
20-24	82.8	6.1	11.1	100.0	186
25-29	78.5	3.1	18.4	100.0	273
30-34	71.3	6.5	22.2	100.0	291
35-39	63.0	5.1	31.9	100.0	346
40-44	60.8	3.5	35.7	100.0	241
45-49	60.0	1.8	38.2	100.0	158
50-54	62.9	0.0	37.1	100.0	145
55-59	75.5	0.0	24.5	100.0	73
60-64	79.5	0.0	20.5	100.0	61
Total 15-24 years	83.8	5.0	11.1	100.0	244
Total 15-49 years	70.0	4.4	25.6	100.0	1,553
Total 15-64 years	70.1	3.7	26.2	100.0	1,832
<sup>1</sup> Relates to <u>Global AIDS M</u> <sup>2</sup> Education categories refe completed.					

Table 9.C HIV treatme	ent status: Tota	al			
Percent distribution of HIV-p tus and selected socio-demo	•	<b>e</b> ,		ted HIV and tr	eatment sta-
	<u> </u>	Aware of H			
Socio-demographic characteristics	Unaware of HIV status	Not on ART	On ART <sup>1</sup>	Total	Number
Place of residence					
Urban	67.4	3.4	29.2	100.0	1,046
Rural	74.0	2.6	23.4	100.0	1,614
Geopolitical zone					
North West	67.8	4.9	27.3	100.0	167
North East	71.1	0.9	28.0	100.0	389
North Central	56.9	1.8	41.4	100.0	632
South East	72.7	4.4	22.9	100.0	464
South South	80.1	3.6	16.3	100.0	698
South West	71.4	2.0	26.6	100.0	310
Marital status					
Never married	82.4	2.5	15.1	100.0	462
Married or living					
together	70.4	3.0	26.5	100.0	1,561
Divorced or separated	62.1	5.2	32.7	100.0	233
Widowed	62.9	2.0	35.1	100.0	398
Type of union					
In polygynous union	72.7	1.6	25.6	100.0	375
Not in polygynous union	69.7	3.5	26.8	100.0	1,173
Not currently in union	71.8	2.8	25.3	100.0	1,093
Education <sup>2</sup>					
No education	79.1	2.1	18.7	100.0	434
Primary	72.8	2.2	25.0	100.0	702
Secondary	70.6	3.4	25.9	100.0	1,087
Tertiary	60.3	2.9	36.8	100.0	372
Others	72.7	7.2	20.1	100.0	60
Wealth quintile					
Lowest	80.4	2.1	17.4	100.0	308
Second	68.3	1.9	29.8	100.0	451
Middle	70.3	4.7	25.0	100.0	698
Fourth	68.5	2.4	29.2	100.0	679
Highest	72.6	2.8	24.6	100.0	524

Table 9.C HIV trea	tment status: Tota	al (continued)			
Percent distribution of H	• •	<b>U</b> 1		ted HIV and tr	eatment sta-
tus and selected socio-d	emographic chara	cteristics, NAIIS 2	2018		
		Aware of H	HV status		
Socio-demographic	Unaware of				
characteristics	HIV status	Not on ART	On ART <sup>1</sup>	Total	Number
Age (years)					
15-19	90.1	2.3	7.6	100.0	81
20-24	84.1	4.7	11.2	100.0	223
25-29	81.5	2.6	15.9	100.0	345
30-34	75.6	5.0	19.3	100.0	379
35-39	68.0	3.9	28.1	100.0	462
40-44	63.7	2.3	34.1	100.0	370
45-49	61.8	2.1	36.1	100.0	281
50-54	60.0	1.0	39.0	100.0	256
55-59	70.3	0.0	29.7	100.0	135
60-64	68.8	3.2	28.0	100.0	128
Total 15-24 years	85.6	4.1	10.3	100.0	304
Total 15-49 years	72.5	3.4	24.1	100.0	2,141
Total 15-64 years	71.1	3.0	25.9	100.0	2,660
<sup>1</sup> Relates to <u>Global AIDS N</u> <sup>2</sup> Education categories re- completed.		•	-		



### Figure 9.A Proportion of HIV-positive adults reporting awareness of HIV status and ART status by sex and age, NAIIS 2018

The estimates for men aged 15-19 years were not presented because the unweighted sample size was 30 or less people.

	ARVs	1		
Characteristics	Not detectable	Detectable	Total	Number
Self-reported treatment status				
Not previously diagnosed	81.7	18.3	100.0	577
Previously diagnosed, not on ART <sup>2</sup>	*	*	*	17
Previously diagnosed, on ART <sup>2</sup>	6.6	93.4	100.0	234
Total 15-24 years	72.6	27.4	100.0	61
Total 15-49 years	66.6	33.4	100.0	601
Total 15-64 years	62.1	37.9	100.0	845

#### Table 9.D Concordance of self-reported treatment status versus presence of antiretrovirals (ARVs): Men

<sup>1</sup>Antiretroviral detection assay included only atazanavir, efavirenz and lopinavir. Participants who reported antiretroviral therapy use or had an undetectable viral load but had no evidence of the first three ARVs were tested for nevirapine as well.

<sup>2</sup>ART – antiretroviral therapy.

An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

#### Table 9.E Concordance of self-reported treatment status versus presence of antiretrovirals (ARVs): Women

Percent distribution of ARV status by self-reported HIV treatment status among HIV-positive women aged 15-64 years, NAIIS 2018

	AR	ARVs <sup>1</sup>		
Characteristics	Not detectable	Detectable	Total	Number
Self-reported treatment status				
Not previously diagnosed	72.0	28.0	100.0	1,262
Previously diagnosed, not on ART <sup>2</sup>	58.7	41.3	100.0	56
Previously diagnosed, on ART <sup>2</sup>	4.9	95.1	100.0	508
Total 15-24 years	72.5	27.5	100.0	254
Total 15-49 years	54.8	45.2	100.0	1,602
Total 15-64 years	53.5	46.5	100.0	1,888

<sup>1</sup>Antiretroviral detection assay included only atazanavir, efavirenz and lopinavir. Participants who reported antiretroviral therapy use or had an undetectable viral load but had no evidence of the first three ARVs were tested for nevirapine as well. <sup>2</sup>ART – antiretroviral therapy.

	ARV	/S <sup>1</sup>		
Characteristics	Not detectable	Detectable	Total	Number
Self-reported treatment status				
Not previously diagnosed	75.6	24.4	100.0	1,839
Previously diagnosed, not on ART <sup>2</sup>	58.0	42.0	100.0	73
Previously diagnosed, on ART <sup>2</sup>	5.5	94.5	100.0	742
Total 15-24 years	72.5	27.5	100.0	315
Total 15-49 years	58.8	41.2	100.0	2,203
Total 15-64 years	56.6	43.4	100.0	2,733

### Table 9.FConcordance of self-reported treatment status versus presence of antiretrovirals(ARVs): Total

<sup>1</sup>Antiretroviral detection assay included only atazanavir, efavirenz and lopinavir. Participants who reported antiretroviral therapy use or had an undetectable viral load but had no evidence of the first three ARVs were tested for nevirapine as well.

<sup>2</sup>ART – antiretroviral therapy.

### **10. VIRAL LOAD SUPPRESSION**

#### 10.1 Background

The key treatment success indicator for PLHIV is VLS. For NAIIS, VLS was defined as VL less than 1,000 HIV RNA copies per mL of plasma. This chapter describes VLS among the population of HIV-positive adults by socio-demographic characteristics.

#### 10.2 Results

Tables 10.A and 10.B, along with Figures 10.A to 10.D, present VLS data of PLHIV.

#### 10.2.1 Key Findings

- Among adults aged 15-64 years who tested HIV positive, 43.1% had VLS (women 45.5%, men 38.8%). The prevalence of VLS was lower in rural than urban areas (40.3% and 46.7%, respectively) (Table 10.A).
- Among adults previously diagnosed and self-reported on ART, VLS was 82.5% (Table 10.A).
- VLS was lowest among those never married (31.6%) and highest in those who that were widowed (52.9%) (Table 10.A).
- VLS was highest among adults in the North Central Zone (63.8%) and lowest among adults in the South South Zone (31.1%) (Table 10.A).
- VLS varied by age group, ranging from 31.2% among adults aged 20-24 years to 55.6% among adults aged 50-54 years (Table 10.B).

### Table 10.A Viral load suppression prevalence by demographic characteristics

Percentage distribution of HIV-positive persons aged 15-64 years with viral load suppression (VLS) (<1,000 copies/mL)<sup>1</sup> by sex, self-reported HIV diagnosis, antiretroviral therapy (ART) status and selected socio-demographic characteristics, NAIIS 2018

	Male	S	Fema	les	Tota	al
Socio-demographic	Percentage		Percentage		Percentage	
characteristics	VLS	Number	VLS	Number	VLS	Number
Self-reported diagnosis and treatment status						
Not previously diagnosed	24.9	577	31.2	1,267	28.8	1,844
Previously diagnosed, not on ART	*	17	40.0	56	39.7	73
Previously diagnosed, on ART	79.5	234	84.2	509	82.5	743
Place of residence						
Urban	38.9	319	51.1	759	46.7	1,078
Rural	38.7	526	41.2	1,135	40.3	1,661
Geopolitical zone						
North West	52.1	55	43.7	120	46.7	175
North East	46.4	141	51.5	262	49.5	403
North Central	60.0	189	65.7	462	63.8	651
South East	35.2	148	37.5	329	36.6	477
South South	27.2	221	33.3	491	31.1	712
South West	26.9	91	48.8	230	41.2	321
Marital status						
Never married	25.6	163	35.6	313	31.6	476
Married or living together	43.3	601	46.1	1,008	44.9	1,609
Divorced or separated	35.6	44	43.0	197	41.3	241
Widowed	36.1	36	54.8	371	52.9	407
Type of union						
In polygynous union	46.7	91	44.2	304	44.9	395
Not in polygynous union	43.3	507	47.1	694	45.3	1,201
Not currently in union	28.7	243	45.1	881	40.8	1,124
<b>Education</b> <sup>2</sup>						
No education	41.6	77	50.3	377	48.5	454
Primary	40.6	203	38.5	517	39.2	720
Secondary	35.5	375	45.6	741	41.6	1,116
Tertiary	45.0	164	55.7	217	50.7	381
Others	*	26	28.8	37	31.2	63

#### Table 10.AViral load suppression prevalence by demographic characteristics (continued)

Percentage distribution of HIV-positive persons aged 15-64 years with viral load suppression (VLS) (<1,000 copies/mL)<sup>1</sup> by sex, self-reported HIV diagnosis, antiretroviral therapy (ART) status and selected socio-demographic characteristics, NAIIS 2018

	Male	es	Femal	es	Tota	al
Socio-demographic	Percentage		Percentage		Percentage	
characteristics	VLS	Number	VLS	Number	VLS	Number
Wealth quintile						
Lowest	49.0	102	45.3	215	46.6	317
Second	42.2	144	43.7	322	43.2	466
Middle	38.0	211	42.2	503	40.8	714
Fourth	40.7	206	50.6	498	47.2	704
Highest	31.8	182	44.9	356	39.6	538
Total 15-24 years	33.6	61	32.2	255	32.6	316
Total 15-49 years	33.5	601	44.7	1,607	40.9	2,208
Total 15-64 years	38.8	845	45.5	1,894	43.1	2,739

<sup>1</sup>Relates to <u>Global AIDS Monitoring indicator 1.4</u>: People living with HIV who have suppressed viral loads. <sup>2</sup>Education categories refer to the highest level of education attended, whether that level was completed.

An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

Percentage distribu (<1,000 copies/mL)	•	•	<b>e</b> ,	ars with viral lo	oad suppressio	n (VLS)
	Ma	es	Fem	ales	Т	otal
	Percentage		Percentage		Percentage	
Age (years)	VLS	Number	VLS	Number	VLS	Number
0-4	*	7	*	10	*	17
5-9	*	9	*	10	*	19
10-14	*	7	*	8	*	15
15-19	*	24	32.6	58	36.5	82
20-24	27.9	37	32.1	197	31.2	234
25-29	14.8	72	39.5	282	32.6	354
30-34	24.7	92	40.0	302	35.1	394
35-39	37.5	116	51.5	356	47.1	472
40-44	38.0	132	53.5	251	47.2	383
45-49	44.0	128	54.6	161	49.7	289
50-54	58.8	114	52.5	149	55.6	263
55-59	45.5	63	48.2	76	47.2	139
60-64	62.5	67	47.8	62	54.8	129
Total 15-24 years	33.6	61	32.2	255	32.6	316
Total 15-49 years	33.5	601	44.7	1,607	40.9	2,208
Total 15-64 years	38.8	845	45.5	1,894	43.1	2,739

An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

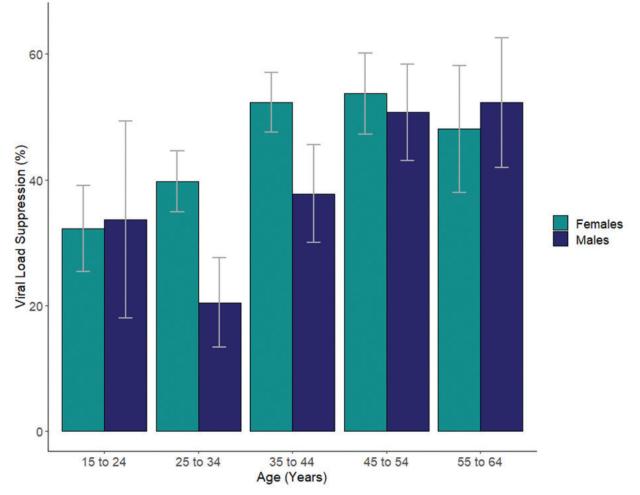


Figure 10.AProportion of viral load suppression among HIV-positive persons by sex and age, NAIIS 2018The estimates for children aged 0-14 years were not presented because the unweighted sample size was 30 or less people.

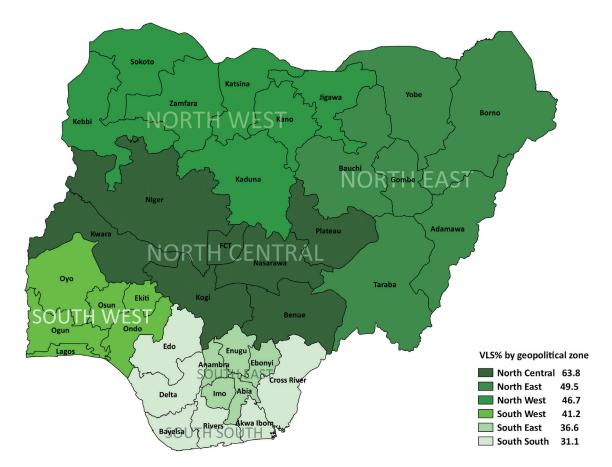


Figure 10.B Viral load suppression (VLS) (<1,000 copies/mL) among HIV-positive adults aged 15-64 years by geopolitical zone, NAIIS 2018

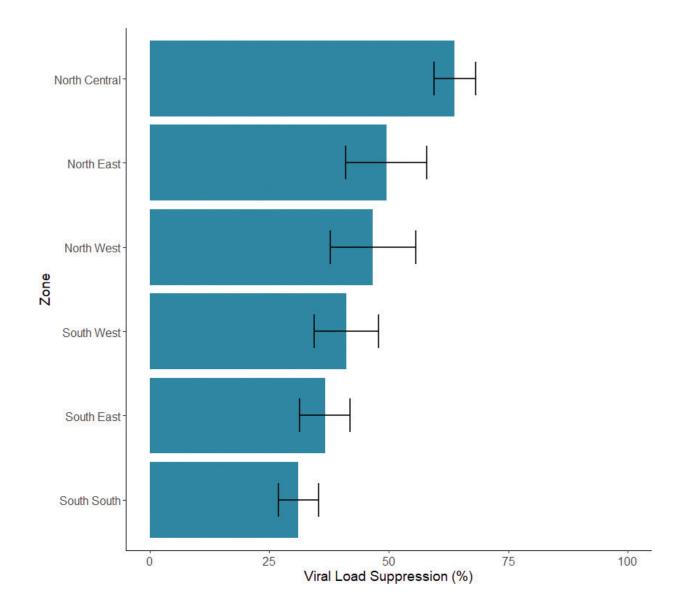


Figure 10.C Viral load suppression (<1000, copies/mL) among HIV-positive adults aged 15-64 years by geopolitical zone, NAIIS 2018

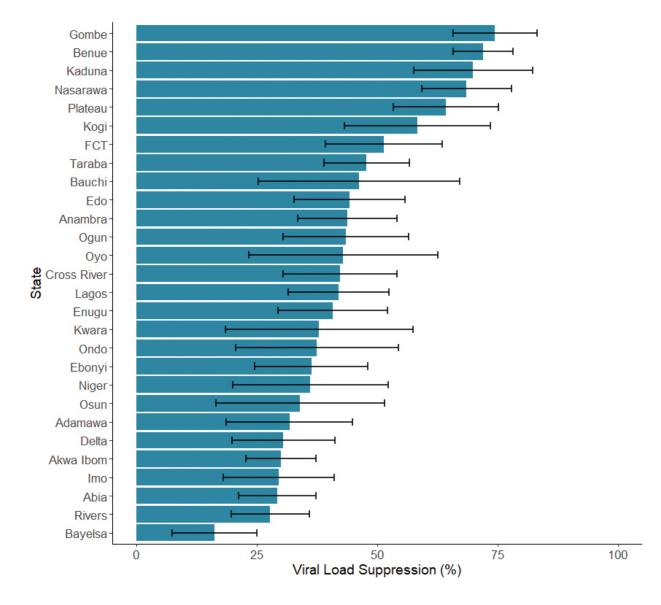


Figure 10.D Viral load suppression among HIV-positive adults aged 15-64 years by state, NAIIS 2018 The estimates were not presented for states where the unweighted sample size was 30 or less people.

# 11. UNAIDS 90-90-90 TARGETS

### 11.1 Background

UNAIDS set ambitious targets referred to as 90-90-90 to bring the HIV epidemic under control. The 90-90-90 targets propose that by 2020, 90% of all PLHIV will know their HIV status; 90% of all persons diagnosed with HIV will receive sustained ART; and 90% of all persons receiving ART will have VLS.<sup>1</sup> Awareness of HIV-positive status and treatment status among PLHIV who know their HIV-positive status and are on treatment provides a marker of access to and retention in care and a measure of program success. VLS of 73% (90 x 90 x 90) or greater among all PLHIV is an indication of successful testing and treatment services.

The 90-90-90 results are presented first as self-report and second as verified by ARV biomarker data. In the first case, participants were defined as 'aware' of their HIV-positive status if they self-reported knowing they were HIV positive before NAIIS HIV testing and 'on treatment' if they self-reported ART use. In the second case, self-reported 'aware' and 'on treatment' have been adjusted to include participants with ARV biomarkers detected in their blood specimen as aware' and 'on treatment' even when they did not self-report. In both sets of results, individuals who had achieved VLS but were not aware of their HIV-positive status or were not on ARVs, either by self-report or ARV biomarker data, were excluded from the numerator for the third 90.

#### 11.2 Results

Tables 11.A to 11.C, along with Figure 11.A, show progress towards attaining the 90-90-90 targets in adults at the time of NAIIS.

### 11.2.1 Key Findings

- Diagnosed: Among HIV-positive adults aged 15-64 years, 46.9% self-reported knowing their HIV status or had detectable ARVs in their blood (40.9% of men and 50.3% of women) (Table 11.B).
- On Treatment: Among HIV-positive adults aged 15-64 years who knew their HIV status, 96.4% self-reported being on ART or had detectable ARVs (97.8% of men and 95.8% of women) (Table 11.B).
- Suppressed Viral Load: Among HIV-positive adults aged 15-64 years who self-reported being on ART or had detectable ARVs, 80.9% had VLS (79.2% of men and 81.7% of women) (Table 11.B).

#### 11.3 References

1. Joint United Nations Programme on HIV/AIDS (UNAIDS). 90-90-90: An ambitious treatment target to help end the AIDS epidemic. Geneva: UNAIDS; 2014.

http://www.unaids.org/sites/default/files/media\_asset/90-90\_en\_0.pdf. Accessed March 10, 2019.

90-90-90	targets among people	e living with	HIV aged 15-64 year	ars by sex a	nd age, NAIIS 2018	
			Diagnosed	1		
	Males		Females	5	Total	
Age	Percentage who self-reported HIV- positive diagnosis	Number	Percentage who self-reported HIV-positive diagnosis	Number	Percentage who self-reported HIV- positive diagnosis	Numbe
(years) 15-24	8.9	60	16.2	244	14.4	304
25-34	13.5	60 160	25.2	244 564	21.7	304 724
	29.9	368	38.4	564 745	35.1	
35-49						1,113
15-49	22.7	588	30.0	1,553	27.5	2,141
15-64	27.1	828	29.9	1,832	28.9	2,660
		Un Tre	eatment, <sup>2</sup> among th			
Age	Males Percentage who self-reported being on ART <sup>2</sup> Number		Females Percentage who self-reported being on ART <sup>2</sup>	Number	Total Percentage who self-reported being on ART <sup>2</sup>	Numbe
(years) 15-24	*	5	68.9	42	71.6	47
25-34	*	22	80.8	42 145	81.9	167
35-49	95.3	124	90.1	284	91.8	408
15-49	93.4	151	85.4	471	87.7	622
15-64	93.8	251	87.7	565	89.8	816
15 04	55.0		ppressed, <sup>3</sup> among t			010
	Males	virally sa	Females		Total	
Age (years)	Percentage virally suppressed <sup>3</sup>	Number	Percentage virally suppressed <sup>3</sup>	Number	Percentage virally suppressed <sup>3</sup>	Numbe
15-24	*	4	78.3	31	80.9	35
25-34	*	19	80.1	125	78.6	144
35-49	77.3	117	85.2	259	82.5	376
15-49	77.2	140	83.3	415	81.5	555
15-64	79.5	234	84.2	509	82.5	743
PEPFAR I <sup>2</sup> Relates 1 PEPFAR 1 <sup>3</sup> Relates 1 loads and	to <u>Global AIDS Monito</u> ndicator DIABGNOSED to <u>Global AIDS Monito</u> TX_CURR_NAT / SUBN to <u>Global AIDS Monito</u> d POEPFAR VL_SUPPRI sk indicates that an es	<u>NAT</u> . ring indicato AT. ring indicato	or 1.2: People living or 1.4: People living	g with HIV o	on antiretroviral thera	apy and

90-90-9	0 targets among peop	ole living wit	h HIV aged 15-64 year	-	age, NAIIS 2018			
	Diagnosed <sup>1</sup> Males Females Total							
Age (years)	Percentage who self-reported HIV- positive or with detectable ARVs <sup>1</sup> Number		Females Percentage who self-reported HIV- positive or with detectable ARVs <sup>1</sup>	Number	Total Percentage who self-reported HIV- positive or with detectable ARVs <sup>1</sup>			
15-24	28.8	60	31.7	248	31.0	Number 308		
25-34	19.2	161	46.9	248 577	38.6	738		
25-54 35-49	45.3	372	57.4	762	52.8	1,134		
15-49	35.8	593	49.3	1,587	44.8	2,180		
15-64	40.9	835	49.3 50.3	1,387	44.8	2,180		
13-04	40.9		Treatment, <sup>2</sup> among th			2,703		
	Males	UII	Females		Total			
Age	Percentage with detectable ARVs or who self-reported		Percentage with detectable ARVs or who self-reported		Percentage with detectable ARVs or who self-reported			
(years)	being on ART <sup>2</sup>	Number	being on ART <sup>2</sup>	Number	being on ART <sup>2</sup>	Numbe		
15-24	*	14	91.3	83	92.3	97		
25-34	96.5	34	95.7	288	95.9	322		
35-49	98.2	187	95.2	442	96.2	629		
15-49	97.7	235	94.9	813	95.7	1,048		
15-64	97.8	382	95.8	984	96.4	1,366		
		Virally	Suppressed, <sup>3</sup> among t	hose on trea	itment			
	Males		Females	-	Total			
Age (years)	Percentage virally suppressed <sup>3</sup>	Number	Percentage virally suppressed <sup>3</sup>	Number	Percentage virally suppressed <sup>3</sup>	Numbe		
15-24	*	13	78.4	77	77.1	90		
25-34	65.8	33	76.9	277	75.2	310		
35-49	77.4	183	84.4	424	82.0	607		
15-49	75.2	229	81.3	778	79.6	1,007		
15-64	79.2	373	81.7	949	80.9	1,322		
			ator 1.1: People living	with HIV wh				
PEPFAR <sup>2</sup> Relates	Indicator DIABGNOS	<u>ED_NAT</u> . toring indica	ator 1.2: People living					
<u>and POE</u> An aster	PFAR VL_SUPPRESSI	ON_NAT.	ator 1.4: People living v					

### Table 11.CAdult self-reported ART status or presence of laboratory antiretroviral (ARV) data:Unconditional percentages

90-90-90 targets among people living with HIV aged 15-64 years by sex and age, NAIIS 2018

50 50 5			Diagnosed		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	Males		Females		Total	
Age	Percentage who self- reported HIV-positive diagnosis or with	Number	Percentage who self-reported HIV- positive diagnosis or with detectable	Norshan	Percentage who self-reported HIV- positive diagnosis or with detectable	Number
(years)	detectable ARVs <sup>1</sup>	Number	ARVs <sup>1</sup>	Number	ARVs <sup>1</sup>	Number
15-24	28.8	60	31.7	248	31.0	308
25-34	19.2	161	46.9	577	38.6	738
35-49	45.3	372	57.4	762	52.8	1,134
15-49	35.8	593	49.3	1,587	44.8	2,180
15-64	40.9	835	50.3	1,870	46.9	2,705
			On Treatmer	nt²		
4.50	Males Percentage with detectable ARVs or		Females Percentage with detectable ARVs or		Total Percentage with detectable ARVs or	
Age (years)	who self-reported being on ART <sup>2</sup>	Number	who self-reported being on ART <sup>2</sup>	Number	who self-reported being on ART <sup>2</sup>	Number
15-24	27.5	60	29.0	248	28.6	308
25-34	18.5	161	44.9	577	37.0	738
35-49	44.5	372	54.6	762	50.8	1,134
15-49	35.0	593	46.8	1,587	42.9	2,180
15-64	40.0	835	48.2	1,870	45.3	2,705
			Virally Suppres	sed <sup>3</sup>		
	Males		Females		Total	
Age	Percentage virally	N	Percentage virally	Number	Percentage virally	N
(years)	suppressed <sup>3</sup>	Number	suppressed <sup>3</sup>	Number	suppressed <sup>3</sup>	Number
15-24	20.1	60	22.7	248	22.1	308
25-34	12.2	161	34.5	577	27.8	738
35-49	34.4	372	46.1	762	41.6	1,134
15-49	26.3	593	38.0	1,587	34.1	2,180
15-64	31.7	835	39.4	1,870	36.6	2,705
Indicato <sup>2</sup> Relates TX_CUF <sup>3</sup> Relates	s to <u>Global AIDS Monito</u> or <u>DIAGNOSED_NAT</u> . s to <u>Global AIDS Monito</u> <u>RR_NAT / SUBNAT</u> . s to <u>Global AIDS Monito</u>	ring indicat	or 1.2: People living wi	th HIV on ant	iretroviral therapy and	PEPFAR
<u>PEPFAR</u>	VL_SUPPRESSION_NAT	<u>.</u> 		1 /22		

An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

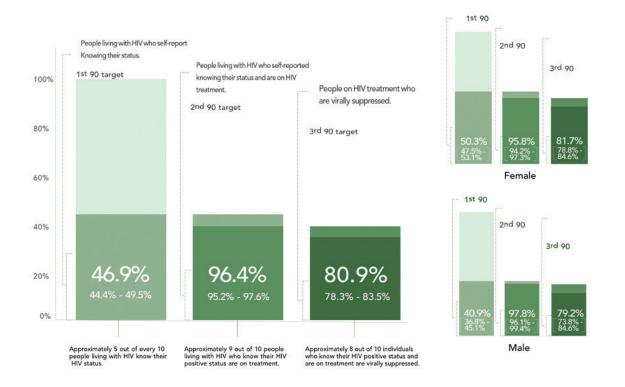


Figure 11.A Adult 90-90-90: Conditional percentages (adjusted for laboratory antiretroviral data among adults aged 15-64 years), NAIIS 2018

## 12. CLINICAL PERSPECTIVES ON PEOPLE LIVING WITH HIV

#### 12.1 Background

Nigeria implemented the "test and treat" policy for all in 2016. Ensuring the treatment program is people-centered and innovative to meet this policy requires diligent monitoring and responsiveness.<sup>1</sup> Clinical indicators such as CD4 count at diagnosis and retention on ART can provide evidence of the ability to reach vulnerable populations and quality of care. The distribution of CD4 counts also reflects population health and the potential impact of HIV on mortality.

#### 12.2 Results

Tables 12.A to 12.E and Figure 12.A present data on clinical characteristics of PLHIV from the survey.

#### 12.2.1 Key Findings

- Among newly diagnosed HIV-positive adults aged 15-64 years who self-reported being HIV negative and had no detectable ARVs, 9.3% had a CD4 count <200 cells/µLl and 29.5% had <350 cells/µLl (Table 12.B).</li>
- Among HIV-positive adults aged 15-64 years who self-reported being on ART ≤12 months prior to the survey, 77.9% of women and 81.7% of men were virally suppressed (Table 12.E).
- Among HIV-positive adults aged 15-64 years who initiated ART ≤12 months prior to the survey, 95.2% were still receiving ART (Table 12.C).
- Among HIV-positive adults aged 15-64 years who initiated ART >12 months prior to the survey, 94.3% were still receiving ART (Table 12.D).
- Among HIV-positive adults aged 15-64 years with VLS, 28.3% reported not being on ART (30.5% among women and 24.7% among men) (Table 12.E).

#### 12.3 References

1. World Health Organization. *Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection.* Geneva: World Health Organization; 2016. <u>http://www.who.int/hiv/pub/arv/arv-2016/en/</u>. Accessed March 10, 2019.

#### Table 12.A Median CD4 count and prevalence of immunosuppression

Median (Q1, Q3) CD4 count of HIV-positive persons aged 15-64 years and percentage with immunosuppression (<500 cells/µL) by sex, self-reported diagnosis and antiretroviral therapy (ART) status and socio-demographic characteristics, NAIIS 2018

		Males			Females			Total	
Socio- demographic characteristics	Median (Q1, Q3) <sup>1</sup>	Percentage <500 cells/μL	Number	Median (Q1, Q3) <sup>1</sup>	Percentage <500 cells/ μL	Number	Median (Q1, Q3) <sup>1</sup>	Percentage <500 cells/ μL	Numbe
Self-reported dia		, h		(4-) 4-)			(4-) 4-)	F*=	
and treatment st	atus								
Not									
previously	445	<b>F7</b> C	530	517	46.7	4.240	495	50.0	4 0 4 0
diagnosed	(297,663)	57.6	570	(325,751)	46.7	1,249	(312,716)	50.8	1,819
Previously diagnosed,				579			514		
not on ART	*	*	17	(282,747)	39.2	56	(282,717)	47.6	73
Previously									
diagnosed,	441			606			541		
on ART	(311,592)	58.6	231	(395,799)	36.9	503	(351,749)	44.6	734
Place of residence	e								
	406			553			511		
Urban	(279,632)	59.4	314	(339,754)	42.1	753	(306,711)	48.3	1,067
	457			533			502		
Rural	(313,646)	58.2	521	(339,775)	45.1	1,115	(327,739)	49.8	1,636
Geopolitical zone	9								
	412			556			514		
North West	(297,651)	58.2	55	(276,737)	41.4	117	(289,713)	47.5	172
North Fast	437		120	560	44.1	257	484	F2 F	206
North East	(292,612)	65.1	139	(279,780)	44.1	257	(289,702)	52.5	396
North Central	446 (293,649)	55.4	185	568 (386,825)	41.1	456	533 (335,771)	45.9	641
	420	55.1	100	518	1111	100	479	1010	0.11
South East	(281,572)	60.2	148	(315,754)	47.8	325	(311,681)	52.5	473
	486			547			521		
South South	(312,678)	54.0	217	(361,771)	42.3	484	(337,745)	46.5	701
	406			516			480		
South West	(267,637)	63.9	91	(329,747)	46.4	229	(308,686)	52.5	320
Marital status									
Never	437			555			516		
married	(323,638)	56.7	161	(357,742)	43.3	307	(328,707)	48.6	468
Married	427			F 2 0			F.0.1		
or living together	437 (298,647)	59.3	595	538 (349,784)	42.9	995	501 (319,724)	50.0	1,590
Divorced or	481	5515	000	508	12.13	555	491	5010	1,000
separated	(275,577)	57.2	44	(263,699)	48.6	197	(266,671)	50.6	241
	397			547			526		
Widowed	(236,551)	60.2	34	(338,757)	44.5	364	(325,752)	45.9	398

### Table 12.A Median CD4 count and prevalence of immunosuppression (continued)

Median (Q1, Q3) CD4 count of HIV-positive persons aged 15-64 years and percentage with immunosuppression (<500 cells/µL) by sex, self-reported diagnosis and antiretroviral therapy (ART) status and socio-demographic characteristics, NAIIS 2018

		Males			Females			Total	
Socio- demographic characteristics	Median (Q1, Q3) <sup>1</sup>	Percentage <500 cells/μL	Number	Median (Q1, Q3) <sup>1</sup>	Percentage <500 cells/ μL	Number	Median (Q1, Q3) <sup>1</sup>	Percentage <500 cells/ μL	Number
Type of union	(Q1, Q3)	300 εςπ3/με	Number	(01,03)	μι	Number	(01,03)	μ	Number
In									
polygynous union	430 (319,613)	62.2	90	537 (318,758)	43.2	300	507 (319,730)	48.2	390
Not in polygynous	437			538			496		
union	(289,646)	59.6	502	(353,800)	42.6	685	(318,727)	50.7	1,187
Not currently in union	443 (295,619)	57.2	239	543 (329,744)	44.9	868	516 (322,715)	48.1	1,107
<b>Education</b> <sup>2</sup>									
No education	488 (319,666)	53.1	76	565 (341,801)	43.5	367	533 (340,779)	45.4	443
Primary	433 (279,613)	65.2	198	512 (327,760)	46.8	512	485 (303,713)	52.6	710
Secondary	446 (305,662)	55.8	373	555 (357,754)	41.8	732	517 (328,711)	47.4	1,105
Tertiary	432 (325,609)	57.4	162	563 (345,784)	41.1	216	506 (328,702)	48.6	378
Others	*	*	26	339 (134,614)	69.4	36	336 (182,588)	72.5	62
Wealth quintile									
Lowest	456 (296,642)	58.1	100	546 (337,772)	44.8	207	504 (302,726)	49.7	307
Second	428 (303,588)	64.0	144	530 (316,793)	44.2	316	489 (316,714)	51.3	460
Middle	458 (270,654)	59.7	208	539 (327,765)	44.5	499	508 (311,738)	49.4	707
Fourth	426 (316,653)	57.2	203	548 (358,745)	42.6	495	511 (340,725)	47.6	698
Highest	433 (285,647)	56.6	180	539 (336,789)	43.6	351	510 (308,708)	48.9	531

#### Table 12.A Median CD4 count and prevalence of immunosuppression (continued)

Median (Q1, Q3) CD4 count of HIV-positive persons aged 15-64 years and percentage with immunosuppression (<500 cells/µL) by sex, self-reported diagnosis and antiretroviral therapy (ART) status and socio-demographic characteristics, NAIIS 2018

		Males			Females			Total	
Socio- demographic characteristics	Median (Q1, Q3) <sup>1</sup>	Percentage <500 cells/μL	Number	Median (Q1, Q3) <sup>1</sup>	Percentage <500 cells/ μL	Number	Median (Q1, Q3)1	Percentage <500 cells/ μL	Numbe
Age (years)									
15-19	*	*	23	640 (455,806)	31.4	57	639 (451,846)	29.5	80
20-24	493 (373,642)	51.5	36	617 (412,788)	34.3	193	582 (385,729)	38.0	229
25-29	455 (327,672)	56.4	72	514 (314,755)	48.6	279	494 (325,736)	50.8	351
30-34	453 (289,652)	60.0	92	527 (324,759)	44.5	302	505 (311,705)	49.4	394
35-39	434 (306,646)	59.5	115	517 (315,725)	47.0	353	490 (313,713)	51.0	468
40-44	443 (295,595)	60.4	129	589 (332,794)	41.2	244	511 (318,739)	49.0	373
45-49	403 (292,620)	63.8	126	506 (288,719)	47.3	160	443 (291,683)	54.8	286
50-54	437 (265,605)	56.9	113	538 (379,766)	44.5	144	493 (327,727)	50.8	257
55-59	328 (214,539)	71.3	63	611 (414,818)	35.2	74	506 (299,763)	49.7	137
60-64	475 (251,662)	52.7	66	432 (320,538)	63.1	62	439 (310,654)	58.1	128
Total 15-24	547	42.5	50	625	22 7	250	602	25.0	200
years Total 15-49	(385,692) 446	42.5	59	(423,804) 546	33.7	250	(392,771) 513	35.8	309
years	(312,650)	58.3	593	(330,762)	43.7	1,588	(324,719)	48.5	2,181
Total 15-64 years	438 (299,640)	58.7	835	542 (339,768)	43.8	1,868	507 (320,723)	49.1	2,703

<sup>1</sup>The interquartile range (IQR) is a measure of variability, based on dividing a data set into quartiles. Quartiles divide a rank-ordered data set into four equal parts. The values that divide each part are called the first, second and third quartiles, and they are denoted by Q1, Q2 and Q3, respectively.

<sup>2</sup>Education categories refer to the highest level of education attended, whether that level was completed.

An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

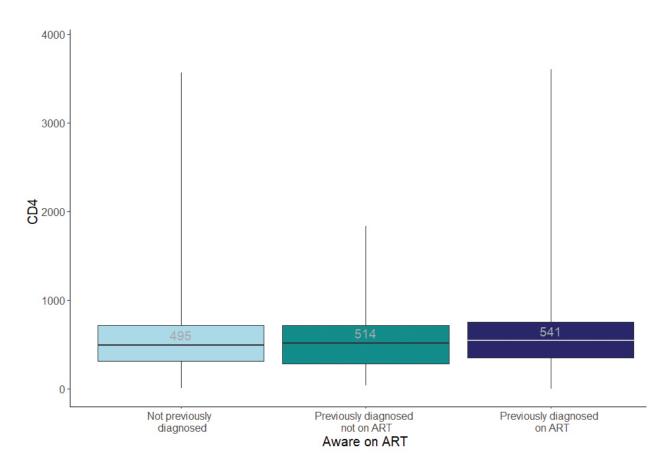


Figure 12.A CD4 count distribution among HIV-positive adults by antiretroviral therapy status (ART), NAIIS 2018

#### Table 12.B Late HIV diagnosis

Percentage distribution of persons aged 15-64 years who tested HIV positive in NAIIS but self-reported HIV negative, who had no detectable antiretrovirals and who had a CD4 cell count <200 cells/ $\mu$ L and < 50 cells/ $\mu$ L by sex and selected socio-demographic characteristics, NAIIS 2018

characteristics, M		Males			Females			Total	
Socio-	Percentage	Percentage		Percentage	Percentage		Percentage	Percentage	
demographic	<200 cells/	<350 cells/		<200 cells/	<350 cells/		<200 cells/	<350 cells/	
characteristics	μL <sup>1</sup>	μL <sup>1</sup>	Number	μL <sup>1</sup>	μL <sup>1</sup>	Number	μL <sup>1</sup>	μL <sup>1</sup>	Numbe
Place of residence									
Urban	12.5	33.1	60	13.3	27.8	142	13.0	29.9	202
Rural	3.9	34.4	92	7.1	25.8	181	5.9	29.1	273
Geopolitical zone									
North West	*	*	7	*	*	9	*	*	16
North East	*	*	17	*	*	27	19.9	46.5	44
North		*							
Central	*		23	5.0	36.7	40	9.2	46.5	63
South East	6.1	34.0	40	4.8	28.2	92	5.3	30.2	132
South South	2.7	25.1	47	6.8	18.3	103	5.3	20.8	150
South West	*	*	18	16.2	26.7	52	14.0	26.2	70
Marital status									
Never married	8.2	23.0	44	3.7	19.4	68	5.7	21.0	112
Married or living together	5.6	39.3	92	9.3	25.8	180	7.8	31.3	272
Divorced or separated	*	*	9	*	*	29	22.1	32.0	38
Widowed	*	*	6	18.1	40.5	46	18.3	40.6	52
<b>Type of union</b> In polygynous									
union	*	*	15	16.7	39.8	39	13.7	41.7	54
Not in polygynous union	5.6	41.6	75	6.4	21.5	137	6.1	29.6	212
Not currently in union	11.9	25.4	59	10.9	27.9	143	11.3	27.1	202
<b>Education</b> <sup>2</sup>									
No education	*	*	2	*	*	24	*	*	26
Primary	4.8	32.4	33	6.1	32.9	77	5.6	32.7	110
Secondary	4.5	32.0	76	11.5	25.9	165	8.9	28.2	241
Tertiary	12.1	35.7	38	11.5	21.9	55	11.8	27.8	93
Others	*	*	3	*	*	1	*	*	4

#### Table 12.BLate HIV diagnosis (continued)

Percentage distribution of persons aged 15-64 years who tested HIV positive in NAIIS but self-reported HIV negative, who had no detectable antiretrovirals and who had a CD4 cell count <200 cells/ $\mu$ L and < 50 cells/ $\mu$ L by sex and selected socio-demographic characteristics, NAIIS 2018

characteristics, h									
		Males			Females			Total	
Socio- demographic characteristics	Percentage <200 cells/ μL <sup>1</sup>	Percentage <350 cells/ μL <sup>1</sup>	Number	Percentage <200 cells/ μL <sup>1</sup>	Percentage <350 cells/ μL <sup>1</sup>	Number	Percentage <200 cells/ μL <sup>1</sup>	Percentage <350 cells/ μL <sup>1</sup>	Numbe
Wealth quintile									
Lowest	*	*	8	*	*	20	*	*	28
Second	*	*	21	12.8	30.1	31	17.1	44.7	52
Middle	4.1	30.2	33	11.6	24.3	75	8.9	26.4	108
Fourth	7.7	29.7	37	7.6	27.9	98	7.6	28.5	135
Highest	6.3	28.4	53	10.6	25.9	99	8.8	26.9	152
Age (years)									
15-19	*	*	0	*	*	9	*	*	9
20-24	*	*	14	0.0	18.9	34	0.0	15.3	48
25-29	*	*	21	8.0	30.5	72	5.7	27.8	93
30-34	7.1	39.4	31	15.9	20.9	55	11.5	30.2	86
35-39	*	*	27	8.0	28.2	66	8.7	29.7	93
40-44	*	*	11	*	*	29	11.2	28.8	40
45-49	*	*	22	*	*	29	18.1	45.4	51
50-54	*	*	15	*	*	20	4.5	24.1	35
55-59	*	*	6	*	*	5	*	*	11
60-64	*	*	5	*	*	4	*	*	9
Total 15-24 years	*	*	14	0.0	16.2	43	0.0	13.9	57
Total 15-49 years	8.1	34.2	126	9.2	26.1	294	8.8	29.0	420
Total 15-64 years	8.0	33.8	152	10.0	26.8	323	9.3	29.5	475

<sup>1</sup>Relates to <u>Global AIDS Monitoring indicator 1.5: Late HIV diagnosis</u>.

<sup>2</sup>Education categories refer to the highest level of education attended, whether that level was completed.

An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

## Table 12.CRetention on antiretroviral therapy (ART): People initiating ART ≤12 monthsprior to the survey

Percentage distribution of HIV-positive persons aged 15-64 years who self-reported still on ART after initiation ≤12 months prior to the survey by sex and selected socio-demographic characteristics, NAIIS 2018

	Males	5	Fema	les	Tota	<u>l</u>
Socio-demographic	Percentage still receiving		Percentage still receiving		Percentage still receiving	
characteristics	ART <sup>1</sup>	Number	ART <sup>1</sup>	Number	ART <sup>1</sup>	Number
Presence of detectable ARVs <sup>2</sup>						
Detectable	*	11	*	22	97.4	33
Not detectable	*	6	*	15	*	21
Place of residence						
Urban	*	16	89.0	42	91.4	58
Rural	96.6	39	99.4	59	98.1	98
Geopolitical zone						
North West	*	3	*	5	*	8
North East	*	13	*	15	*	28
North Central	*	17	96.9	32	96.6	49
South East	*	8	*	13	*	21
South South	*	13	*	22	97.3	35
South West	*	1	*	14	*	15
Marital status						
Never married	*	9	*	15	*	24
Married or living together	97.3	37	91.5	48	94.1	85
Divorced or separated	<i>91.</i> 5 *	7	*	48	94.1 *	23
Widowed	*	2	*	22	*	23 24
Type of union		Z		22		24
In polygynous union	*	5	*	16	*	21
Not in polygynous		5		10		21
union	97.0	32	87.1	32	92.4	64
Not currently in union	*	18	96.6	53	96.5	71
Education <sup>3</sup>						
No education	*	6	*	15	*	21
Primary	*	9	*	28	95.2	37
Secondary	*	21	92.0	47	92.5	68
Tertiary	*	19	*	10	*	29
Others	.*	0	*	0	*	0

prior to the survey (cont	inued)					
Percentage distribution of						initiation
≤12 months prior to the s						
	Male	2S	Fema	ales	Tota	
Wealth quintile						
Lowest	*	6	*	9	*	15
Second	*	10	*	15	*	25
Middle	*	18	*	27	92.6	45
Fourth	*	13	92.0	33	94.6	46
Highest	*	8	*	17	*	25
Age (years)						
15-19	*	0	*	2	*	2
20-24	*	4	*	10	*	14
25-29	*	2	*	18	*	20
30-34	*	3	*	13	*	16
35-39	*	12	*	21	97.6	33
40-44	*	6	*	13	*	19
45-49	*	12	*	13	*	25
50-54	*	8	*	9	*	17
55-59	*	6	*	2	*	8
60-64	*	2	*	0	*	2
Total 15-24 years	*	4	*	12	*	16
Total 15-49 years	97.6	39	93.4	90	94.8	129
Total 15-64 years	97.0	55	94.2	101	95.2	156

### Table 12.CRetention on antiretroviral therapy (ART): People initiating ART ≤12 monthsprior to the survey (continued)

<sup>1</sup>Relates to <u>Global AIDS Monitoring indicator 1.3: Retention on antiretroviral therapy at 12 months</u>. <sup>2</sup>Antiretroviral detection assay included only atazanavir, efavirenz and lopinavir. Participants who reported ART use or had an undetectable viral load but had no evidence of the first three ARVs were tested for nevirapine as well.

<sup>3</sup>Education categories refer to the highest level of education attended, whether that level was completed. An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

# Table 12.DRetention on antiretroviral therapy (ART): People initiating ART >12 monthsprior to the survey

Percentage distribution of HIV-positive persons aged 15-64 years who self-reported still on ART after initiation >12 months prior to the survey by sex and selected socio-demographic characteristics, NAIIS 2018

	Mal	es	Fema	ales	Tot	al
	Percentage		Percentage still		Percentage still	
Socio-demographic	still receiving	NI SIL SI	receiving	NI SILS	receiving	NL
characteristics	ART <sup>1</sup>	Number	ART <sup>1</sup>	Number	ART <sup>1</sup>	Number
Presence of detectable ARVs <sup>2</sup>						
Detectable	97.5	73	96.9	190	97.0	263
Not detectable	*	10	*	25	49.7	35
Place of residence						
Urban	98.2	74	92.4	213	94.2	287
Rural	94.4	107	94.2	210	94.3	317
Geopolitical zone						
North West	*	12	*	25	91.6	37
North East	*	28	100.0	64	100.0	92
North Central	97.0	74	99.1	146	98.3	220
South East	*	21	92.5	70	94.5	91
South South	89.8	31	83.6	65	85.9	96
South West	*	15	94.8	53	94.7	68
Marital status						
Never married	*	8	96.7	44	97.2	52
Married or living together	95.5	154	93.0	218	94.2	372
Divorced or separated	*	9	88.0	53	90.4	62
Widowed	*	10	94.5	108	95.1	118
Type of union						
In polygynous union	*	25	99.6	54	95.1	79
Not in polygynous union	97.2	128	90.5	161	93.9	289
Not currently in union	*	27	93.5	205	94.4	232
Education <sup>3</sup>						
No education	*	13	93.8	66	94.8	79
Primary	95.9	45	97.7	105	97.1	150
Secondary	96.9	62	93.2	174	94.3	236
Tertiary	94.4	56	94.5	67	94.4	123
Others	*	5	*	11	*	16

### Table 12.DRetention on antiretroviral therapy (ART): People initiating ART >12 monthsprior to the survey (continued)

Percentage distribution of HIV-positive persons aged 15-64 years who self-reported still on ART after initiation >12 months prior to the survey by sex and selected socio-demographic characteristics, NAIIS 2018

	Ma	les	Fema	les	Tot	al
	Percentage		Percentage still		Percentage still	
Socio-demographic	still receiving		receiving		receiving	
characteristics	ART <sup>1</sup>	Number	ART <sup>1</sup>	Number	ART <sup>1</sup>	Number
Wealth quintile						
Lowest	*	19	*	25	94.6	44
Second	93.0	38	98.0	81	96.2	119
Middle	95.6	44	91.3	105	92.6	149
Fourth	97.6	44	96.8	119	97.0	163
Highest	96.5	36	88.5	93	91.3	129
Age (years)						
15-19	*	0	*	6	*	6
20-24	*	0	*	19	*	19
25-29	*	5	86.9	38	89.0	43
30-34	*	10	89.4	62	88.8	72
35-39	*	19	94.3	95	94.3	114
40-44	100.0	36	91.3	76	94.6	112
45-49	97.7	33	97.2	45	97.4	78
50-54	96.1	37	100.0	47	97.9	84
55-59	*	17	*	20	100.0	37
60-64	*	24	*	15	92.6	39
Total 15-24 years	*	0	*	25	*	25
Total 15-49 years	96.8	103	91.8	341	93.1	444
Total 15-64 years	96.2	181	93.3	423	94.3	604

<sup>1</sup>Relates to <u>Global AIDS Monitoring indicator 1.3: Retention on antiretroviral therapy at 12 months</u>.

<sup>2</sup>Antiretroviral detection assay included only atazanavir, efavirenz and lopinavir. Participants who reported ART use or had an undetectable viral load but had no evidence of the first three ARVs were tested for nevirapine as well.

<sup>3</sup>Education categories refer to the highest level of education attended, whether or not that level was completed.

An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

#### Table 12.E Viral load suppression by self-reported antiretroviral therapy (ART) status

Percentage distribution of HIV-positive persons aged 15-64 years with viral load suppression (VLS) (<1,000 copies/mL) by self-reported ART status and selected socio-demographic characteristics, NAIIS 2018

	On ART > 12	months	On ART ≤ 12	months	Not on A	ART
Socio- demographic characteristic	With viral load suppression	Number <sup>1</sup>	With viral load suppression	Number <sup>1</sup>	With viral load suppression	Number <sup>1</sup>
Sex						
Male	79.2	176	81.7	52	24.7	555
Female	85.9	403	77.9	95	30.5	1,233
Residence						
Urban	84.3	277	83.0	52	29.7	665
Rural	82.8	302	76.9	95	27.3	1,123
Age (years)						
15-24	*	22	*	13	25.3	253
25–64	83.8	557	78.7	134	28.9	1,535
Total 15–64						
years	83.6	579	79.4	147	28.3	1,788

<sup>1</sup>Number of HIV-positive persons who had viral load values.

An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

# 13. PREVENTION OF MOTHER-TO-CHILD HIV TRANSMISSION

#### 13.1 Background

PMTCT, also known as prevention of vertical transmission, refers to interventions to prevent transmission of HIV from an HIV-positive mother to her infant during pregnancy, labor, delivery or breastfeeding.<sup>1</sup> To prevent mother-to-child HIV transmission (MTCT), WHO recommends a comprehensive four-pronged approach: (1) primary prevention of HIV infection among women, especially young women; (2) prevention of unintended pregnancies among HIV-positive women; (3) provision of specific interventions to reduce HIV transmission from HIV-infected women to their infants; and (4) provision of treatment, care and support for HIV-positive mothers, their infants and family.<sup>2,3</sup>

#### 13.2 Results

Tables 13.A to 13.D present statistics on ANC attendance, breastfeeding practices, awareness of a woman's HIV status prior to or during pregnancy, use of ART during pregnancy in women who were aware of their HIV-positive status during pregnancy and infant HIV testing to confirm HIV infection through self-report by the mother and through biomarker testing during the survey.

#### 13.2.1 Key Findings

<ul> <li>In the three years preceding the survey:</li> </ul>	•	In the three	years	preceding	the survey	:
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- 76.3% of women aged 15-49 years who delivered in the three years preceding the survey attended at least one ANC visit, 87.1% in urban areas and 68.1% in rural areas (Table 13.A).
- ANC attendance for women aged 15-49 years was lowest for those with no education (56.9%) and highest for those with tertiary education (97.6%) (Table 13.A).
- ANC attendance was lowest among women aged 15-19 years (64.6%) and highest among women aged 35-39 years (80.6%) (Table 13.A).
- 84.3% of those who knew their HIV-positive status received ARVs (Table 13.D).
- Among women aged 15-49 years who gave birth within the past 12 months, 41.5% reported knowing their status during their pregnancy (Table 13.C).

#### 13.3 References

1. Joint United Nations Programme on HIV/AIDS (UNAIDS). Prevention of mother-to-child transmission of HIV (PMTCT). The Strengthening High Impact Interventions for an AIDS-free Generation (AIDSFree) Project. Accessed March 10, 2019.

2. De Cock KM, Fowler MG, Mercier E, et al. Prevention of mother-to-child HIV transmission in resourcepoor countries: translating research into policy and practice. *JAMA*. 2000; 283:1175-1182. doi:10.1001/ jama.283.9.1175.

 World Health Organization. Towards the elimination of mother-to-child transmission of HIV: Report of a WHO technical consultation. Geneva: World Health Organization;
 http://apps.who.int/iris/bitstream/handle/10665/44638/9789241501910\_eng.
 pdf;jsessionid=CD35DAE3C3D00349A9B149BCFF9262C4?sequence=1. Accessed March 10, 2019.

### Table 13.AAntenatal care

Percentage of women aged 15-49 years who delivered in the three years preceding the survey and who attended at least one antenatal care (ANC) visit for their most recent birth by selected sociodemographic characteristics, NAIIS 2018

	Percentage who attended	
Socio-demographic characteristics	at least one ANC visit	Number
Place of residence		
Urban	87.1	9,181
Rural	68.1	14,420
Geopolitical zone		
North West	67.2	4,226
North East	71.2	4,924
North Central	72.4	3,764
South East	93.9	3,546
South South	74.6	3,271
South West	86.4	3,870
State		
Abia	93.9	707
Adamawa	76.1	732
Akwa Ibom	67.5	532
Anambra	95.2	615
Bauchi	69.7	1,169
Bayelsa	49.4	620
Benue	66.0	511
Borno	80.2	248
Cross River	83.8	604
Delta	79.1	492
Ebonyi	87.5	949
Edo	87.6	530
Ekiti	86.0	500
Enugu	94.6	624
FCT <sup>1</sup>	89.9	432
Gombe	79.2	1,015
Imo	96.0	651
Jigawa	78.9	868
Kaduna	71.7	661
Kano	82.4	734
Katsina	54.2	564
Kebbi	37.7	539
Коді	77.6	428

Table 13.A Antenatal care (continued	)	
Percentage of women aged 15-49 years whe who attended at least one antenatal care ( demographic characteristics, NAIIS 2018		
	Percentage who attended	
Socio-demographic characteristics	at least one ANC visit	Number
Kwara	82.8	398
Lagos	88.3	1,041
Nasarawa	85.8	643
Niger	57.9	699
Ogun	89.2	548
Ondo	83.9	564
Osun	93.1	582
Оуо	78.4	635
Plateau	77.5	653
Rivers	71.9	493
Sokoto	47.0	537
Taraba	63.3	923
Yobe	57.9	837
Zamfara	44.5	323
Marital status		
Never married	72.1	1,166
Married or living together	76.5	21,641
Divorced or separated	77.2	547
Widowed	80.6	238
Type of union		
In polygynous union	68.4	6,098
Not in polygynous union	79.8	15,418
Not currently in union	74.4	1,951
Education <sup>2</sup>		
No education	56.9	6,352
Primary	78.1	4,068
Secondary	86.7	9,064
Tertiary	97.6	2,409
Others	66.0	1,677
Wealth quintile		
Lowest	55.3	5,066
Second	67.1	4,852
Middle	81.4	5,011
Fourth	88.1	4,704
Highest	93.6	3,968

Table 13.A         Antenatal care (continued)	4)						
Percentage of women aged 15-49 years who delivered in the three years preceding the survey and who attended at least one antenatal care (ANC) visit for their most recent birth by selected socio- demographic characteristics, NAIIS 2018							
	Percentage who attended						
Socio-demographic characteristics	at least one ANC visit	Number					
Age (years)							
15-19	64.6	1,682					
20-24	74.2	5,309					
25-29	78.2	6,929					
30-34	78.4	5,171					
35-39	80.6	3,132					
40-44	80.3	1,120					
45-49	69.3	258					
Total 15-24 years	71.7	6,991					
Total 15-49 years	76.3	23,601					
<sup>1</sup> FCT – Federal Capital Territory. <sup>2</sup> Education categories refer to the highest level of education attended, whether that level was							

completed.

Percent distribution of last-born children born to women aged 15-49 years in the three years preceding							
the survey by breastfeeding status, child's age and mother's HIV status, NAIIS 2018							
	Ever breastfed,						
	but not currently Curre						
Characteristic	Never breastfed	breastfeeding	breastfeeding	Number			
Child's age (months)							
0-1	0.9	52.4	46.7	1,395			
2-3	2.1	55.4	42.5	1,423			
4-5	1.2	59.0	39.8	1,378			
6-8	1.0	59.1	39.8	2,062			
9-11	0.9	57.9	41.2	1,852			
12-17	1.0	71.7	27.2	4,108			
18-23	1.0	90.5	8.4	2,930			
24-36	0.7	97.0	2.2	5,486			
Mother's NAIIS HIV test							
result							
HIV positive	2.2	77.4	20.4	311			
HIV negative	1.0	73.3	25.7	21,357			
Not tested	1.4	71.6	27.1	1,689			

#### Breastfeeding status by child's age and mother's HIV status Table 13.B

Percent distribution of last-horn children horn to women aged 15-49 years in the three years preceding

### Table 13.C Prevention of mother-to-child HIV (PMTCT) transmission: Knowledge of HIV status

Percentage distribution of women aged 15-49 years who gave birth within the past 12 months who were tested for HIV during antenatal care and received their results or who already knew they were HIV positive by selected socio-demographic characteristics, NAIIS 2018

	or HIV and ed result <sup>1</sup>				
Socio-demographic characteristics	Percentage who tested HIV positive	Percentage who tested HIV negative	Percentage who already knew they tested HIV positive	Total percentage with known HIV status <sup>1</sup>	Number of women who gave birth within the past 12 months
Place of residence					
Urban	0.0	57.0	0.7	57.7	3,193
Rural	0.1	29.3	0.4	29.8	5,169
Geopolitical zone					
North West	0.0	27.0	0.2	27.3	1,468
North East	0.0	28.2	0.3	28.5	1,730
North Central	0.0	44.5	0.5	45.1	1,321
South East	0.1	65.1	0.6	65.8	1,393
South South	0.3	44.8	0.6	45.7	1,235
South West	0.1	51.7	0.9	52.7	1,215
Marital status					
Never married	0.0	33.9	1.5	35.4	410
Married or living together	0.1	41.5	0.4	42.0	7,746
Divorced or					
separated	0.0	36.1	1.3	37.4	147
Widowed	0.0	42.4	0.9	43.3	57
Type of union					
In polygynous union	0.0	27.8	0.2	27.9	2,073
Not in polygynous union	0.1	46.5	0.5	47.1	5,629
Not currently in	_				_
union	0.0	35.1	1.4	36.5	614
Education <sup>2</sup>	_		_		_
No education	0.0	19.0	0.1	19.2	2,162
Primary	0.0	36.7	0.6	37.3	1,359
Secondary	0.2	52.4	0.6	53.2	3,371
Tertiary	0.0	80.5	1.3	81.8	885
Others	0.0	18.7	0.0	18.7	576

 Table 13.C
 Prevention of mother-to-child HIV (PMTCT) transmission: Knowledge of HIV status (continued)

Percentage distribution of women aged 15-49 years who gave birth within the past 12 months who were tested for HIV during antenatal care and received their results or who already knew they were HIV positive by selected socio-demographic characteristics, NAIIS 2018

		or HIV and ed result <sup>1</sup>	_		
Socio-demographic characteristics	Percentage who tested HIV positive	Percentage who tested HIV negative	Percentage who already knew they tested HIV positive	Total percentage with known HIV status <sup>1</sup>	Number of women who gave birth within the past 12 months
Wealth quintile					
Lowest	0.0	16.5	0.1	16.7	1,796
Second	0.0	25.9	0.3	26.1	1,716
Middle	0.1	41.9	0.2	42.1	1,806
Fourth	0.2	52.8	0.9	53.9	1,660
Highest	0.1	74.0	1.1	75.3	1,384
Age (years)					
15-19	0.0	26.8	0.0	26.8	753
20-24	0.0	35.5	0.2	35.8	1,986
25-29	0.1	44.3	0.5	45.0	2,536
30-34	0.1	47.0	0.7	47.7	1,770
35-39	0.2	48.1	0.8	49.1	977
40-44	0.0	46.2	1.5	47.7	280
45-49	0.0	30.9	2.1	33.0	60
Total 15-24 years	0.0	32.9	0.1	33.1	2,739
Total 15-49 years	0.1	41.0	0.5	41.5	8,362
<sup>1</sup> Relates to PEPFAR PM <sup>2</sup> Education categories r	·		ion attended, wh	nether that leve	I was completed.

Table 13.DPrevention of mother-to-child HIV transmission: HIV-positive pregnant women whoreceived antiretrovirals (ARVs)

Percent distribution of women aged 15-49 years who gave birth within the past three years and received antiretrovirals (ARVs) during pregnancy by HIV result and selected socio-demographic characteristics, NAIIS 2018

HIV result and socio-demographic characteristics	Percentage who were already on ARVs prior to pregnancy	Percentage who were newly initiated on ARVs during pregnancy or labor and delivery	Total percentage who received ARVs <sup>1</sup>	Number of HIV- positive womer who gave birth within the past three years
NAIIS HIV test result		· ·		· · ·
HIV positive	73.7	22.5	96.2	87
HIV negative	*	*	*	29
Not tested	*	*	*	12
Place of residence				
Urban	71.0	9.0	80.0	63
Rural	67.5	22.4	89.9	65
Geopolitical zone				
North West	*	*	*	11
North East	*	*	*	21
North Central	*	*	*	29
South East	*	*	*	25
South South	*	*	*	20
South West	*	*	*	22
Marital status				
Never married	*	*	*	10
Married or living together	74.4	16.0	90.4	102
Divorced or separated	*	*	*	13
Widowed	*	*	*	3
Type of union				
In polygynous union	*	*	*	16
Not in polygynous union	73.8	16.3	90.1	86
Not currently in union	*	*	*	26
Education <sup>2</sup>				
No education	*	*	*	15
Primary	*	*	*	24
Secondary	68.0	22.6	90.6	57
Tertiary	*	*	*	29
Others	*	*	*	3

Table 13.DPrevention of mother-to-child HIV transmission: HIV-positive pregnant women whoreceived antiretrovirals (ARVs) (continued)

Percent distribution of women aged 15-49 years who gave birth within the past three years and received antiretrovirals (ARVs) during pregnancy by HIV result and selected socio-demographic characteristics, NAIIS 2018

,				
HIV result and socio-demographic characteristics	Percentage who were already on ARVs prior to pregnancy	Percentage who were newly initiated on ARVs during pregnancy or labor and delivery	Total percentage who received ARVs <sup>1</sup>	Number of HIV- positive women who gave birth within the past three years
Wealth quintile				
Lowest	*	*	*	12
Second	*	*	*	15
Middle	73.6	8.6	82.2	32
Fourth	68.5	15.3	83.8	31
Highest	69.0	18.4	87.4	38
Age (years)				
15-19	*	*	*	1
20-24	*	*	*	12
25-29	71.7	13.0	84.7	32
30-34	78.9	11.4	90.3	34
35-39	75.9	15.5	91.4	36
40-44	*	*	*	12
45-49	*	*	*	1
Total 15-24 years	*	*	*	13
Total 15-49 years	69.5	14.8	84.3	128
<sup>1</sup> Relates to <u>Global AIDS Ma</u> <u>and PEPFAR PMTCT_ARV</u> <sup>2</sup> Education categories refe completed.	NAT / SUBNAT.	-		

An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

# 14. Adolescents and Young People

# 14.1 Background

A third of the sub-Saharan Africa population is made up of individuals between the ages of 10 and 24 years.<sup>1</sup> Young people aged 15-24 years are more likely to engage in risky sexual behaviors than older adults and less likely to visit health care facilities. Control of HIV in this population is particularly challenging but critical for long-term epidemic control.<sup>1</sup>

## 14.2 Results

Table 14.A shows the prevalence of early sexual debut before 15 years among young persons aged 15-24 years. Tables 14.B to 14.D show knowledge of HIV prevention among adolescents aged 10-14 years. These knowledge data were measured by asking participants to agree or disagree with both accurate and inaccurate statements about HIV prevention.

# 14.2.1 Key Findings

- Among young people aged 15-24 years, 18.1% reported sexual debut before the age of 15 years (Table 14.A).
- Among young women aged 15-24 years, sexual debut before age 15 years was 24.2% in rural areas compared to 13.8% in urban areas (Table 14.A).
- Comprehensive knowledge of HIV prevention among adolescents aged 10-14 years was 1.4% (girls 1.2%, boys 1.7%) (Table 14.B, Table 14.C, Table 14.D).

### 14.3 References

1. Hervish A, Clifton D. *The Status Report on Adolescents and Young People in Sub-Saharan Africa: Opportunities and Challenges.* Johannesburg and Washington, DC: Population Reference Bureau; 2012.

# Table 14.AAge at sexual debut

Percentage of older adolescents and young adults aged 15-24 years who have had vaginal sex by age at sexual debut, sex and selected socio-demographic characteristics, NAIIS 2018

		Ma	ales			Fem	ales			Tot	al	
Socio- demographic characteris- tics	Percent- age who had sex before age of 15 years	Percent- age who had sex be- tween age of 15 and 19 years	Percent- age who had sex be- tween age of 20 and 24 years	Number	Percent- age who had sex before age of 15 years	Percent- age who had sex be- tween age of 15 and 19 years	Percent- age who had sex be- tween age of 20 and 24 years	Number	Percent- age who had sex before age of 15 years	Percent- age who had sex be- tween age of 15 and 19 years	Percent- age who had sex be- tween age of 20 and 24 years	Number
Place of residence												
Urban	15.9	65.0	19.1	3,457	13.8	69.8	16.4	6,533	14.7	67.8	17.5	9,990
Rural	13.9	67.6	18.4	5,088	24.2	69.2	6.6	11,963	20.7	68.7	10.7	17,051
Geopolitical zone												
North West	7.7	63.9	28.3	656	29.1	66.8	4.1	3,872	25.1	66.3	8.6	4,528
North East	10.7	63.7	25.6	1,040	24.7	70.4	4.9	3,876	21.2	68.7	10.1	4,916
North Central	11.1	68.0	21.0	1,837	14.9	72.6	12.5	3,307	13.3	70.7	16.0	5,144
South East	18.6	63.6	17.7	1,378	11.8	69.0	19.2	2,348	15.0	66.5	18.5	3,726
South South	17.9	70.7	11.5	2,020	15.9	73.8	10.3	2,898	16.8	72.3	10.9	4,918
South West	17.2	65.6	17.1	1,614	9.2	67.7	23.1	2,195	13.4	66.6	20.0	3,809
Marital status												
Never married	17.6	66.3	16.1	6,543	15.2	68.6	16.3	5,948	16.6	67.2	16.2	12,491
Married or living together	5.9	66.6	27.6	1,898	22.2	69.9	7.9	11,953	19.4	69.3	11.2	13,851
Divorced or separated	11.0	70.3	18.7	80	22.6	69.9	7.4	505	20.7	70.0	9.3	585
Widowed	*	*	*	8	18.4	68.9	12.7	69	18.4	69.6	12.1	77
Type of union				5			,					
In polygy- nous union Not in	9.4	69.7	20.9	88	29.0	66.9	4.1	3,464	28.3	67.0	4.7	3,552
polygynous union	5.7	66.4	27.9	1,796	19.1	71.2	9.7	8,427	16.2	70.2	13.7	10,223
Not cur- rently in union	17.5	66.4	16.1	6,631	15.8	68.7	15.5	6,522	16.8	67.3	15.9	13,153

# Table 14.AAge at sexual debut (continued)

Percentage of older adolescents and young adults aged 15-24 years who have had vaginal sex by age at sexual debut, sex and selected socio-demographic characteristics, NAIIS 2018

		Ma	ales			Fem	ales			Tot	al	
Socio- demographic characteris- tics	Percent- age who had sex before age of 15 years	Percent- age who had sex be- tween age of 15 and 19 years	Percent- age who had sex be- tween age of 20 and 24 years	Number	Percent- age who had sex before age of 15 years	Percent- age who had sex be- tween age of 15 and 19 years	Percent- age who had sex be- tween age of 20 and 24 years	Number	Percent- age who had sex before age of 15 years	Percent- age who had sex be- tween age of 15 and 19 years	Percent- age who had sex be- tween age of 20 and 24 years	Numbe
<b>Education</b> <sup>1</sup>												
No edu- cation Primary	9.5 14.2	70.6 63.1	19.9 22.7	547 648	30.9 23.1	66.3 72.0	2.7 4.9	4,605 2,375	28.1 20.8	66.9 69.7	5.0 9.5	5,152 3,023
Secondary	14.2	67.3	15.5	5,691	12.3	73.9	13.8	2,373 8,625	20.8 14.6	70.8	9.5 14.6	14,316
Tertiary Others	17.2 10.2 5.2	67.3 62.3 66.9	27.5 27.9	1,343 315	3.8 34.3	56.4 64.8	39.8 0.9	8,823 1,500 1,370	7.3 28.8	59.7 65.2	14.0 33.0 6.0	2,843 1,685
Wealth quintile	5.2	00.5	27.5	515	54.5	04.0	0.5	1,370	20.0	05.2	0.0	1,005
Lowest	9.5	70.9	19.6	1,173	31.5	65.3	3.2	4,248	26.0	66.7	7.3	5,421
Second	11.4	65.5	23.0	1,486	25.1	69.9	5.0	4,095	21.1	68.6	10.2	5,581
Middle	16.3	64.7	19.0	1,959	16.9	74.1	9.1	4,051	16.6	70.6	12.8	6,010
Fourth	17.8	66.0	16.2	2,049	12.0	71.9	16.1	3,608	14.5	69.3	16.2	5,657
Highest	15.8	66.3	17.9	1,878	9.0	65.9	25.1	2,494	12.5	66.1	21.4	4,372
Age (years)												
15-19	27.1	72.9	NA	2,577	28.3	71.7	NA	6,088	27.9	72.1	NA	8,665
20-24	10.3	64.0	25.7	5,968	15.7	68.3	16.0	12,408	13.5	66.6	19.9	18,376
Total 15-24 years	14.9	66.4	18.7	8,545	20.1	69.5	10.5	18,496	18.1	68.3	13.5	27,041

NA – not applicable.

# Table 14.B Adolescent knowledge about HIV prevention: Adolescent boys

Percentage distribution of adolescent boys aged 10-14 years who correctly identify both ways of preventing the transmission of HIV and reject major misconceptions about HIV transmission by selected socio-demographic characteristics, NAIIS 2018

	20,											
			Pe	rcentag	e who corr	ectly ar	nswered the	questic	ons:			
Socio-demo- graphic characteristics	Can a person reduce their chance of getting HIV by not hav- ing sex?	Num- ber	Can a person reduce the risk of getting HIV by using a condom every time they have sex?	Num- ber	Can a healthy- looking person have HIV?	Num- ber	Can ARVs make peo- ple with HIV less likely to spread the virus?	Num- ber	Can a mother with HIV or AIDS pass HIV to her unborn baby?	Num- ber	All five ques- tions	Num- ber <sup>1</sup>
Place of residence												
Urban	13.5	1,532	8.4	2,387	11.8	1,532	8.3	1,532	14.9	1,532	2.7	2,388
Rural	5.6	2,251	3.6	2,982	4.2	2,251	3.0	2,251	4.5	2,251	0.8	2,982
Geopolitical zone												
North West	3.3	1,161	2.4	1,452	2.7	1,161	1.6	1,161	2.6	1,161	0.9	1,453
North East	2.1	743	1.6	848	1.3	743	1.1	743	1.5	743	0.5	848
North Central	5.1	642	3.8	785	4.4	642	2.6	642	4.6	642	1.3	785
South East	20.5	353	7.9	668	18.4	353	13.5	353	22.1	353	2.6	668
South South	25.3	380	12.7	734	19.5	380	15.5	380	22.0	380	2.9	734
South West	17.7	504	10.0	882	15.2	504	10.3	504	21.2	504	2.8	882
<b>Education</b> <sup>2</sup>												
No educa- tion	0.3	420	0.3	438	0.4	420	0.0	420	0.2	420	0.0	438
Primary	3.1	2,203	1.9	3,056	1.9	2,203	1.7	2,203	2.9	2,203	0.4	3,056
Secondary	27.3	982	15.1	1,678	24.1	982	16.3	982	27.6	982	4.7	1,679
Tertiary	*	1	*	1	*	1	*	1	*	1	*	1
Wealth quintile												
Lowest	2.0	924	1.5	1,038	1.3	924	0.8	924	0.8	924	0.1	1,038
Second	3.8	883	2.5	1,080	2.6	883	2.1	883	2.8	883	0.7	1,080
Middle	6.2	818	3.8	1,175	4.8	818	2.6	818	4.7	818	0.8	1,176
Fourth	12.1	681	7.0	1,113	10.4	681	8.8	681	13.1	681	2.6	1,113
Highest	30.4	477	14.6	963	26.9	477	17.9	477	35.2	477	4.3	963

# Table 14.8Adolescent knowledge about HIV prevention: Adolescent boys (continued)

Percentage distribution of adolescent boys aged 10-14 years who correctly identify both ways of preventing the transmission of HIV and reject major misconceptions about HIV transmission by selected socio-demographic characteristics, NAIIS 2018

Socio-demo- graphic characteristics	Can a person reduce their chance of getting HIV by not hav- ing sex?	Num- ber	Can a person reduce the risk of getting HIV by using a condom every time they have sex?	Num- ber	Can a healthy- looking person have HIV?	Num- ber	Can ARVs make peo- ple with HIV less likely to spread the virus?	Num- ber	Can a mother with HIV or AIDS pass HIV to her unborn baby?	Num- ber	All five ques- tions	Num- ber <sup>1</sup>
Total 10-14 years	8.9	3,783	5.8	5,369	7.4	3,783	5.2	3,783	8.8	3,783	1.7	5,370

<sup>1</sup>Includes only participants who answered all five questions.

<sup>2</sup>Education categories refer to the highest level of education attended, whether that level was completed.

An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

# Table 14.C Adolescent knowledge about HIV prevention: Adolescent girls

Percentage distribution of adolescent girls aged 10-14 years who correctly identify both ways of preventing the transmission of HIV and reject major misconceptions about HIV transmission by selected socio-demographic characteristics, NAIIS 2018

			Р	ercenta	ge who co	orrectly	answered th	ne quest	tions:			
Socio-demo- graphic characteristics	Can a person reduce their chance of get- ting HIV by not having sex?	Num- ber	Can a per- son reduce the risk of getting HIV by using a condom every time they have sex?	Num- ber	Can a healthy- looking person have HIV?	Num- ber	Can ARVs make peo- ple with HIV less likely to spread the virus?	Num- ber	Can a mother with HIV or AIDS pass HIV to her unborn baby?	Num- ber	All five ques- tions	Num- ber <sup>1</sup>
Place of												
residence												
Urban	13.2	1,397	5.9	2,379	12.6	1,397	6.9	1,396	13.7	1,396	1.8	2,379
Rural	3.9	2,118	2.6	2,880	3.9	2,118	3.0	2,118	4.3	2,118	0.7	2,880
Geopolitical zone												
North West	1.6	1,172	1.0	1,494	1.4	1,172	0.7	1,172	1.3	1,172	0.4	1,494
North East	0.9	690	0.8	828	0.9	690	0.7	690	0.8	690	0.3	828
North Central	3.3	595	2.6	741	3.5	595	2.3	595	3.6	595	1.0	741
South East	23.2	253	6.6	626	22.7	253	15.1	253	24.2	253	2.6	626
South South	19.4	354	7.6	742	18.6	354	14.1	354	20.8	354	1.8	742
South West	22.9	451	9.5	828	22.1	451	11.5	450	25.1	450	2.3	828
Education <sup>2</sup>												
No education	0.3	564	0.3	604	0.3	564	0.3	564	0.3	564	0.3	604
Primary	2.7	1,941	1.4	2,782	2.2	1,941	1.7	1,940	2.3	1,940	0.4	2,782
Secondary	24.9	874	10.3	1,725	25.1	874	14.3	874	27.4	874	2.8	1,725
Tertiary	*	0	*	1	*	0	*	0	*	0	*	1
Wealth quintile												
Lowest	0.6	895	0.5	1,026	0.6	895	0.5	895	0.7	895	0.2	1,026
Second	2.0	802	1.5	1,000	1.8	802	1.9	802	2.4	802	0.5	1,000
Middle	5.1	758	2.9	1,123	5.1	758	3.4	757	4.7	757	0.8	1,123
Fourth	11.8	629	5.3	1,131	11.8	629	7.2	629	12.8	629	2.0	1,131
Highest	30.1	431	10.3	979	28.7	431	15.5	431	32.1	431	2.5	979
Total 10-14												
years	7.8	3,515	4.1	5,259	7.6	3,515	4.6	3,514	8.2	3,514	1.2	5,259

<sup>1</sup>Includes only participants who answered all five questions.

<sup>2</sup>Education categories refer to the highest level of education attended, whether that level was completed. An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

#### Table 14.D Adolescent knowledge about HIV prevention: Total<sup>1</sup>

Percentage distribution of adolescents aged 10-14 years who correctly identify both ways of preventing the transmission of HIV and reject major misconceptions about HIV transmission by selected socio-demographic characteristics, NAIIS 2018 Percentage who correctly answered the questions: Can a Can a perperson Can a son reduce Can ARVs mother reduce Can a the risk of make their healthywith HIV All Socio-demogetting HIV people chance Numlooking Num-Numor AIDS five Num-Num-Numgraphic by using with HIV of getber person ber pass HIV ber ber1 ber ber quescharacteristics a condom less likely ting HIV have to her tions every time to spread by not HIV? unborn they have the virus? having baby? sex? sex? Place of residence Urban 13.3 2,929 7.2 4,766 12.2 2,929 7.6 2,928 14.3 2,929 2.3 4,767 Rural 4.8 4,369 3.1 5,862 4.0 4,369 3.0 4,369 4.4 4,369 0.7 5,862 Geopolitical

zone												
North West	2.4	2,333	1.7	2,946	2.1	2,333	1.2	2,333	2.0	2,333	0.6	2,947
North East	1.6	1,433	1.2	1,676	1.1	1,433	0.9	1,433	1.2	1,433	0.4	1,676
North												
Central	4.3	1,237	3.2	1,526	4.0	1,237	2.4	1,237	4.1	1,237	1.1	1,526
South East	21.6	606	7.3	1,294	20.2	606	14.2	606	22.9	606	2.6	1,294
South South	22.5	734	10.2	1,476	19.0	734	14.8	734	21.5	734	2.3	1,476
South West	20.1	955	9.8	1,710	18.4	955	10.9	954	23.0	955	2.6	1,710
<b>Education<sup>2</sup></b>												
No												
education	0.3	984	0.3	1,042	0.4	984	0.2	984	0.3	984	0.2	1,042
Primary	2.9	4,144	1.6	5,838	2.0	4,144	1.7	4,143	2.6	4,144	0.4	5,838
Secondary	26.2	1,856	12.7	3,403	24.6	1,856	15.4	1,856	27.5	1,856	3.8	3,404
Tertiary	*	1	*	2	*	1	*	1	*	1	*	2
Wealth												
quintile												
Lowest	1.3	1,819	1.0	2,064	1.0	1,819	0.7	1,819	0.7	1,819	0.1	2,064
Second	3.0	1,685	2.0	2,080	2.2	1,685	2.0	1,685	2.6	1,685	0.6	2,080
Middle	5.7	1,576	3.3	2,298	5.0	1,576	3.0	1,575	4.7	1,576	0.8	2,299
Fourth	12.0	1,310	6.2	2,244	11.1	1,310	8.1	1,310	13.0	1,310	2.3	2,244
Highest	30.3	908	12.5	1,942	27.7	908	16.8	908	33.7	908	3.4	1,942
Total 10-14												
years	8.4	7,298	5.0	10,628	7.5	7,298	4.9	7,297	8.5	7,298	1.4	10,629

<sup>1</sup>Includes only participants who answered all five questions.

<sup>2</sup>Education categories refer to the highest level of education attended, whether that level was completed.

An asterisk indicates that an estimate is based on a very small number (30 or less) of unweighted cases and has been suppressed.

# 15. HIV RISK FACTORS

## 15.1 Background

During NAIIS, participants were asked questions about high-risk behaviors, including early sexual debut, recent engagement with multiple sexual partners, condom use at last sexual intercourse, recent engagement in paid sexual intercourse and condom use at last sexual intercourse with a non-marital, non-cohabitating partner. With this information, programs can focus resources to reach individuals most at risk for HIV infection and individuals most in need of information.

In 2007, WHO and UNAIDS recommended voluntary medical male circumcision as a cost-effective strategy to reduce the spread of HIV. Therefore, men aged 15-64 years were asked if they had been medically or traditionally circumcised.

# 15.2 Results

Tables 15.A to 15.E illustrate NAIIS data about HIV risk factors.

# 15.2.1 Key Findings

- Among men aged 15-64 years, HIV prevalence was 1.5% among those with no condom use during sex with a non-marital, non-cohabiting partner compared to 0.9% among those who used condoms with a non-marital, non-cohabiting partner (Table 15.A).
- Among married men who had sex with a non-marital, non-cohabiting partner in the past 12 months, 34.3% reported using a condom the last time they had sex compared to 17.3% of married women (Table 15.B, Table 15.C).
- Among men aged 15-64 years, 28.0% self-reported medical circumcision status, 56.8% reported non-medical circumcision status and 1.8% reported being uncircumcised (Table 15.E).

Table 15.A HIV p	revalence by se	xual behavio	or				
Prevalence of HIV amo behavior characteristic		d 15-64 year	rs who ever had	vaginal sex	by sex and sexu	lal	
	Mal	es	Femal	es	Total		
Sexual behavior characteristics	Percentage HIV positive	Number	Percentage HIV positive	Number	Percentage HIV positive	Number	
Age (years) at first sexual intercourse							
<15	0.9	3,151	1.5	10,746	1.3	13,897	
15-19	1.4	19,158	2.0	44,801	1.8	63,959	
20-24	1.1	19,099	2.4	17,176	1.6	36,275	
≥25	1.4	12,487	2.0	5,103	1.5	17,590	
Number of sexual partners in the past 12 months						-	
0	1.7	12,229	3.5	17,630	2.7	29,859	
1	1.2	31,406	1.6	62,241	1.4	93,647	
≥2	1.2	14,430	3.6	2,964	1.6	17,394	
Condom use at last sexual intercourse in the past 12 months							
Used condom Did not use	1.2	6,150	4.1	4,104	2.2	10,254	
condom	1.2	39,775	1.5	60,559	1.4	100,334	
Condom use at last sex with a non-marital, non- cohabitating partner							
Used condom Did not use	0.9	5,632	4.0	2,366	1.7	7,998	
condom No sexual intercourse with a non-marital, non-cohabitating partner in the past	1.5	8,770	3.4	6,881	2.2	15,651	
12 months	1.1	31,553	1.4	55,997	1.3	87,550	
Total 15-24 years	0.4	8,451	1.1	17,805	0.9	26,256	
Total 15-49 years	1.2	45,445	2.0	69,769	1.6	115,214	
Total 15-64 years	1.3	58,326	2.0	83,055	1.7	141,381	

 Table 15.8
 Condom use at last sex with a non-marital, non-cohabitating partner: Men

Percentage distribution of men aged 15-64 years who reported having sex in the past 12 months who also reported having a non-marital, non-cohabiting partner in the past 12 months and among those who reported having sex with a non-marital, non-cohabiting partner in the past 12 months, the percentage distribution who reported using a condom the last time they had sex with a non-marital, non-cohabiting partner by selected socio-demographic characteristics, NAIIS 2018

	Among men who repor in the past 12 m	-	Among men who reported h with a non-marital, non-co partner in the past 12 m	habiting
Socio-demographic characteristics	Percentage who report having sex with a non marital, non-cohabitin partner in the past 12 months	- g	Percentage who reported using a condom the last time they had sex with a non-marital, non-cohabiting partner <sup>1</sup>	Number
Place of residence	montris	Number	partiter	Number
Urban	39.3	19,939	42.2	7,301
Rural	28.3	28,776	36.6	7,826
Geopolitical zone	2010	20,770	0010	,,020
North West	5.5	8,674	37.6	361
North East	11.6	7,148	32.7	886
North Central	30.3	9,287	44.9	2,756
South East	49.1	7,216	45.7	3,065
South South	58.2	8,090	36.2	4,437
South West	49.5	8,300	38.6	3,622
Marital status				
Never married	95.0	10,507	42.5	9,942
Married or living together	11.8	37,220	34.3	4,353
Divorced or separated	86.1	720	30.8	614
Widowed	82.9	229	19.8	190
Type of union				
In polygynous union	6.1	6,897	19.1	440
Not in polygynous union	13.0	30,266	35.7	3,896
Not currently in union	94.3	11,456	41.6	10,746
Education <sup>2</sup>				
No education	8.4	5,499	25.5	435
Primary	18.8	9,181	24.9	1,677
Secondary	48.1	19,109	39.7	8,687
Tertiary	43.3	10,440	47.1	4,210
Others	2.7	4,451	7.7	114

 Table 15.8
 Condom use at last sex with a non-marital, non-cohabitating partner: Men (continued)

Percentage distribution of men aged 15-64 years who reported having sex in the past 12 months who also reported having a non-marital, non-cohabiting partner in the past 12 months and among those who reported having sex with a non-marital, non-cohabiting partner in the past 12 months, the percentage distribution who reported using a condom the last time they had sex with a non-marital, non-cohabiting partner by selected socio-demographic characteristics, NAIIS 2018

	Among men who repor in the past 12 n	-	Among men who reported having sex with a non-marital, non-cohabiting partner in the past 12 months				
Socio-demographic	Percentage who report having sex with a non marital, non-cohabitir partner in the past 12	1- 1g	Percentage who reported using a condom the last time they had sex with a non-marital, non-cohabiting				
characteristics	months	Number	partner <sup>1</sup>	Number			
Wealth quintile							
Lowest	8.7	9,025	25.6	814			
Second	17.8	9,001	32.3	1,737			
Middle	34.6	9,911	35.5	3,355			
Fourth	44.9	10,464	40.4	4,382			
Highest	51.0	10,314	44.7	4,839			
Age (years)							
15-19	89.5	1,866	40.4	1,692			
20-24	72.1	4,889	43.1	3,523			
25-29	48.2	7,221	41.8	3,523			
30-34	33.3	7,175	41.2	2,293			
35-39	21.0	7,062	37.2	1,484			
40-44	16.6	5,639	35.5	938			
45-49	13.6	4,741	33.5	627			
50-54	11.5	4,071	21.1	467			
55-59	9.5	2,964	24.3	294			
60-64	10.1	3,087	10.9	286			
Total 15-24 years	76.4	6,755	42.4	5,215			
Total 15-49 years	37.9	38,593	40.8	14,080			
Total 15-64 years	33.5	48,715	39.7	15,127			
	lonitoring indicator 3.18: Conc er to the highest level of educ		-	eted.			

### Table 15.C Condom use at last sex with a non-marital, non-cohabitating partner: Women

Percentage distribution of women aged 15-64 years who reported having sex in the past 12 months who also reported having a non-marital, non-cohabitating partner in the past 12 months and among those who reported having sex with a non-marital, non-cohabiting partner in the past 12 months, the percentage distribution who reported using a condom the last time they had sex with a non-marital, non-cohabiting partner by selected socio-demographic characteristics, NAIIS 2018

	Among women who re having sex in the past 12 mon		Among women who reporte with a non-marital, non- partner in the past 12	cohabiting
Socio-demographic characteristics	Percentage who reported having sex with a non-marital, non- cohabiting partner in the past 12 months	Number	Percentage who reported using a condom the last time they had sex with a non-marital, non- cohabiting partner <sup>1</sup>	Number
Place of residence				
Urban	17.4	28,520	29.1	4,862
Rural	11.2	41,523	22.7	4,840
Geopolitical zone				
North West	2.8	14,316	16.5	339
North East	4.4	12,134	17.0	613
North Central	9.1	12,255	34.3	1,176
South East	27.5	9,750	30.9	2,408
South South	30.5	10,415	23.6	2,998
South West	22.1	11,173	27.0	2,168
Marital status				
Never married	76.8	8,119	31.8	6,347
Married or living together	2.3	59,011	17.3	1,330
Divorced or separated	77.9	1,471	14.7	1,137
Widowed	62.1	1,397	14.4	859
Type of union				
In polygynous union	2.1	20,086	9.6	404
Not in polygynous union	2.3	38,593	20.6	882
Not currently in union	75.2	10,987	27.8	8,343
Education <sup>2</sup>				
No education	3.0	20,312	3.3	599
Primary	9.1	13,512	13.8	1,239
Secondary	25.1	23,182	28.5	5,566
Tertiary	28.1	8,177	34.7	2,217
Others	1.9	4,781	0.9	76

 Table 15.C
 Condom use at last sex with a non-marital, non-cohabitating partner: Women (continued)

Percentage distribution of women aged 15-64 years who reported having sex in the past 12 months who also reported having a non-marital, non-cohabitating partner in the past 12 months and among those who reported having sex with a non-marital, non-cohabiting partner in the past 12 months, the percentage distribution who reported using a condom the last time they had sex with a non-marital, non-cohabiting partner by selected socio-demographic characteristics, NAIIS 2018

	Among women who having sex in the past 12 me		Among women who reported having se with a non-marital, non-cohabiting partner in the past 12 months		
Socio-demographic characteristics	Percentage who reported having sex wit a non-marital, non- cohabiting partner in th past 12 months		Percentage who reported using a condom the last time they had sex with a non-marital, non- cohabiting partner <sup>1</sup>	Number	
Wealth quintile					
Lowest	3.7	14,306	12.4	614	
Second	7.5	14,040	19.6	1,194	
Middle	14.9	14,154	22.7	2,205	
Fourth	20.8	14,302	27.2	2,811	
Highest	23.0	13,241	31.9	2,878	
Age (years)					
15-19	34.8	5,378	33.6	2,094	
20-24	23.2	11,429	30.9	2,791	
25-29	12.9	13,664	26.6	1,806	
30-34	8.4	11,489	21.0	946	
35-39	7.7	9,601	19.6	735	
40-44	7.0	7,231	11.5	520	
45-49	8.2	4,691	14.4	362	
50-54	7.1	3,706	8.4	255	
55-59	7.0	1,647	2.6	104	
60-64	8.2	1,207	6.1	89	
Total 15-24 years	27.1	16,807	32.1	4,885	
Total 15-49 years	14.7	63,483	27.3	9,254	
Total 15-64 years	14.0	70,043	26.3	9,702	

# Table 15.DCondom use at last sex with a non-marital, non-cohabitating partner: Total

Percentage distribution of adults aged 15-64 years who reported having sex in the past 12 months who also reported having a non-marital, non-cohabitating partner in the past 12 months and among those who reported having sex with a non-marital, non-cohabiting partner in the past 12 months, the percentage distribution who reported using a condom the last time they had sex with a non-marital, non-cohabiting partner by selected socio-demographic characteristics, NAIIS 2018

	Among adults who repo sex in the past 12 m	-	Among adults who reported having sex with a non-marital, non-cohabiting partner in the past 12 months		
Socio-demographic characteristics	Percentage who reported having sex with a non-marital, non-cohabiting partner in the past 12 months	Number	Percentage who reported using a condom the last time they had sex with a non-marital, non- cohabiting partner <sup>1</sup>	Number	
Place of residence					
Urban	27.7	48,459	37.9	12,163	
Rural	18.9	70,299	32.1	12,666	
Geopolitical zone					
North West	3.9	22,990	28.6	700	
North East	7.3	19,282	27.1	1,499	
North Central	19.3	21,542	42.3	3,932	
South East	38.2	16,966	40.3	5,473	
South South	44.3	18,505	31.9	7,435	
South West	36.0	19,473	35.1	5,790	
Marital status					
Never married	88.3	18,626	39.1	16,289	
Married or living together	6.4	96,231	30.8	5,683	
Divorced or separated	81.0	2,191	21.1	1,751	
Widowed	65.4	1,626	15.5	1,049	
Type of union		_,		_,	
In polygynous union	3.2	26,983	14.7	844	
Not in polygynous union	7.5	68,859	33.4	4,778	
Not currently in union	86.4	22,443	36.6	19,089	
Education <sup>2</sup>					
No education	4.3	25,811	13.7	1,034	
Primary	13.5	22,693	20.8	2,916	
Secondary	37.1	42,291	36.1	14,253	
Tertiary	37.5	18,617	43.6	6,427	
Others	2.3	9,232	4.7	190	

Table 15.D Condom use at last sex with a non-marital, non-cohabitating partner: Total (continued)

Percentage distribution of adults aged 15-64 years who reported having sex in the past 12 months who also reported having a non-marital, non-cohabitating partner in the past 12 months and among those who reported having sex with a non-marital, non-cohabiting partner in the past 12 months, the percentage distribution who reported using a condom the last time they had sex with a non-marital, non-cohabiting partner by selected socio-demographic characteristics, NAIIS 2018

	Among adults who repo sex in the past 12 n	-	Among adults who reported having sex with a non-marital, non-cohabitir partner in the past 12 months		
Socio-demographic characteristics	Percentage who reported having sex with a non-marital, non-cohabiting partner in the past 12 months	Number	Percentage who reported using a condom the last time they had sex with a non-marital, non- cohabiting partner <sup>1</sup>	Number	
Wealth quintile	· · ·				
Lowest	5.8	23,331	20.8	1,428	
Second	12.0	23,041	27.8	2,931	
Middle	23.9	24,065	31.2	5,560	
Fourth	32.4	24,766	36.0	7,193	
Highest	37.3	23,555	40.9	7,717	
Age (years)					
15-19	49.6	7,244	36.9	3,786	
20-24	41.2	16,318	38.8	6,314	
25-29	28.1	20,885	37.9	5,329	
30-34	20.1	18,664	36.8	3,239	
35-39	14.3	16,663	32.4	2,219	
40-44	11.8	12,870	28.4	1,458	
45-49	11.0	9,432	26.9	989	
50-54	9.6	7,777	17.0	722	
55-59	8.5	4,611	17.5	398	
60-64	9.5	4,294	9.7	375	
Total 15-24 years	43.8	23,562	38.2	10,100	
Total 15-49 years	25.0	102,076	36.4	23,334	
Total 15-64 years	23.0	118,758	35.3	24,829	
	lonitoring indicator 3.18: Con er to the highest level of educ		i <u>st high-risk sex</u> . ed, whether that level was cor	mpleted.	

# Table 15.EMale circumcision

Percent distribution of males aged 15-64 years by self-reported circumcision status, by NAIIS HIV test result and selected socio-demographic characteristics, NAIIS 2018

		Circumcised <sup>1</sup>				
HIV status and socio-	Medical	Non-medical	Method			
demographic characteristics	circumcision	circumcision	not known	Uncircumcised	Unknown	Number
NAIIS HIV test result						
HIV positive	31.0	53.7	13.3	1.1	0.8	845
HIV negative	27.8	57.1	12.1	1.7	1.2	77,125
Not tested	29.2	53.0	13.5	2.3	1.9	5,370
Place of residence						
Urban	33.8	46.4	16.6	1.6	1.7	34,635
Rural	22.6	66.5	8.1	1.9	0.9	48,705
Geopolitical zone						
North West	8.6	87.6	0.7	2.6	0.5	15,094
North East	13.9	83.2	0.5	1.9	0.4	15,563
North Central	29.2	62.4	5.8	1.7	0.9	16,916
South East	63.2	20.0	15.0	0.6	1.1	11,354
South South	38.6	41.9	16.7	1.4	1.5	12,025
South West	37.4	22.4	35.6	1.5	3.1	12,388
Marital status						
Never married	35.0	48.2	13.2	2.0	1.7	34,157
Married or living together	21.6	64.8	11.1	1.6	0.9	47,079
Divorced or separated	27.7	53.1	16.6	1.9	0.6	1,346
Widowed	24.7	57.3	15.6	1.7	0.7	619
Type of union						
In polygynous union	8.5	83.2	5.2	2.4	0.8	8,611
Not in polygynous union	24.3	61.0	12.5	1.4	0.8	38,139
Not currently in union	34.6	48.4	13.3	2.0	1.6	36,122
Education <sup>2</sup>						
No education	7.3	80.4	4.6	6.5	1.3	9,878
Primary	19.7	66.8	10.6	1.7	1.2	14,588
Secondary	35.2	47.0	15.2	1.1	1.6	36,387
Tertiary	40.1	42.4	15.5	1.1	0.9	15,976
Others	3.3	94.1	1.1	1.1	0.5	6,443
Wealth quintile						
Lowest	7.4	86.0	2.7	3.2	0.7	15,831
Second	15.7	75.6	5.5	2.2	1.1	16,154
Middle	26.8	60.6	10.1	1.5	1.0	17,529
Fourth	36.6	44.3	16.6	1.1	1.4	17,573
Highest	47.5	26.3	23.0	1.2	2.0	16,253

Table 15.E	Male circumcision	(continued)
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Percent distribution of males aged 15-64 years by self-reported circumcision status, by NAIIS HIV test result and selected socio-demographic characteristics, NAIIS 2018

		Circumcised <sup>1</sup>					
HIV status and socio- demographic characteristics	Medical circumcision	Non-medical circumcision	Method not known	Uncircumcised	Unknown	Number	
Age (years)							
15-19	33.3	51.3	11.2	2.0	2.2	14,323	
20-24	31.0	54.3	11.9	1.5	1.3	11,111	
25-29	29.8	55.7	11.8	1.6	1.1	11,322	
30-34	30.0	55.0	12.0	2.0	1.0	9,680	
35-39	27.8	55.9	13.4	1.9	0.9	9,187	
40-44	23.3	60.2	14.0	1.6	1.0	7,380	
45-49	22.9	61.8	12.8	1.4	1.0	6,166	
50-54	18.2	66.0	12.8	2.1	0.9	5,432	
55-59	17.7	67.9	11.5	2.0	0.9	4,011	
60-64	15.0	70.9	12.0	1.4	0.7	4,728	
Total 15-24 years	32.3	52.6	11.5	1.8	1.8	25,434	
Total 15-49 years	29.5	55.3	12.2	1.8	1.3	69,169	
Total 15-64 years	28.0	56.8	12.2	1.8	1.3	83,340	
<u>TOTALCIRC NAT / SUBNAT</u> .							
<sup>2</sup> Education categories refer to	o the highest le	vel of educatio	n attended, v	nether that leve	i was comp	leted.	

# 16. HBV AND HCV SCREENING AND TB SERVICES

### 16.1 Background

PLHIV are at risk for acquiring other infections, including tuberculosis (TB), hepatitis B virus (HBV) and hepatitis C virus (HCV). TB is the leading cause of death for PLHIV in Africa. HIV infection predisposes a person to TB infection and progression to active disease. Information regarding health seeking behavior, particularly for TB health services, is therefore very important.

HIV, HBV and HCV have similar transmission routes and concurrent infection with HIV and either HBV or HCV often results in more rapid progression of HBV or HCV to cirrhosis and higher liver-disease mortality. NAIIS 2018 provides population-based HBV and HCV prevalence among HIV-positive individuals aged 15-64 years and a subset of HIV-negative individuals, which supports actionable policy recommendations for screening and treatment. This chapter describes the prevalence of HBV and HCV in persons aged 15 to 64, by sex, age, socio-demographic characteristics and HIV status.

## 16.2 Results

Tables 16.A to 16.C report NAIIS findings on co-infections associated with HIV.

## 16.2.1 Key Findings

- The overall prevalence of HBV infection among adults aged 15-64 years was 8.1% (10.3% in men and 5.8% in women). HBV prevalence peaked at ages 35-39 years (10.2%) and was lowest at ages 55-59 years (2.5%) (Table 16.A).
- The overall prevalence of HCV infection among individuals aged 15-64 years was 1.1% (1.3% in men and 1.0% in women). HCV prevalence peaked at ages 50-54 years (3.3%) and was lowest at ages 15-19 years (0.4%) (Table 16.B).
- The prevalence of HBV infection among HIV-positive adults aged 15-64 years was 8.9% (Table 16.A).
- The prevalence of HCV among HIV-positive adults aged 15-64 years was 1.1% (Table 16.B).
- Among adults found to be HIV-positive during NAIIS 2018, 9.9% had ever visited a clinic for TB evaluation.

# Table 16.AHepatitis B virus (HBV) infection prevalence by sex and demographic characteristics:Persons aged 15-64 years

Prevalence of hepatitis B surface antigen (HBsAg+) among persons aged 15-64 years by HIV status, sex and selected socio-demographic characteristics, NAIIS 2018

	Males		Females		Total	
Socio-demographic	Percentage HBsAg		Percentage HBsAg		Percentage HBsAg	
characteristics	positive <sup>1</sup>	Number	positive <sup>1</sup>	Number	positive <sup>1</sup>	Numbe
NAIIS HIV test result						
HIV positive	13.3	843	6.5	1,891	8.9	2,734
HIV negative	10.3	3,551	5.7	4,153	8.1	7,704
Place of residence						
Urban	9.8	1,812	5.5	2,640	7.6	4,452
Rural	10.8	2,582	6.0	3,404	8.5	5,986
Marital status						
Never married	10.8	1,410	5.2	1,085	8.8	2,495
Married or living together	10.0	2,785	5.6	3,893	7.7	6,678
Divorced or separated	6.2	128	8.4	352	7.8	480
Widowed	1.7	67	7.6	706	7.2	773
Education <sup>2</sup>						
No education	9.0	488	6.5	1,532	7.2	2,020
Primary	9.8	863	5.7	1,329	7.7	2,192
Secondary	10.1	1,828	5.9	2,194	8.2	4,022
Tertiary	11.6	821	3.7	675	8.6	1,496
Others	11.8	390	5.9	308	9.3	698
Wealth quintile						
Lowest	12.0	859	7.7	1,010	10.0	1,869
Second	10.7	860	6.2	1,149	8.5	2,009
Middle	10.5	911	6.0	1,414	8.2	2,325
Fourth	11.0	939	4.9	1,352	8.1	2,291
Highest	7.4	825	4.4	1,119	5.9	1,944
Pregnancy status						
Currently pregnant	NA	NA	5.9	435	NA	NA
Not currently pregnant	NA	NA	5.8	5,526	NA	NA
Number of pregnancies						
0	NA	NA	5.2	950	NA	NA
1	NA	NA	6.6	667	NA	NA
2-5	NA	NA	6.4	2,922	NA	NA
>5	NA	NA	4.9	1,478	NA	NA

# Table 16.AHepatitis B virus (HBV) infection prevalence by sex and demographic characteristics:Persons aged 15-64 years (continued)

Prevalence of hepatitis B surface antigen (HBsAg+) among persons aged 15-64 years by HIV status, sex and selected socio-demographic characteristics, NAIIS 2018

		5 Females			Total	
Socio-demographic characteristics	Percentage HBsAg positive <sup>1</sup>	Number	Percentage HBsAg positive <sup>1</sup>	Number	Percentage HBsAg positive <sup>1</sup>	Numbei
Male circumcision						
Circumcised	10.2	4,279	NA	NA	NA	NA
Not circumcised	11.4	77	NA	NA	NA	NA
Number of sexual partners in the past 12 months						
0	10.7	1,438	5.8	1,842	8.5	3,280
1	10.8	2,035	5.8	3,930	7.7	5,965
≥2	8.3	862	5.4	244	7.9	1,106
Age (years)						
15-19	10.3	443	5.4	604	7.9	1,047
20-24	10.7	464	6.4	815	8.6	1,279
25-29	13.7	605	5.1	988	9.5	1,593
30-34	11.2	591	7.6	857	9.5	1,448
35-39	13.1	561	7.2	825	10.2	1,386
40-44	9.2	485	6.3	633	7.7	1,118
45-49	7.7	405	4.1	406	5.9	811
50-54	6.1	344	6.6	405	6.3	749
55-59	3.9	229	1.1	227	2.5	456
60-64	5.2	267	2.5	284	3.8	551
Total 15-24 years	10.5	907	5.9	1,419	8.2	2,326
Total 15-49 years	11.1	3,554	6.1	5,128	8.6	8,682
Total 15-64 years	10.3	4,394	5.8	6,044	8.1	10,438

<sup>1</sup>The numerator for HBV prevalence is the number of persons who tested positive for HBV. The denominator for HBV prevalence is the number of people who were tested for HBV. <sup>2</sup>Education categories refer to the highest level of education attended, whether that level was completed.

NA – not applicable.

# Table 16.BHepatitis C virus (HCV) infection prevalence by demographic characteristics: Personsaged 15-64 years

Prevalence of hepatitis C (HCV RNA+) among persons aged 15-64 years by HIV status, sex and selected socio-demographic characteristics, NAIIS 2018

	Male	es	Fema	les	Tota	al
Socio-demographic	Percentage HCV RNA		Percentage HCV RNA		Percentage HCV RNA	
characteristics	positive1	Number	positive1	Number	positive1	Number
NAIIS HIV test result						
HIV positive	0.8	843	1.2	1,891	1.1	2,734
HIV negative	1.3	3,552	1.0	4,153	1.1	7,705
Place of residence						
Urban	0.7	1,813	0.1	2,640	0.4	4,453
Rural	1.8	2,582	1.8	3,404	1.8	5,986
Marital status						
Never married	0.4	1,411	0.3	1,085	0.4	2,496
Married or living						
together	1.9	2,785	1.2	3,893	1.6	6,678
Divorced or separated	1.5	128	0.6	352	0.9	480
Widowed	3.6	67	1.6	706	1.8	773
<b>Education<sup>2</sup></b>						
No education	3.1	488	2.3	1,532	2.5	2,020
Primary	2.0	863	1.7	1,329	1.8	2,192
Secondary	1.1	1,829	0.2	2,194	0.7	4,023
Tertiary	0.6	821	0.2	675	0.4	1,496
Others	0.2	390	0.3	308	0.2	698
Wealth quintile						
Lowest	2.3	859	1.5	1,010	1.9	1,869
Second	1.6	860	2.3	1,149	2.0	2,009
Middle	1.8	911	1.0	1,414	1.4	2,325
Fourth	0.7	940	0.3	1,352	0.5	2,292
Highest	0.0	825	0.2	1,119	0.1	1,944
Pregnancy status						
Currently pregnant	NA	NA	0.6	435	NA	NA
Not currently pregnant	NA	NA	1.0	5,526	NA	NA
Number of pregnancies						
0	NA	NA	0.3	950	NA	NA
1	NA	NA	0.2	667	NA	NA
2-5	NA	NA	1.4	2,922	NA	NA
>5	NA	NA	1.4	1,478	NA	NA

# Table 16.BHepatitis C virus (HCV) infection prevalence by demographic characteristics: Personsaged 15-64 years (continued)

Prevalence of hepatitis C (HCV RNA+) among persons aged 15-64 years by HIV status, sex and selected socio-demographic characteristics, NAIIS 2018

	Male	S	Fema	les	Tota	al
Socio-demographic characteristics	Percentage HCV RNA positive <sup>1</sup>	Number	Percentage HCV RNA positive <sup>1</sup>	Number	Percentage HCV RNA positive <sup>1</sup>	Number
Male circumcision	positive	Number	positive	Number	positive	Number
Circumcised	1.2	4,280	NA	NA	NA	NA
Not circumcised	2.4	77	NA	NA	NA	NA
Number of sexual partners in the past 12 months						
0	0.8	1,439	0.9	1,842	0.9	3,281
1	1.6	2,035	1.1	3,930	1.3	5,965
≥2	1.4	862	0.4	244	1.3	1,106
Age (years)						
15-19	0.5	443	0.3	604	0.4	1,047
20-24	0.6	465	0.4	815	0.5	1,280
25-29	0.9	605	0.7	988	0.8	1,593
30-34	1.3	591	1.7	857	1.5	1,448
35-39	1.5	561	1.2	825	1.3	1,386
40-44	1.6	485	0.1	633	0.8	1,118
45-49	1.9	405	2.1	406	2.0	811
50-54	3.1	344	3.5	405	3.3	749
55-59	3.2	229	0.7	227	2.0	456
60-64	2.4	267	2.6	284	2.5	551
Total 15-24 years	0.5	908	0.3	1,419	0.4	2,327
Total 15-49 years	1.0	3,555	0.8	5,128	0.9	8,683
Total 15-64 years	1.3	4,395	1.0	6,044	1.1	10,439

RNA+). The denominator for HCV prevalence is the number of persons who tested positive for hepatitis C (HC RNA+). The denominator for HCV prevalence is the number of people who were tested for HCV. <sup>2</sup>Education categories refer to the highest level of education attended, whether that level was completed.

NA – not applicable.

# Table 16.C Clinic attendance for tuberculosis (TB) evaluation and services: Total

Percent of respondents aged 15-64 years who self-reported ever visiting a clinic for tuberculosis (TB), diagnosed with TB and treated for TB by HIV status and selected socio-demographic characteristics, NAIIS 2018

NAII3 2018						
			Among those who had ever visited a clinic for TB evaluation		Among those diagnosed	
HIV status and socio-demographic	Percentage who ever visited a clinic for TB	N	Percentage who were diagnosed		Percentage who were treated for	
characteristics NAIIS HIV test result	evaluation	Number	with TB	Number	ТВ	Number
HIV positive	9.9	2,714	40.4	281	98.8	114
HIV negative	9.9 1.7	169,175	40.4 26.1	2,769	98.8 89.7	746
Not tested	2.5	12,523	18.9	303	84.8	58
Place of residence	2.5	12,323	10.9	303	04.0	20
Urban	2.3	77 000	23.7	1 750	89.1	429
Rural	2.5 1.5	77,899	30.2	1,752 1,601	91.6	429 489
Geopolitical zone	1.5	106,513	50.2	1,001	91.0	469
North West	1.8	32,334	24.8	470	85.2	121
North East	1.8	32,334 31,524	24.8	500	89.8	142
North Central	1.3	35,986	20.8 31.4	628	91.6	142
South East	2.6	28,616	24.5	689	91.0	178
South South	2.0 1.9	28,010	24.5	529	94.3 89.3	148
South West	2.1	27,112	27.7	537	93.0	140
Marital status	2.1	20,040	20.1	227	55.0	142
Never married	1.5	57,997	25.5	835	84.0	219
Married or living together	2.0	113,139	26.1	2,141	93.1	573
Divorced or separated	3.3	4,592	32.8	156	88.9	54
Widowed	2.7	8,459	30.4	215	93.3	71
Type of union						
In polygynous union	1.6	31,208	25.2	474	94.3	136
Not in polygynous union	2.1	81,163	26.4	1,654	92.8	434
Not currently in union	1.7	71,048	26.9	1,206	86.1	344
<b>Education</b> <sup>1</sup>						
No education	1.0	36,801	28.7	357	93.4	113
Primary	1.9	34,369	31.0	624	92.9	209
Secondary	1.7	73,485	27.8	1,219	90.8	333
Tertiary	3.6	27,679	20.0	992	90.3	212
Others	1.5	11,915	31.4	158	76.3	51

 Table 16.C
 Clinic attendance for tuberculosis (TB) evaluation and services: Total (continued)

Percent of respondents aged 15-64 years who self-reported ever visiting a clinic for tuberculosis (TB), diagnosed with TB and treated for TB by HIV status and selected socio-demographic characteristics, NAIIS 2018

			Among those who had ever visited a clinic for TB evaluation		Among those who were diagnosed with TB	
HIV status and socio-demographic characteristics	Percentage who ever visited a clinic for TB evaluation	Number	Percentage who were diagnosed with TB	Number	Percentage who were treated for TB	Number
Wealth quintile						
Lowest	1.2	33,633	31.3	362	91.9	126
Second	1.3	35,674	29.5	450	87.6	127
Middle	1.8	39,357	26.1	694	90.2	204
Fourth	2.1	39,585	27.0	850	91.7	233
Highest	2.7	36,163	23.1	997	89.6	228
Age (years)						
15-19	1.0	30,578	21.5	278	78.8	60
20-24	1.3	25,989	22.5	316	85.5	68
25-29	1.8	27,068	22.4	432	88.1	101
30-34	2.0	22,723	24.4	407	85.7	93
35-39	2.3	20,470	30.1	458	93.9	126
40-44	2.2	16,487	33.6	344	89.5	123
45-49	2.8	12,782	31.7	344	96.5	112
50-54	2.5	11,697	24.1	272	94.1	79
55-59	3.3	7,613	24.9	243	97.7	72
60-64	3.0	9,005	31.2	259	94.9	84
Total 15-24 years	1.2	56,567	22.0	594	82.4	128
Total 15-49 years	1.7	156,097	26.4	2,579	89.0	683
Total 15-64 years	1.9	184,412	26.3	3,353	90.3	918

completed.

# APPENDIX A SAMPLE DESIGN METHODOLOGY

Appendix A provides a high-level overview of NAIIS sampling and weighting procedures. In-depth details are provided in the Sampling and Weighting Document, which may be found on the <u>NAIIS project</u> <u>website</u>.

# A.1 Sample Design

## Overview

The NAIIS sample design was a stratified multistage probability sample design, with strata defined by the 37 states of the country. First-stage primary sampling units were defined as EAs created for the 2006 census. Second-stage sampling units were defined as households within EAs and, finally, eligible persons within households. Within each state, EAs were selected with probabilities proportionate to the 2018 projected number of households in the EA based on the 2006 census. The allocation of the sample EAs to the 37 states was designed to achieve specified precision levels for (1) a national estimate of HIV incidence and (2) state-level estimates of HIV prevalence and viral load suppression (VLS). The second-stage sampling units were selected from lists of dwelling units/households compiled by trained staff for each of the sample EAs. Upon completion of the listing process, a random systematic sample of 28 dwelling units/households was selected from each EA, except for Lagos where eight dwelling units/households were selected from each EA, except for Lagos where eight dwelling units/households were included in the study sample for data collection. All eligible children aged 0-14 years in a subsample of the sampled households were included in the study for data collection.

### **Population of Inference**

The population of inference for NAIIS was comprised of the *de facto* household population. The *de facto* population was comprised of individuals who were present in households, i.e., slept in the household, on the night prior to the household interview. In contrast, the *de jure* population is comprised of individuals who are usual residents of the household, irrespective of whether they slept in the household on the night prior to the household interview.

### **Precision Specifications and Assumptions**

The following specifications were used to develop the sample design for NAIIS.

- The relative standard error of the national estimate of HIV incidence among persons aged 15-64 was set at ~30%.
- The 95% confidence intervals were used for the estimated VLS rate among HIV-positive persons aged 15-64 in each of the 37 strata (states) calculated at ~10%.

The following assumptions were used to develop the sample design for NAIIS:

- An overall HIV prevalence rate of 3.4% that varied by state.
- An annual HIV incidence rate for adults aged 15-64 of 0.49%.
- A MDRI of 130 days, yielding an annualization rate of 365/130 = 2.8077. Hence, the estimated HIV incidence rate for MDRI = 130 days was Pm= 0.0060/2.8077 = 0.0021 (0.21%).
- The VLS rate among HIV-positive adults aged 15-49 in each state h of Pvh = 50%. This was a conservative assumption because it overstated the actual variance of the VLS rate.
- An intra-cluster correlation (ICC) of 0.02 for both prevalence and incidence. The ICC provided an average measure of the homogeneity of responses within the first-stage sampling units.

- An occupancy rate of 100% was used for sampled dwelling units. Note that this was not included in the calculation of the overall survey response rate but does determine the initial numbers of dwelling units to be sampled.
- An overall household response rate of 90.6% was witnessed among the occupied dwelling units.<sup>1</sup>
- The average number of persons aged 15-64 in a household was 2.47.<sup>1</sup>
- The percentage of persons in households who were aged 0-14 was 45.7%.<sup>1</sup>
- The percentage of persons in households who were aged 15-64 was 48.2%.<sup>1</sup>
- Among individuals aged 15-64 in eligible responding households, the biomarker response rate was 77.3%. This corresponded to an overall biomarker response rate of 63%. This was a conservative estimate derived from response rates in the 2012 National HIV & AIDS and Reproductive Health Survey (NARHS 2012).<sup>1</sup>
- Among children aged 0-14 in eligible responding households, the biomarker response rate was 63%.

<sup>1</sup>The assumed values of response rates and number of participating persons per household were based on data from the <u>2013-14 Nigeria Demographic</u> and <u>Health Survey (DHS) and NARHS 2012</u>.

## Selection of the Primary Sampling Units (PSUs)

The sampling frame consisted of 662,855 EAs containing 28,900,478 households and 140,431,798 persons. A stratified sample of 4,035 EAs was selected from the sampling frame. The 37 strata specified for sampling were the 37 states of Nigeria. The EA samples were selected systematically and with probabilities proportionate to a measure of size (MOS) equal to the 2018 projected number of households in the EA based on the 2006 census. Prior to selection, the EAs were sorted by type of EA, including urban/rural and other geographic variables in the frame. The sorting of the EAs prior to sample selection induces an implicit geographic stratification. To select the sample from an individual stratum, the cumulative MOS was determined for each EA in the ordered list of EAs and the sample selections were designated using a sampling interval equal to the total MOS of the EAs in the stratum divided by the number of EAs to be selected and a random starting point. The resulting sample has the property that the probability of selecting an EA within an individual stratum is proportional to the MOS of the EA in the stratum.

### Selection of Households

For both sampling and analysis purposes, a household is defined to be a group of individuals who reside in a physical structure such as a house, apartment, compound or homestead and share in housekeeping arrangements. The physical structure in which people reside is referred to as the dwelling unit, which may contain more than one household meeting the above definition. Households are eligible for participation in the study if they are located within the sampled EA.

The selection of households for NAIIS involved the following steps: (1) listing the dwelling units/ households within the sampled EAs; (2) assigning eligibility codes to the listed dwelling unit/household records; (3) selecting the samples of dwelling units/households; and (4) designating a subsample of households for data collection for children.

A description of the household listing process as well as a summary of household eligibility may be found in the Sampling and Weighting Document. Twenty-eight households were sampled from each cluster in all states except for Lagos state, where eight households were sampled per cluster.

### Selection of Individuals

The selection of individuals for NAIIS involved the following steps: (1) compiling a list of all individuals

known to reside in the household or who slept in the household during the night prior to data collection; (2) identifying those rostered individuals who were eligible for data collection; and (3) selecting for the study those individuals meeting the age and residency requirements of the study. However, only those individuals who slept in the household the night before the household interview, i.e., the *de facto* population, were retained for subsequent weighting and analysis.

# A.2 Weighting

#### Overview

In general, the purpose of weighting survey data from a complex sample design is to (1) compensate for variable probabilities of selection, (2) account for differential nonresponse rates within relevant subsets of the sample and (3) adjust for possible under-coverage of certain population groups. Weighting is accomplished by assigning an appropriate sampling weight to each responding sampled unit (e.g., a household or person) and using that weight to calculate weighted estimates from the sample. The critical component of the sampling weight is the base weight that is defined to be the reciprocal of the probability of including a household or person in the sample. The base weights are used to inflate the responses of the sampled units to population levels and are generally unbiased (or consistent) if there is no nonresponse or noncoverage in the sample. When nonresponse or noncoverage occurs in the survey, weighting adjustments are applied to the base weights to compensate for both types of sample omissions.

Nonresponse is unavoidable in virtually all surveys of human populations. For NAIIS, nonresponse could occur at different stages of data collection, including (1) before the enumeration of individuals in the household, (2) after household enumeration and selection of persons but before completion of the individual interview and (3) after completion of the interview but before collection of a viable blood sample.

Noncoverage could arise when some members of the survey population have no chance of being selected for the sample. For example, noncoverage could occur if the field operations fail to enumerate all dwelling units during the listing process or if certain household members are omitted from the household rosters. To compensate for such omissions, the post-stratification procedures are used to calibrate the weighted sample counts to available population projections.

#### Methods

The overall weighting approach for NAIIS included several steps. Methods and results for each of the steps below are detailed in the Sampling and Weighting Document.

**Initial checks:** Checks of the data files were carried out as part of the survey and data quality control and the probabilities of selection for EAs and households are calculated and checked.

**Calculation of PSU base weights**: The weighting process began with the calculation and checking of the sample EA base weights as the reciprocals of the overall PSU probabilities of selection.

**Calculation of household weights:** The next step was to calculate household weights. The household base weights were calculated as the EA weights multiplied by the reciprocal of the within-EA household selection probabilities. The household base weights were adjusted first to account for dwelling units for which it could not be determined whether the dwelling unit contained an eligible household and then the responding households had their weights adjusted to account for non-responding eligible households. This adjustment was made based on the EA the households are in and the resulting weight was the final household weight.

**Calculation of person-level interview weights:** Once the household weights were determined, they were used to calculate the individual base weights. The individual base weights were then adjusted for nonresponse among the eligible individuals, with a final adjustment for the individual weights to compensate for under-coverage in the sampling process by post-stratifying, i.e., weighting up, to 2018 population projections.

**Calculation of person-level HIV testing weights:** The individual weights adjusted for nonresponse were in turn the initial weights for the HIV testing data sample, with a further adjustment for nonresponse to HIV testing and a final post-stratification adjustment to compensate for under-coverage.

# APPENDIX B LABORATORY METHODOLOGY

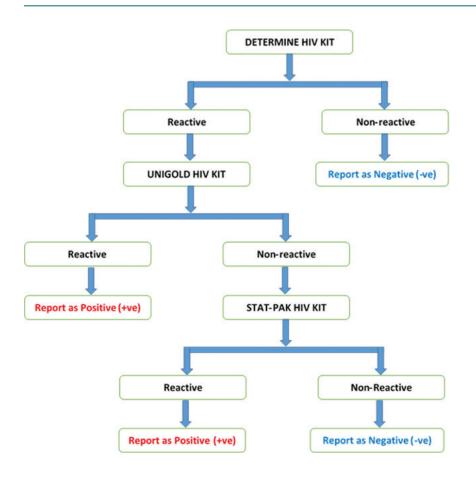
#### **B.1 Field-Based Laboratory Procedures**

Trained and qualified survey laboratory staff collected whole blood specimens from identified eligible and consenting participants. Specimen volume varied by age: a 14 mL venous blood specimen was collected from adults aged 15-64 years, a 6 mL venous blood specimen was collected from children aged 2-14 years and a 1 mL capillary blood specimen was collected from children aged <2 years, using a finger stick for children aged 6 to 23 months and a heel stick for infants below 6 months of age. For participants ≥2 years who could not provide a venous blood specimen, blood was collected from a finger stick using the 1 ml ethylene diamine tetra acetic acid (EDTA) microtube.

Blood samples were labeled with a unique pre-printed bar-coded participant identification number (PTID) and stored in temperature-controlled cooler boxes with ultra-low freezer packs which were replenished daily. At the end of each day, specimens were transported to a satellite laboratory for processing into plasma aliquots and dried blood spots (DBS) and were frozen within 24 hours of blood collection.

#### **B.2 Household-Based Procedures**

HBTC services, including HIV rapid testing and counseling, HBsAg and HCV rapid testing, point-of-care (POC) CD4 testing and return of results, were carried out in accordance with Nigeria's National HIV Testing Guidelines. HIV rapid testing was conducted in the field (Figure B.1) using a serial rapid-testing algorithm. Determine<sup>™</sup> HIV ½ (Abbott Molecular Inc., Des Plaines, Illinois, United States) was used as a screening test. Uni-Gold<sup>™</sup> (Trinity Biotech, plc., Wicklow, Ireland) was used as a confirmatory test. STAT PAK<sup>®</sup> HIV ½ Assay (Chembio Diagnostic Systems Inc., Medford, New York, United States) was used as a tie-breaker test for discordant screening and confirmatory tests. NAIIS participants with non-reactive results on the screening test were reported as HIV negative; those with a reactive screening and confirmatory tests were classified as HIV-positive. Participants with a reactive screening test result, followed by a non-reactive confirmatory test result, had the tie-breaker test performed to determine HIV status. Participants with reactive tie-breaker tests were classified as HIV-negative.



### Figure B.1 Nigerian National Serial HIV Rapid Testing Algorithm, NAIIS 2018

#### CD4 Testing

CD4 cell count was measured for all participants who tested HIV positive and a randomly selected 2% of the population who tested HIV negative. All CD4 testing was performed using the validated Pima<sup>™</sup> CD4 Point of Care Testing (POCT) system (Abbott Molecular Inc., Chicago, IL, United States, formerly Alere).

#### Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) Testing

All HIV-positive participants (aged 15-64) and approximately 5,303 randomly selected HIV-negative respondents (aged 15-64) were screened for HBV using Determine<sup>™</sup> HBsAg test kit (Abbott Inc., Chicago, Illinois, United States, formerly Alere) and for HCV using OraQuick<sup>®</sup> HCV Rapid Antibody Test (Orasure Technologies, Inc., Bethlehem, Pennsylvania, United States). Participants with a positive HCV antibody result underwent confirmatory HCV RNA quantitative PCR testing (viral load test) using Roche platform.

### **Quality Assurance (QA) and Quality Control (QC)**

QC panels consisting of positive and negative control specimens and PT panels which contained blinded positive and negative levels of all biomarkers (HIV, HBV and HCV) were regularly distributed to both the field and satellite laboratories. To ensure that test kits and staff competencies were adequately monitored, bi-weekly QC testing and two rounds of PT panels were completed. The first 50 HIV rapid tests performed by each field laboratorian were retested at the satellite lab until concordance was 100%.

#### **B.3 Satellite and Central Laboratory-Based Procedures**

At the satellite laboratories, specimens were processed into plasma aliquots and one to two DBS cards, depending on age of the participant and volume of the specimen. For infants <2 years, who provided blood from a heel stick in a one mL microtube, one to two DBS cards were prepared. All DBS cards were prepared in the laboratory. Plasma and DBS samples were labeled with unique bar-code labels generated from the LDMS. Plasma aliquots and DBS were frozen within 24 hours of blood collection. Specimens were stored in the satellite laboratories in -20°C freezers with temperature control monitors. Within a week, specimens were transported to the central laboratory using the cooler boxes with ultra-low freezer packs. At the central laboratory, specimens were stored in -80°C freezers with temperature control monitors in a purpose-built biorepository with a secured electrical supply.

#### Geenius™ HIV 1/2 Testing

All HIV-positive specimens were retested at the satellite laboratory using Geenius<sup>™</sup> HIV 1/2 Supplemental Assay (Bio-Rad, Hercules, California, United States) as the confirmatory test. Participants who had reactive results on both rapid and Geenius<sup>™</sup> HIV 1/2 tests were classified as HIV-positive. Participant specimens with a reactive rapid test result followed by a non-reactive confirmatory test result at the satellite laboratory were subjected to further QA discrepancy resolution at the central laboratory. Specimens from participants who self-reported being HIV positive with an HIV negative test result at HBT received further testing, including additional HIV serial rapid testing and Geenius<sup>™</sup> HIV 1/2 testing in the satellite and central laboratories as well as deoxyribonucleic acid (DNA) polymerase chain reaction (PCR) to resolve discrepancies.

#### **HIV Viral Load Testing**

VL testing of HIV-positive participants was done using the Roche solutions for molecular diagnostics (CO-BAS® AmpliPrep/COBAS® TaqMan® HIV-1 Test, version 2.0, Roche Molecular Diagnostics, Indianapolis, Indiana, United States).

HIV-1 VL using DBS specimens from children and adults with an insufficient volume of plasma was measured on the Roche COBAS® AmpliPrep instrument and COBAS® TaqMan® 48 analyzer using the COBAS® AmpliPrep/COBAS® TaqMan® free virus elution (FVE) protocol, HIV-1 Test version 2.0 (Roche Molecular Diagnostics, Branchburg, New Jersey, United States) and internal QC was performed according to the manufacturer's specifications.

VL results were sent to the health facilities selected by the HIV-positive participant within 8 to 10 weeks of specimen collection. The facility referral focal person contacted the HIV-positive participant via mobile phone, informing them that their VL results were available. The facility referral focal person also used the mobile phone to document that the participant enrolled into care, initiated on antiretroviral therapy (ART) and received viral load results using the Unstructured Supplementary Service Data (USSD) codes.

### **Classification of Final HIV Status**

For participants aged 18 months-64 years, the algorithm for classification of final HIV status included results from rapid HIV testing and Geenius<sup>™</sup> HIV 1/2 confirmatory testing on all positives. In addition, Western Blot, TNA PCR and VL RNA PCR were done on discrepant results. For participants less than 18 months, the algorithm for classification of final HIV status included results from rapid HIV testing and HIV TNA PCR. Classification of final HIV status was used to determine estimates for HIV prevalence and to inform estimates for HIV incidence.

#### Infant HIV Virologic Testing (IVT)/Early Infant Diagnosis (EID)

All infants <18 months were tested for HIV using the Determine<sup>™</sup> HIV 1/2 Rapid Test. Infants who were reactive on Determine received IVT/EID testing using prepared DBS. In addition, infants born to mothers of unknown HIV status or HIV-positive mothers were screened using the Determine<sup>™</sup> HIV 1/2 HIV Test and received IVT/EID testing using prepared DBS. HIV TNA PCR using COBAS<sup>®</sup> TaqMan<sup>®</sup> HIV-1 Qualitative Test (Roche Molecular Systems, Branchburg, NJ, USA) United States) analyzer was conducted at the central laboratory. Specimens with HIV-negative results were categorized as HIV negative while specimens with HIV-positive results were reported as HIV-positive. Results were returned to the infant's parent or guardian at the household within two weeks of specimen collection.

#### HIV Recent Infection Testing Algorithm

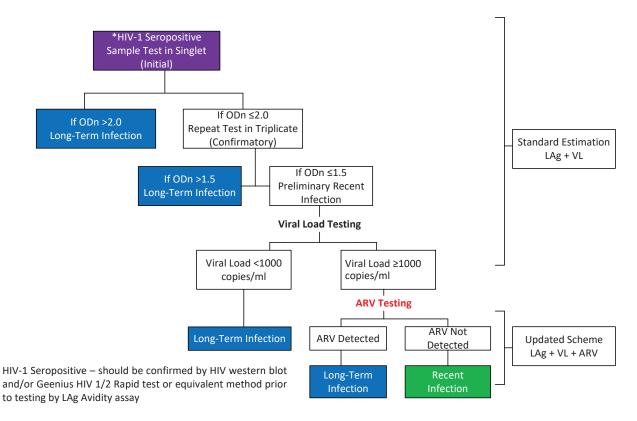
A total of 2,759 specimens were tested at the central laboratory for HIV incidence at the end of data collection. Specimens from HIV-positive participants ≥18 months old were tested for recent HIV infection using the HIV-1 Limiting Antigen (LAg) Avidity Assay Testing Algorithm (Figure B.2). This assay was based on the principle of Enzyme Immunoassay (EIA).

Two different laboratory-based testing algorithms were used to estimate incidence for PLHIV participants ≥18 months old. HIV-1 LAg Avidity plus VLVL and HIV-1 LAg Avidity plus viral load and ARV detection were used to distinguish recent from long-term infection. Incidence estimates were obtained using the formula recommended by the WHO Incidence Working Group and Consortium for Evaluation and Performance of Incidence Assays, with assay performance characteristics of an MDRI of 130 days (95% CI: 118, 142), a time cutoff (T) of 1.0 year and a residual proportion false recent (PFR) of 0.00. Each algorithm employed a combination of assays: HIV-1 LAg Avidity EIA (Sedia Biosciences Corporation, Portland, Oregon, United States) and VL (Figure B.2) and HIV-1 LAg Avidity EIA, VL and ARV detection.

Specimens with a normalized optical density (ODn) value  $\leq 2.0$  during initial testing were confirmed by further testing of the specimen in triplicate. For those HIV-positive specimens with median normalized ODn value  $\leq 1.5$ , VL results were reviewed to increase the positive predictive value of true recent infections. Specimens with ODn values >1.5 were classified as long-term infections. Specimens with final ODn value <0.4 were retested by the HIV diagnostic testing algorithm to confirm HIV-1 seropositivity (Figure B.2).

Specimens identified as HIV negative based on the ODn reading were excluded from the total number of HIV-positive specimens and incorporated into the total number of HIV-negative specimens for incidence estimation. Specimens with VL <1,000 copies/mL were classified as long-term infections, while those with VL  $\geq$ 1,000 copies/mL were classified as recent infections (Figure B.2). In the ARV-adjusted algorithm, specimens with VL  $\geq$ 1,000 copies/mL and with detectable ARVs were classified as long-term infections, while specimens with VL  $\geq$ 1,000 copies/mL and without detectable ARVs were classified as recent infections.

Incidence estimation is based on recent/long-term (LT) classification using algorithms with LAg Avidity.<sup>1,2,3</sup> The first testing algorithm (i.e., HIV-1 LAg Avidity plus VL) uses VL testing to exclude specimens with low VL and limit misclassification of persons as recent infections who are elite controllers or on effective ART. The second algorithm (i.e., HIV-1 LAg Avidity plus VL and ARV detection) uses ARV detection to exclude specimens with high VL and limit misclassification as recent infections of persons who are on ART but have poor treatment adherence.



### Figure B.2 Testing Algorithm for LAg Avidity Testing, NAIIS 2018

### **Detection of Antiretrovirals**

ARV detection was performed by the Division of Clinical Pharmacology of the Department of Medicine at the University of Cape Town, South Africa. Qualitative screening, for detectable concentrations of ARVs, was conducted on DBS specimens from all HIV-positive adults and children using high-resolution liquid chromatography coupled with tandem mass spectrometry (MS). Protein precipitation followed by high performance liquid chromatography with MS/MS detection using a gradient elution methodology described by Koal et al.<sup>1</sup> was used for the qualitative determination of four ARV drugs from DBS This qualitative assay separates the parent compound from the fragments and is highly specific and highly sensitive, with a limit of detection of 0.02  $\mu$ g/mL for each drug and a signal-to-noise ratio of at least 5:1 for all drugs. Four ARVs, efavirenz, lopinavir, atazanavir and nevirapine, were selected as markers for the most commonly prescribed first- and second-line regimens. These ARVs have relatively long half-lives, allowing for a longer period of detection following intake. Detection of ARVs indicates participant use of a given drug at the time of blood collection. Specimens from participants who were virally suppressed or self-reported being on ART but had no evidence of the first three compounds were tested for nevirapine. Results below the limit of detection among individuals who reported taking ART indicate that there was no recent exposure to the regimen and that adherence to a prescribed regimen was suboptimal, but cannot be interpreted as "not on ART." Given the limited number of ARVs selected for detection, NAIIS could not rule out the use of other ART regimens.

#### References

1. Koal T, Burhenne H, Römling R, Svoboda M, Resch K, Kaever V. Quantification of antiretroviral drugs in dried blood spot samples by means of liquid chromatography/tandem mass spectrometry. *Rapid Commun Mass Spectrom*. 2005;19(21):2995-3001.

# APPENDIX C ESTIMATES OF SAMPLING ERRORS

Estimates from sample surveys are affected by two types of errors: non-sampling errors and sampling errors. Non-sampling errors result from mistakes made during data collection, e.g., misinterpretation of an HIV test result and data management errors such as transcription errors during data entry. While NAIIS implemented numerous quality assurance and control measures to minimize non-sampling errors, these were impossible to avoid and difficult to evaluate statistically. In contrast, sampling errors can be evaluated statistically. Sampling errors are a measure of the variability between all possible samples. The sample of respondents selected for NAIIS was only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples could yield results that differed somewhat from the results of the actual sample selected. Although the degree of variability cannot be known exactly, it can be estimated from the survey results.

The standard error, which is the square root of the variance, is the usual measurement of sampling error for a statistic (e.g., proportion, mean, rate, count). In turn, the standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of approximately plus or minus two times the standard error of that statistic in 95% of all possible samples of identical size and design.

NAIIS utilized a multi-stage stratified sample design, which required complex calculations to obtain sampling errors. The Taylor linearization method of variance estimation was used for survey estimates that are proportions, e.g., HIV prevalence. The Jackknife repeated replication method was used for variance estimation of more complex statistics such as rates, e.g., annual HIV incidence and counts such as the number of people living with HIV.

The Taylor linearization method treats any percentage or average as a ratio estimate, r = y/x, where y represents the total sample value for variable y and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance:

$$SE^{2}(r) = \operatorname{var}(r) = \frac{1-f}{x^{2}} \sum_{h=1}^{H} \left[ \frac{m_{h}}{m_{h}-1} \left( \sum_{i=1}^{m_{h}} z_{hi}^{2} - \frac{z_{h}^{2}}{m_{h}} \right) \right]$$

in which

 $z_{hi} = y_{hi} - rx_{hi}$  and  $z_h = y_h - rx_h$ 

Where *h* represents the stratum, which varies from 1 to *H*,

 $m_h$  is the total number of clusters selected in the  $h^{\text{th}}$  stratum,

 $y_{hi}$  is the sum of the weighted values of variable y in the i<sup>th</sup> cluster in the h<sup>th</sup> stratum,

 $x_{hi}$  is the sum of the weighted number of cases in the *i*<sup>th</sup> cluster in the *h*<sup>th</sup> stratum and,

*f* is the overall sampling fraction, which is so small that it is ignored.

In addition to the standard error, the design effect for each estimate is also calculated. The design effect is defined as the ratio of the standard error using the given sample design to the standard error that would result if a simple random sample had been used. A design effect of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. Confidence limits for the estimates, which are calculated as

$$r \pm t_{(0.975,K)} \sqrt{\operatorname{var}(r)}$$

where  $t_{(0.975, K)}$  is the 97.5th percentile of a *t*-distribution with *K* degrees of freedom, are also computed.

Sampling errors for selected variables from NAIIS are presented in Tables C.1 through C.9. For most variables, sampling error tables include the weighted estimate, unweighted denominator, standard error or design effect and lower- and upper-95% confidence limits.

Table C.1 age, NAIIS 20		ors: Annual HIV inciden	ce LAg/VL/ARV testing	algorithm by sex and
Age (years)	Weighted estimate (%)	Design effect	Lower confidence limit (%)	Upper confidence limit (%)
		TOTAL		
15-24	0.04	1.03	0.01	0.07
25-34	0.15	1.92	0.07	0.24
35-49	0.08	2.11	0.01	0.14
15-49	0.08	1.68	0.05	0.12
15-64	0.08	1.70	0.05	0.11
		MALES		
15-24	0.03	0.99	0.00	0.07
25-34	0.10	1.44	0.01	0.19
35-49	0.05	3.11	0.00	0.15
15-49	0.06	1.70	0.02	0.10
15-64	0.05	1.79	0.02	0.09
		FEMALES		
15-24	0.05	1.10	0.01	0.10
25-34	0.21	2.39	0.07	0.35
35-49	0.10	1.46	0.02	0.18
15-49	0.11	1.76	0.06	0.16
15-64	0.11	1.75	0.06	0.16

Table C.2 Sa	1 0	IIV prevalence by			Linner
	Weighted	Unweighted	Standard	Lower confidence	Upper confidence
Age	estimate (%)	number	error (%)	limit (%)	limit (%)
		ТОТ			
0-17 months	0.19	2,291	0.09	0.02	0.36
18-59 months	0.11	7,634	0.04	0.04	0.19
5-9 years	0.13	12,781	0.03	0.07	0.20
10-14 years	0.16	9,788	0.05	0.07	0.25
Total 0-4 years	0.13	9,925	0.03	0.07	0.20
Total 0-14 years	0.14	32,494	0.02	0.10	0.19
15-19 years	0.23	28,897	0.03	0.16	0.29
20-24 years	0.80	24,426	0.06	0.67	0.92
25-29 years	1.22	25,470	0.09	1.05	1.38
30-34 years	1.60	21,393	0.11	1.40	1.81
35-39 years	2.23	19,328	0.14	1.96	2.49
40-44 years	2.16	15,549	0.14	1.89	2.43
45-49 years	2.45	12,023	0.17	2.12	2.77
50-54 years	2.32	10,986	0.18	1.97	2.67
55-59 years	2.02	7,112	0.21	1.61	2.43
60-64 years	1.44	8,532	0.15	1.14	1.74
Total 15-24 years	0.49	53,323	0.03	0.42	0.55
Total 15-49 years	1.27	147,086	0.04	1.19	1.35
Total 15-64 years	1.36	173,716	0.04	1.28	1.45
		MA	LES		
0-17 months	0.08	1,159	0.08	0.00	0.25
18-59 months	0.11	3,937	0.04	0.02	0.19
5-9 years	0.12	6,505	0.04	0.03	0.21
10-14 years	0.17	4,972	0.07	0.03	0.30
Total 0-4 years	0.10	5,096	0.04	0.02	0.18
Total 0-14 years	0.13	16,573	0.03	0.07	0.19
15-19 years	0.15	13,344	0.04	0.07	0.23
20-24 years	0.33	10,368	0.06	0.21	0.46
25-29 years	0.66	10,592	0.09	0.48	0.85
30-34 years	1.00	9,067	0.13	0.74	1.26
35-39 years	1.37	8,623	0.17	1.04	1.70
40-44 years	1.72	6,904	0.18	1.37	2.06
45-49 years	2.20	5,769	0.22	1.76	2.63
50-54 years	2.32	5,053	0.26	1.81	2.84
55-59 years	1.63	3,773	0.24	1.16	2.10

Table C.2 Sa	ampling errors: H	IIV prevalence by	sex and age, N	AIIS 2018 (contin	ued)
Age	Weighted estimate (%)	Unweighted number	Standard error (%)	Lower confidence limit (%)	Upper confidence limit (%)
		MA	LES		
60-64 years	1.42	4,477	0.20	1.02	1.81
Total 15-24 years	0.23	23,712	0.04	0.16	0.30
Total 15-49 years	0.83	64,667	0.04	0.75	0.92
Total 15-64 years	0.96	77,970	0.04	0.87	1.05
		FEM	ALES		
0-17 months	0.29	1,132	0.15	0.00	0.59
18-59 months	0.12	3,697	0.05	0.02	0.23
5-9 years	0.14	6,276	0.05	0.05	0.24
10-14 years	0.16	4,816	0.06	0.04	0.27
Total 0-4 years	0.16	4,829	0.05	0.06	0.27
Total 0-14 years	0.16	15,921	0.03	0.09	0.22
15-19 years	0.31	15,553	0.05	0.21	0.40
20-24 years	1.29	14,058	0.11	1.08	1.50
25-29 years	1.80	14,878	0.13	1.54	2.06
30-34 years	2.23	12,326	0.16	1.92	2.54
35-39 years	3.12	10,705	0.21	2.71	3.53
40-44 years	2.62	8,645	0.20	2.23	3.01
45-49 years	2.70	6,254	0.25	2.21	3.19
50-54 years	2.31	5,933	0.24	1.85	2.78
55-59 years	2.40	3,339	0.32	1.76	3.03
60-64 years	1.46	4,055	0.24	1.00	1.92
Total 15-24 years	0.75	29,611	0.06	0.64	0.87
Total 15-49 years	1.74	82,419	0.06	1.62	1.85
Total 15-64 years	1.79	95,746	0.06	1.67	1.90

Table C.3	Sampling errors: HIV prevalence by residence and state, persons aged 15-64 years,
NAIIS 2018	

Characteristic	Weighted estimate (%)	Unweighted number	Standard error (%)	Lower confidence limit (%)	Upper confidence limit (%)
	estimate (%)	TOTAL		111111 (70)	iiiiii (70)
Place of residence		10112			
Urban	1.3	72,790	0.1	1.1	1.4
Rural	1.5	100,926	0.1	1.4	1.6
State					
Abia	2.0	5,767	0.2	1.6	2.4
Adamawa	1.1	5,286	0.2	0.7	1.4
Akwa Ibom	4.8	4,381	0.4	4.0	5.5
Anambra	2.2	4,653	0.3	1.6	2.8
Bauchi	0.5	6,124	0.1	0.2	0.8
Bayelsa	1.7	3,892	0.2	1.3	2.2
Benue	4.8	4,566	0.5	3.9	5.7
Borno	1.1	1,815	0.3	0.5	1.7
Cross River	1.8	4,617	0.2	1.3	2.3
Delta	1.7	3,929	0.2	1.3	2.2
Ebonyi	0.8	6,413	0.1	0.6	1.0
Edo	1.8	4,318	0.2	1.4	2.2
Ekiti	0.7	3,613	0.2	0.4	1.0
Enugu	1.8	4,756	0.2	1.3	2.2
FCT <sup>1</sup>	1.4	4,631	0.2	1.0	1.8
Gombe	1.2	6,539	0.2	0.7	1.6
Imo	1.7	5,443	0.2	1.2	2.1
Jigawa	0.3	5,702	0.1	0.2	0.5
Kaduna	1.0	5,253	0.2	0.6	1.4
Kano	0.6	4,387	0.2	0.3	0.9
Katsina	0.3	4,124	0.1	0.1	0.5
Kebbi	0.6	4,243	0.1	0.3	0.9
Коді	0.8	4,191	0.2	0.5	1.2
Kwara	0.8	4,077	0.2	0.5	1.2
Lagos	1.3	7,502	0.2	1.0	1.6
Nasarawa	1.8	5,368	0.2	1.3	2.2
Niger	0.6	5,949	0.1	0.4	0.9
Ogun	1.4	3,584	0.2	1.0	1.8
Ondo	1.0	4,094	0.2	0.6	1.4
Osun	0.9	3,637	0.2	0.6	1.2
Оуо	0.9	4,118	0.2	0.6	1.2

Characteristic	Weighted estimate (%)	Unweighted number	Standard error (%)	Lower confidence limit (%)	Upper confidence limit (%)
		TOTAL			
Plateau	1.5	5,274	0.2	1.1	1.8
Rivers	3.6	3,955	0.4	2.9	4.3
Sokoto	0.4	4,036	0.1	0.2	0.6
Taraba	2.6	6,772	0.3	2.0	3.3
Yobe	0.4	4,300	0.1	0.1	0.6
Zamfara	0.4	2,407	0.2	0.1	0.7
		MALES			
Place of residence					
Urban	0.9	32,172	0.1	0.8	1.0
Rural	1.0	45,798	0.1	0.9	1.2
State					
Abia	1.7	2,306	0.3	1.2	2.3
Adamawa	0.8	2,601	0.2	0.5	1.1
Akwa Ibom	2.9	1,939	0.4	2.1	3.7
Anambra	1.8	1,922	0.3	1.1	2.4
Bauchi	0.4	2,921	0.1	0.1	0.7
Bayelsa	1.4	1,722	0.3	0.9	2.0
Benue	3.5	2,156	0.4	2.6	4.3
Borno	1.0	795	0.4	0.2	1.8
Cross River	1.6	2,116	0.2	1.1	2.0
Delta	1.2	1,580	0.3	0.6	1.8
Ebonyi	0.7	2,400	0.2	0.4	1.0
Edo	1.2	1,891	0.2	0.7	1.6
Ekiti	0.3	1,606	0.1	0.1	0.6
Enugu	1.3	1,806	0.3	0.7	1.8
FCT <sup>1</sup>	0.8	2,271	0.2	0.4	1.1
Gombe	0.8	3,283	0.2	0.4	1.2
mo	1.3	2,190	0.3	0.7	1.9
ligawa	0.1	2,766	0.1	0.0	0.3
Kaduna	0.6	2,471	0.2	0.3	1.0
Kano	0.4	2,125	0.1	0.1	0.6
Katsina	0.2	1,915	0.1	0.0	0.5
Kebbi	0.4	1,975	0.1	0.1	0.7
Kogi	0.5	1,846	0.2	0.1	0.8
Kwara	0.4	1,913	0.1	0.2	0.7
Lagos	0.8	3,111	0.2	0.5	1.2

### Table C 2 Sampling errors: HIV prevalence by residence and state rod 15 64 vo

Characteristic	Weighted estimate (%)	Unweighted number	Standard error (%)	Lower confidence limit (%)	Upper confidence limit (%)
		MALES			
Nasarawa	1.3	2,566	0.2	0.9	1.7
Niger	0.4	2,802	0.1	0.2	0.6
Ogun	0.9	1,424	0.2	0.5	1.3
Ondo	0.8	1,777	0.2	0.3	1.2
Osun	0.7	1,515	0.2	0.4	1.1
Оуо	0.8	1,822	0.2	0.4	1.3
Plateau	0.6	2,370	0.1	0.3	0.9
Rivers	2.8	1,791	0.5	1.8	3.7
Sokoto	0.4	1,956	0.2	0.1	0.7
Taraba	1.7	3,119	0.2	1.3	2.2
Yobe	0.5	2,153	0.2	0.1	0.8
Zamfara	0.3	1,048	0.2	0.0	0.7
		FEMALES			
Place of residence					
Urban	1.6	40,618	0.1	1.5	1.8
Rural	1.9	55,128	0.1	1.8	2.1
State					
Abia	2.2	3,461	0.2	1.7	2.7
Adamawa	1.4	2,685	0.3	0.8	2.0
Akwa Ibom	6.7	2,442	0.6	5.5	7.8
Anambra	2.6	2,731	0.4	1.8	3.4
Bauchi	0.6	3,203	0.2	0.2	1.0
Bayelsa	2.1	2,170	0.3	1.5	2.7
Benue	6.3	2,410	0.7	5.0	7.6
Borno	1.2	1,020	0.4	0.5	1.9
Cross River	2.1	2,501	0.3	1.4	2.7
Delta	2.2	2,349	0.4	1.5	2.9
Ebonyi	0.9	4,013	0.2	0.6	1.2
Edo	2.3	2,427	0.3	1.7	3.0
Ekiti	1.1	2,007	0.2	0.6	1.6
Enugu	2.2	2,950	0.3	1.6	2.8
FCT <sup>1</sup>	2.2	2,360	0.4	1.5	2.9
Gombe	1.6	3,256	0.3	1.0	2.3
Imo	2.0	3,253	0.3	1.5	2.6
Jigawa	0.5	2,936	0.1	0.2	0.8
Kaduna	1.4	2,782	0.3	0.8	2.0

### Table C 3 Sampling errors: HIV prevalence by residence and state, persons aged 15-64 years.

				Lower	Upper
	Weighted	Unweighted	Standard	confidence	confidence
Characteristic	estimate (%)	number	error (%)	limit (%)	limit (%)
		FEMLAES			
Kano	0.7	2,262	0.2	0.3	1.2
Katsina	0.4	2,209	0.2	0.0	0.7
Kebbi	0.8	2,268	0.2	0.4	1.3
Коді	1.2	2,345	0.2	0.8	1.7
Kwara	1.3	2,164	0.3	0.8	1.8
Lagos	1.9	4,391	0.2	1.4	2.3
Nasarawa	2.4	2,802	0.3	1.7	3.0
Niger	1.0	3,147	0.2	0.6	1.3
Ogun	1.9	2,160	0.3	1.2	2.5
Ondo	1.3	2,317	0.3	0.7	1.8
Osun	1.0	2,122	0.2	0.6	1.5
Оуо	1.0	2,296	0.3	0.5	1.4
Plateau	2.3	2,904	0.3	1.7	2.9
Rivers	4.6	2,164	0.5	3.6	5.7
Sokoto	0.4	2,080	0.2	0.1	0.7
Taraba	3.6	3,653	0.5	2.6	4.6
Yobe	0.3	2,147	0.1	0.0	0.5
Zamfara	0.5	1,359	0.2	0.2	0.9

## Table C.3Sampling errors: HIV prevalence by residence and state, persons aged 15-64 years,NAIIS 2018 (continued)

Age (years)	Weighted estimate (%)	Unweighted number	Standard error (%)	Lower confidence limit (%)	Upper confidence limit (%)
		TOTAL			
0 to 14	21.8	51	6.2	9.5	34.0
15 to 24	32.6	316	3.4	26.0	39.2
25 to 34	33.9	748	2.2	29.7	38.2
35 to 44	47.1	855	2.1	43.0	51.3
45 to 54	52.3	552	2.6	47.2	57.4
55 to 64	49.9	268	3.8	42.4	57.3
Total 15-24 years	32.6	316	3.4	26.0	39.2
Total 15-49 years	40.9	2,208	1.4	38.2	43.6
Total 15-64 years	43.1	2,739	1.3	40.6	45.6
		MALES			
0 to 14	*	23	7.2	0.0	24.6
15 to 24	33.6	61	8.0	18.0	49.3
25 to 34	20.4	164	3.6	13.3	27.6
35 to 44	37.8	248	4.0	30.0	45.5
45 to 54	50.7	242	3.9	43.1	58.4
55 to 64	52.3	130	5.3	41.9	62.6
Total 15-24 years	33.6	61	8.0	18.0	49.3
Total 15-49 years	33.5	601	2.4	28.7	38.2
Total 15-64 years	38.8	845	2.1	34.7	42.9
		FEMALES			
0 to 14	*	28	9.3	13.4	50.1
15 to 24	32.2	255	3.5	25.4	39.1
25 to 34	39.7	584	2.5	34.9	44.6
35 to 44	52.3	607	2.4	47.6	57.0
45 to 54	53.7	310	3.3	47.2	60.2
55 to 64	48.1	138	5.1	38.0	58.2
Total 15-24 years	32.2	255	3.5	25.4	39.1
Total 15-49 years	44.7	1,607	1.5	41.8	47.6
Total 15-64 years	45.5	1,894	1.4	42.7	48.3

Characteristics	Weighted estimate (%)	Unweighted number	Standard error (%)	Lower confidence limit (%)	Upper confidence limit (%)
		TOTAL			
Place of residence					
Urban	46.7	1,078	2.0	42.7	50.7
Rural	40.3	1,661	1.6	37.1	43.5
Geopolitical zone					
North West	46.7	175	4.6	37.7	55.6
North East	49.5	403	4.3	41.0	57.9
North Central	63.8	651	2.2	59.4	68.2
South East	36.6	477	2.7	31.4	41.9
South South	31.1	712	2.1	26.9	35.3
South West	41.2	321	3.4	34.5	47.9
		MALES			
Place of residence					
Urban	38.9	319	3.4	32.2	45.6
Rural	38.7	526	2.6	33.5	43.9
Geopolitical zone					
North West	52.1	55	7.9	36.6	67.5
North East	46.4	141	5.6	35.5	57.3
North Central	60.0	189	4.3	51.6	68.4
South East	35.2	148	4.5	26.4	44.1
South South	27.2	221	3.4	20.6	33.8
South West	26.9	91	5.3	16.5	37.3
		FEMALES			
Place of residence					
Urban	51.1	759	2.3	46.6	55.5
Rural	41.2	1,135	1.8	37.6	44.7
Geopolitical zone					
North West	43.7	120	5.4	33.1	54.3
North East	51.5	262	4.9	41.8	61.2
North Central	65.7	462	2.4	61.0	70.4
South East	37.5	329	3.0	31.5	43.4
South South	33.3	491	2.5	28.3	38.2
South West	48.8	230	3.8	41.3	56.2

# Table C.5Sampling errors: Viral load suppression by residence and zone, persons aged 15-64vears. NAIIS 2018

Table C	2.6	Samplin	g erro	rs: Self-	reporte	ed ARV 9	0-90-90	by age	e (cond	itional	percenta	ages), NA	IIS 201	18	
		Diagnosed					On T	reatme	ent			Virally	Suppre	ssed	
Age (years)	Weight- ed estimate (%)	Un- weight- ed num- ber	Stan- dard error (%)	Lower confi- dence limit (%)	Upper confi- dence limit (%)	Weight- ed esti- mate (%)	Un- weight- ed num- ber	Stan- dard error (%)	Lower confi- dence limit (%)	Upper confi- dence limit (%)	Weight- ed esti- mate (%)	Un- weight- ed number	Stan- dard error (%)	Lower confi- dence limit (%)	Upper confi- dence limit (%)
							TOTA	L							
15-24	14.4	304	2.4	9.7	19.0	71.6	47	7.6	56.6	86.6	80.9	35	7.7	65.8	96.0
25-34	21.7	724	1.9	17.9	25.4	81.9	167	4.1	73.9	90.0	78.6	144	4.0	70.7	86.5
35-49	35.1	1,113	1.8	31.6	38.6	91.8	408	1.6	88.8	94.9	82.5	376	2.4	77.8	87.2
15-49	27.5	2,141	1.3	25.0	30.0	87.7	622	1.7	84.4	91.0	81.5	555	1.9	77.7	85.2
15-64	28.9	2,660	1.2	26.6	31.2	89.8	816	1.3	87.1	92.4	82.5	743	1.6	79.4	85.7
							MALE	S							
15-24	8.9	60	5.0	0.0	18.7	*	5	14.3	57.9	100.0	*	4	8.7	75.2	100.0
25-34	13.5	160	3.3	7.1	19.9	*	22	7.2	72.7	100.0	*	19	11.9	49.3	96.0
35-49	29.9	368	2.9	24.3	35.5	95.3	124	1.8	91.8	98.8	77.3	117	5.2	67.0	87.6
15-49	22.7	588	2.1	18.5	26.8	93.4	151	2.0	89.5	97.3	77.2	140	4.7	68.0	86.3
15-64	27.1	828	1.9	23.5	30.8	93.8	251	1.6	90.7	97.0	79.5	234	3.5	72.6	86.4
					-		FEMAL	.ES							
15-24	16.2	244	2.7	10.9	21.4	68.9	42	8.3	52.5	85.3	78.3	31	8.8	61.1	95.5
25-34	25.2	564	2.2	20.8	29.6	80.8	145	4.6	71.8	89.8	80.1	125	4.0	72.2	88.0
35-49	38.4	745	2.2	34.2	42.6	90.1	284	2.1	85.9	94.3	85.2	259	2.3	80.6	89.7
15-49	30.0	1,553	1.4	27.2	32.8	85.4	471	2.1	81.3	89.6	83.3	415	1.9	79.5	87.0
15-64	29.9	1,832	1.3	27.3	32.5	87.7	565	1.8	84.1	91.2	84.2	509	1.7	80.9	87.5
An aste	risk indica	tes that a	n estin	nate is b	ased on	a very sm	nall numb	er (30	or less)	of unwe	ghted ca	ses and h	as been	suppre	ssed.

Table C	7	Sampli	ng erro	ors: AR\	/-adjust	ed 90-90	<b>)-90 by</b> a	ge (cor	nditiona	al perce	entages),	NAIIS 2	018		
		Dia	agnosed	b			On T	reatme	nt			Virally	Suppre	ssed	
Age (years)	Weight- ed esti- mate (%)	Un- weight- ed num- ber	Stan- dard error (%)	Lower confi- dence limit (%)	Upper confi- dence limit (%)	Weight- ed esti- mate (%)	Un- weight- ed number	Stan- dard error (%)	Lower confi- dence limit (%)	Upper confi- dence limit (%)	Weight- ed esti- mate (%)	Un- weight- ed num- ber	Stan- dard error (%)	Lower confi- dence limit (%)	Upper confi- dence limit (%)
							TOTA	_							
15-24	31.0	308	3.4	24.3	37.7	92.3	97	2.9	86.5	98.1	77.1	90	5.3	66.7	87.4
25-34 35-49	38.6 52.8	738 1,134	2.3 1.8	34.1 49.2	43.1 56.3	95.9 96.2	322 629	1.3 1.0	93.3 94.3	98.4 98.0	75.2 82.0	310 607	3.2 1.9	68.9 78.3	81.5 85.7
15-49	44.8	2,180	1.4	42.0	47.6	95.7	1,048	0.8	94.1	97.2	79.6	1,007	1.5	76.6	82.6
15-64	46.9	2,705	1.3	44.4	49.5	96.4	1,366 MALE	0.6 S	95.2	97.6	80.9	1,322	1.3	78.3	83.5
15-24	28.8	60	8.1	13.0	44.6	*	14	4.4	87.1	100.0	*	13	13.7	46.0	99.8
25-34	19.2	161	3.6	12.1	26.2	96.5	34	3.4	89.8	100.0	65.8	33	9.8	46.6	85.0
35-49	45.3	372	3.1	39.2	51.4	98.2	187	1.0	96.2	100.0	77.4	183	4.1	69.4	85.3
15-49	35.8	593	2.4	31.1	40.6	97.7	235	1.0	95.7	99.7	75.2	229	3.6	68.0	82.3
15-64	40.9	835	2.1	36.8	45.1	97.8	382	0.8	96.1	99.4	79.2	373	2.7	73.8	84.6
				-			FEMAL	ES							
15-24	31.7	248	3.6	24.7	38.8	91.3	83	3.6	84.3	98.3	78.4	77	5.4	67.7	89.0
25-34	46.9	577	2.5	42.0	51.8	95.7	288	1.4	93.0	98.5	76.9	277	3.3	70.4	83.3
35-49	57.4	762	2.1	53.3	61.5	95.2	442	1.3	92.6	97.8	84.4	424	1.9	80.7	88.0
15-49	49.3	1,587	1.5	46.3	52.3	94.9	813	1.0	93.0	96.8	81.3	778	1.6	78.1	84.4
15-64	50.3	1,870	1.4	47.5	53.1	95.8	984	0.8	94.2	97.3	81.7	949	1.5	78.8	84.6
An aste	risk indica	ates that a	an estir	nate is b	ased on	a very sn	nall numb	er (30 c	or less) o	of unwei	ghted cas	es and ha	is been	suppres	ssed.

Table C.8 S	ampling errors:	HBV prevalence by	age, NAIIS 2018		
	Weighted	Unweighted	Standard	Lower confidence	Upper confidence
Age (years)	estimate (%)	number	error (%)	limit (%)	limit (%)
		тот			
15-19	7.9	1,047	1.0	5.9	9.9
20-24	8.6	1,279	1.1	6.3	10.8
25-29	9.5	1,593	1.0	7.5	11.5
30-34	9.5	1,448	1.2	7.2	11.7
35-39	10.2	1,386	1.2	7.9	12.6
40-44	7.7	1,118	1.1	5.5	9.9
45-49	5.9	811	1.2	3.6	8.3
50-54	6.3	749	1.4	3.5	9.2
55-59	2.5	456	0.8	0.9	4.1
60-64	3.8	551	1.1	1.7	5.9
Total 15-24 years	8.2	2,326	0.8	6.7	9.7
Total 15-49 years	8.6	8,682	0.4	7.8	9.5
Total 15-64 years	8.1	10,438	0.4	7.3	8.9
		MAL	.ES		
15-19	10.3	443	1.7	7.0	13.5
20-24	10.7	464	2.0	6.8	14.6
25-29	13.7	605	1.8	10.2	17.2
30-34	11.2	591	1.9	7.5	14.9
35-39	13.1	561	1.9	9.5	16.8
40-44	9.2	485	1.7	5.8	12.5
45-49	7.7	405	1.7	4.3	11.1
50-54	6.1	344	1.7	2.8	9.5
55-59	3.9	229	1.5	1.0	6.8
60-64	5.2	267	1.9	1.5	8.8
Total 15-24 years	10.5	907	1.3	7.9	13.0
Total 15-49 years	11.1	3,554	0.7	9.6	12.5
Total 15-64 years	10.3	4,394	0.7	9.0	11.6
		FEMA	ALES		
15-19	5.4	604	1.1	3.2	7.6
20-24	6.4	815	1.1	4.3	8.5
25-29	5.1	988	0.9	3.4	6.8
30-34	7.6	857	1.3	5.1	10.2
35-39	7.2	825	1.4	4.5	10.0
40-44	6.3	633	1.4	3.5	9.1
45-49	4.1	406	1.7	0.8	7.4
50-54	6.6	405	2.3	2.0	11.1

Table C.8         Sampling errors: HBV prevalence by age, NAIIS 2018 (continued)							
Age (years)	Weighted estimate (%)	Unweighted number	Standard error (%)	Lower confidence limit (%)	Upper confidence limit (%)		
FEMALES							
55-59	1.1	227	0.7	0.0	2.5		
60-64	2.5	284	1.1	0.3	4.7		
Total 15-24 years	5.9	1,419	0.8	4.4	7.4		
Total 15-49 years	6.1	5,128	0.5	5.1	7.0		
Total 15-64 years	5.8	6,044	0.4	4.9	6.6		

Table C.9 Sa	mpling errors: HO	CV prevalence by	age, NAIIS 2018	8	
	Weighted	Unweighted	Standard	Lower confidence	Upper confidence
Age (years)	estimate (%)	number	error (%)	limit (%)	limit (%)
		ΤΟΤΑ	L		
15-19	0.4	1,047	0.2	0.0	0.9
20-24	0.5	1,280	0.2	0.1	0.9
25-29	0.8	1,593	0.2	0.3	1.3
30-34	1.5	1,448	0.5	0.6	2.4
35-39	1.3	1,386	0.4	0.6	2.1
40-44	0.8	1,118	0.4	0.1	1.6
45-49	2.0	811	0.6	0.8	3.2
50-54	3.3	749	0.9	1.6	5.0
55-59	2.0	456	0.8	0.4	3.6
60-64	2.5	551	0.8	0.8	4.2
Total 15-24 years	0.4	2,327	0.2	0.1	0.8
Total 15-49 years	0.9	8,683	0.1	0.6	1.2
Total 15-64 years	1.1	10,439	0.1	0.9	1.4
		MALE	ES		
15-19	0.5	443	0.4	0.0	1.2
20-24	0.6	465	0.4	0.0	1.3
25-29	0.9	605	0.3	0.2	1.6
30-34	1.3	591	0.5	0.3	2.4
35-39	1.5	561	0.5	0.5	2.5
40-44	1.6	485	0.7	0.2	3.0
45-49	1.9	405	0.7	0.4	3.3
50-54	3.1	344	1.1	1.0	5.1
55-59	3.2	229	1.5	0.2	6.3
60-64	2.4	267	1.1	0.2	4.7
Total 15-24 years	0.5	908	0.3	0.0	1.0
Total 15-49 years	1.0	3,555	0.2	0.6	1.4
Total 15-64 years	1.3	4,395	0.2	0.9	1.6
		FEMAI	LES		
15-19	0.3	604	0.3	0.0	1.0
20-24	0.4	815	0.2	0.0	0.7
25-29	0.7	988	0.3	0.1	1.3
30-34	1.7	857	0.7	0.3	3.0
35-39	1.2	825	0.6	0.1	2.3
40-44	0.1	633	0.0	0.0	0.1
45-49	2.1	406	0.9	0.3	3.9
50-54	3.5	405	1.4	0.8	6.2

Table C.9         Sampling errors: HCV prevalence by age, NAIIS 2018 (continued)						
Age (years)	Weighted estimate (%)	Unweighted number	Standard error (%)	Lower confidence limit (%)	Upper confidence limit (%)	
FEMALES						
55-59	0.7	227	0.5	0.0	1.8	
60-64	2.6	284	1.3	0.1	5.0	
Total 15-24 years	0.3	1,419	0.2	0.0	0.7	
Total 15-49 years	0.8	5,128	0.2	0.5	1.1	
Total 15-64 years	1.0	6,044	0.2	0.7	1.3	

### Appendix D

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#### **NAIIS Steering Committee**

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Aremu Damilare Adeniyi, Interviewer 2 AkomoledeAnthonia Iyabode, Counsellor 1 Ewuola Christopher Afolabi, Counsellor 2 Ogunjobi KemisolaMary, Field Laboratorian 1 Adepoju Tosin, Field Laboratorian 2 Bamgbade Bunmi Omotunde, Team Lead Olufemi Olajumoke Adeola, Interviewer 1 Bamiteko Olugbenga Adebanio. Interviewer 2 Gbadamosi Oluwaseun Taibat, Counsellor 1 Babalola Sunday Ezekiel, Counsellor 2 Iyanda Tolulope, Field Laboratorian 1 Nwosu Ifeanyi Joseph, Field Laboratorian 2 North East Zone Igawe Philip Bobu, Team Lead Grace Yila Maikano, Interviewer Adamu Shehu Timta, Interviewer Salisu Hafsat, Counsellor Awu Monica A, Counsellor Musa Mamman, Field Laboratorian MuhammedAdama, Field Laboratorian Ali Joy, Team Lead Aliyu Ja'afar Jafar, Interviewer Alkali Aisha, Interviewer Davo Blessing, Counsellor Danazumi Samaila, Counsellor Ismail Ali Yerima, Field Laboratorian Babaja Rashida, Field Laboratorian Abraham Zirra. Team Lead Mohammed Awwal. Interviewer DavidRuby Gana, Interviewer Lumba Nelson, Counsellor Sani Sylvia, Counsellor Musa Muhammed Sabo, Field Laboratorian Paul Hopson Mbi, Field Laboratorian Chiroma Ali Umar, Team Lead Dauda Ummi Bagari, Interviewer Muhammad Imran Barkindo, Interviewer Danladi Hammari. Counsellor Idris Bashir. Counsellor Audu Umar, Field Laboratorian Peter Dorathy Simon, Field Laboratorian Vahyalla Musa, Team Lead Mohammed Amaturrahman, Interviewer Musa Philip Butu, Interviewer Kauna Daniel, Counsellor Inuwa Amina, Counsellor Abdullahi Bala, Field Laboratorian Jacob Peter, Field Laboratorian Abdulrahman Faiza, Team Lead Aliyu Ruqayya, Interviewer Ibrahim Mustapha Abdulrazak, Interviewer Maikano Malate, Counsellor Gidado Ishaqa A, Counsellor Abubakar Bura Muhammed, Field Laboratorian Danjuma Haruna Bello, Field Laboratorian Dauda Saraya, Team Lead Suleiman Aishatu, Interviewer AhmadZakari Abdullahi, Interviewer Muhammed Abdullahi Magaji, Counsellor Johnson Abraham, Counsellor

Nggada Hyelhare Paul, Field Laboratorian Abdullahi Rabiu, Field Laboratorian Lawal Sulaiman, Team Lead Umar Maimuna Sule, Interviewer Mohammed Ismail, Interviewer liato Monica Odudu, Counsellor Danbade Aliyu Isah, Counsellor Musa Elizabeth Peleba, Field Laboratorian Abubakar Muhammed, Field Laboratorian Magaji Solomon Eziekiel, Team Lead Haruna Mohammed Bose, Interviewer Iliya Zira Sallah, Interviewer Raymond Yoila S. Counsellor Garba Hadiza Ammani, Counsellor Yahaya Alpha, Field Laboratorian Adamu Muhammed, Field Laboratorian Salihu Isa Idris, Team Lead Sunday Benjamin, Interviewer Danfulani Elizabeth Bulus, Interviewer Simon Evelyn, Counsellor Bukar Umar Farouk, Counsellor Abubakar Idris Matinja, Field Laboratorian Sani Ammar, Field Laboratorian Akandiya Job Yarakawa, Team Lead Bello Maryam D, Interviewer Ahmad Baba Mustapha, Interviewer Ibrahim Laraba, Counsellor WaziriBlessing C, Counsellor Abubakar Adamu, Field Laboratorian Abdu Ayuba, Field Laboratorian Yusuf Abdullahi Aliyu, Team Lead Ibrahim Nafisat Kuru, Interviewer Muhammad Tasiu, Interviewer Solomon Sarah Hezekiah, Counsellor Salihu Asiya, Counsellor Ya'u Buhari, Field Laboratorian Usman Abubakar, Field Laboratorian Halima Ahmed. Team Lead Mangey Jarumi, Interviewer Yusuf Zainab, Interviewer Yakubu Amsa Ibrahim, Counsellor Eric Anita, Counsellor Enock Suleiman Bauchi, Field Laboratorian Abba Muh'd Tar, Field Laboratorian Mohammed Maru Mustapha, Team Lead Idi Junaidu, Interviewer Salihu Maryam, Interviewer Abdullahi Aisha, Counsellor Chama Abigail Jessey, Counsellor Muhammed Nafiu Wada, Field Laboratorian Reuben Barkahyel, Field Laboratorian Dauda Shalangwa, Team Lead Salihu Rukayya Sabiya, Interviewer Cletus Tari, Interviewer Sule Ahmed Adaya, Counsellor Suleiman Fanta, Counsellor Sani Ibrahim, Field Laboratorian Maidugu Yusuf Musa, Field Laboratorian Joseph Musa Gurati, Team Lead Tukur Auwal, Interviewer

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Samke Kursiyya, Interviewer BabaRabi Asabe, Counsellor Abdullahi Ramatu, Counsellor Edache Onyeche, Field Laboratorian Lohor Iliva Petlong, Field Laboratorian Ajiboye Motunrayo, Team Lead Tijjani Sekinat, Interviewer Adah Erik Ojonugwa, Interviewer MohammadKolo Chekpa, Counsellor Fakunle Itunu, Counsellor AdajiOtafu Joseph, Field Laboratorian Daniel Nenbammun, Field Laboratorian Oyedeji Olufemi Solomon, Team Lead Nafiu Abdulwahab, Interviewer Mohammed Safiya Adamu, Interviewer Pyop SharonAndrew, Counsellor Shaibu Josephine H., Counsellor Adeleye Bolanle Enitan, Field Laboratorian Nimmak Samuel, Field Laboratorian AdogaRoselineOgenyo, Team Lead Garba Bashir Tahir, Interviewer Ndanusa Halima, Interviewer Michael Victoria, Counsellor MohammedSamira, Counsellor Akor Shedrack Egbunu, Field Laboratorian Musa Simi Priscilla, Field Laboratorian MuhammedAbdullahiUmar, Team Lead Akano Olavinka Evitavo. Interviewer Donli Onyeka Ebiere, Interviewer Aboshin Elizabeth Member, Counsellor Zakari Ruth, Counsellor John Onuche Noah, Field Laboratorian Lawrence Gift, Field Laboratorian Adgidzi EuniceAsheobin, Team Lead Mustapha Olabanji Mohammed, Interviewer Abubakar Asmau Bello, Interviewer Idris Hajara, Counsellor Hosea Victor. Counsellor Bognet VirginiaPhilip, Field Laboratorian Timloh Danjuma Haruna, Field Laboratorian KassimAbdulmuminiMaikudi, Team Lead H Aliyu, Interviewer Musa Rifkatu, Interviewer Dei Jennifer Iverien, Counsellor Ochende John Femi, Counsellor Okpe Rita Ochanya, Field Laboratorian Nimark Maurice, Field Laboratorian DalhatuAhmedMuhammad, Team Lead Ibrahim Yahaya, Interviewer Mustapha Fatimah Wuraola, Interviewer Egwumah Grace Ile, Counsellor UsmanShehuldris, Counsellor OlatunjiAbdulwasiuShola, Field Laboratorian Shedrach Bulus Nghozei, Field Laboratorian Abdullahi Abubakar, Team Lead Isah Idris Tijjani, Interviewer Shehu Hafsat, Interviewer AzuOnyia Blessing, Counsellor Zakari Hauwa, Counsellor Usman Mohammed, Field Laboratorian

KabiruUmar Nuhu, Field Laboratorian Hosle Tangkat, Team Lead Amile Msoo Sara, Interviewer Ibrahim Habiba, Interviewer AbdulahiMohammedWachiko, Counsellor Benson Peace, Counsellor Bolanle Fatima Salaudeen, Field Laboratorian Christopher Namo, Field Laboratorian DuhurLongjiSimon, Team Lead Ramalan Mariam Aliyu, Interviewer Obe Abu, Interviewer Halliday JanetData, Counsellor Akue Theophilus, Counsellor Abah Martha Ejiga, Field Laboratorian Alhassan Yusuf, Field Laboratorian DakumLongjiBenji, Team Lead Ahmed Medinat Abiodun, Interviewer Gofwen Morgan, Interviewer Suleiman Yusuf, Counsellor Ali Adama, Counsellor Riliwan Jamiu, Field Laboratorian Yunana Meshak, Field Laboratorian Dr. DzungweAmos Mvendaga, Team Lead Ephraim Grace, Interviewer Gana MusaAliyu, Interviewer Abdullahi Mansur, Counsellor Adetona Habibat, Counsellor AbidemiBunmi Aiavi, Field Laboratorian TankoRichard M. Field Laboratorian AbdullahiKassim Adams, Team Lead Obioha Christine, Interviewer AhmedIdris, Interviewer MohammedAnas Iliayasu, Counsellor Abubakar Tessy Naomi, Counsellor Manchesterismus Osime, Field Laboratorian UmarAliyu Saleh, Field Laboratorian AbdullahiNasiru, Team Lead AlhassanIbrahim Ibrahim. Interviewer Akpaka Martha, Interviewer Danladi Cathrine Maikasuwa, Counsellor Muhammed Abdulkareem, Counsellor Eze Kelvin, Field Laboratorian ZakouAmadou, Field Laboratorian Omenka AlexAlagi, Team Lead ShuaibuBala, Interviewer Aboje Aladi Victoria, Interviewer Zekeri Roseline Rabi, Counsellor Kitka Manji, Counsellor Habiba Ghazali, Field Laboratorian Haruna Kaburu Hassan, Field Laboratorian Tyotswam Yanmeer Simeone, Team Lead Mohammed Maimuna Katu, Interviewer Abdulkarim Abdulrazak, Interviewer Isa Abubakar, Counsellor Ibrahim Salama K, Counsellor Assumpta Nwankwo, Field Laboratorian Gideon Zam Nunkpan, Field Laboratorian JohnAnthony Tiri, Team Lead Oyelere Yewande Ololade, Interviewer Adamu Aisha Ahmad, Interviewer

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Adamu Mahdi Ahmed, Field Laboratorian Abdurrauf Sani, Field Laboratorian Yusuf Sameer Sanusi, Team Lead Galadimawa Susan, Interviewer Bello Umar Kasarawa, Interviewer Ahmad Ummahanni Atiku, Counsellor Magaji Juma'are Makarfi, Counsellor Zebulon Kennedy, Field Laboratorian Isa Yakubu, Field Laboratorian Abubakar Bilkisu Gulma, Team Lead Saminu Aliyu, Interviewer Muhammad Halisa, Interviewer Tahir Rahama. Counsellor Lawal Naziru, Counsellor Lawal Nazir Habib, Field Laboratorian Firdausi Abubakar, Field Laboratorian Ahmed Rabiu Sambo, Team Lead Johnson Euodias Chat. Counsellor Barau Hassan, Counsellor Biliyaminu Zainab Abdullahi, Interviewer Buhari Abbatti, Interviewer Liti Yahaya, Field Laboratorian Muhammad Umar, Field Laboratorian Julius Jessica Solomon, Team Lead Yunusa Nafisa Bello, Interviewer Halilu Umar Anka, Interviewer Bako Sarah, Counsellor Abdulkadir Nura, Counsellor Ilu Lurwanu. Field Laboratorian Alhassan Yunusa, Field Laboratorian Haruna Yusuf. Team Lead Hassan Suwaiba, Interviewer Yohanna Christiana Rambo, Counsellor Muazu Aminu, Counsellor Ibrahim Inusa, Interviewer Sani Muntari, Field Laboratorian Yusuf Hajara, Field Laboratorian Samaila Kabiru, Team Lead Adam Sunusi Salisu, Counsellor Dalhat Maryam Muazu, Counsellor Tijjani Illyasu, Interviewer Lawal Shamsiya, Interviewer Umaru Samuel, Field Laboratorian Okechukwu Chisom Emmanuel, Field Laboratorian Nasidi Abubakar Said, Team Lead Usman Rabi Muhammed, Interviewer Maida Emmanuel Tajo, Counsellor Ibrahim Zainab Danladi, Counsellor Sa'ad Fatima Abubakar, Interviewer Ibrahim Sani Ahmed, Field Laboratorian Ibrahim Talatu, Field Laboratorian Attahiru Abubakar, Team Lead Lawan Jibrin Muhammed, Interviewer Ibrahim Habiba, Interviewer Sada Aliyu, Counsellor Saminu Shamsiya Usman, Counsellor Paul Precious Awulo, Field Laboratorian Isa Abdulkadir, Field Laboratorian Auwal Aliyu Aliyu, Team Lead Sadig Abubakar Saidu, Interviewer

Usman Hafsat, Interviewer Godwin Emmanuel, Counsellor Jibril Suwaiba, Counsellor Mohammed Abdurrahman, Field Laboratorian Aliyu Abdulkadir, Field Laboratorian

#### South South Zone

Anayo Ozowuba, Zonal Mobilizer Lekia Princewill Eli, State Based Mobilizer Paul Isiugo, State Based Mobilzer Egeni Godspower Ken Anselem, State Based Mobilizer Ibe Agbirigba, Community Mobilizer Hopelyn Ifeoma, Community Mobilizer Jim David, Community Mobilizer Ifeanyi Ogbonda, Community Mobilizer Godspower Mgba, Community Mobilizer Eke Bethel Ikedi, Community Mobilizer Kiikpoye Mark, Community Mobilizer Tenegheni Linus, Community Mobilizer Okorogba Godspower, Community Mobilizer Kaliwana Ali, Community Mobilizer Sogbeye Briggs, Community Mobilizer Clifford Emmanuel, Community Mobilizer Ibiang Efayohobase Ekpo, Community Mobilizer Gold Amachree, Community Mobilizer Adairi Tolofari, Community Mobilizer Dokubo Sogbeba, Community Mobilizer Austin Braide. Community Mobilizer Titi Sunday Goya, Community Mobilizer Llyod Ebenezer, Community Mobilizer Ohalem Smart Emeka, Community Mobilizer Chibundu Uchegbu, Community Mobilizer Tenalo Stephen Bariduanen, Community Mobilizer Acheola Mgbede, Community Mobilizer Barisi-Letam Chibor, Community Mobilizer Te-Erebe Barilugbene Humble, Community Mobilizer Edith Edoghotu John, Community Mobilizer Otobo Dennis. Community Mobilizer Ezechimere Royal Chinedum, Community Mobilizer Anucha Sylvester I., Community Mobilizer Jaja Gabriel Bruce, Community Mobilizer Ananwudi Chukwuma Cyril, Community Mobilizer Manikpo Gibson Epbabari, Community Mobilizer Chinedu Chukwuma, Community Mobilizer Allu Favour Clement, Community Mobilizer Felix Essien Ekandem, State Based Mobilizer Mary Etim Bassey, State Based Mobilizer Emediong D Udon, State Based Mobilizer Anienamakan E. Udo, Community Mobilizer Esifa Joseph, Community Mobilizer Wasinfereke Udoessien, Community Mobilizer Asuquo Effiong Andrew, Community Mobilizer Invang O. Hezekiah, Community Mobilizer Otu Josiah Gebriel, Community Mobilizer Ofonime John Darby, Community Mobilizer Abasiubong J Edet, Community Mobilizer Joseph Ngwonye, Community Mobilizer Blessing Edet Samuel, Community Mobilizer Blessing Ekwere, Community Mobilizer Udofia Itoro Akpan, Community Mobilizer

Uba U Kingsley, Community Mobilizer Gloria Felix Obong, Community Mobilizer Asuguo Essien Isong, Community Mobilizer Mayen Okopide, Community Mobilizer Ekwere Yaknti E., Community Mobilizer David Thompson Atang, Community Mobilizer Blessing D. Udo, Community Mobilizer Elizabeth Ofong Ndah, Community Mobilizer Archibong Usen Okon, Community Mobilizer Emmanuel Udoh, Community Mobilizer Abanuma Linus I, Community Mobilizer Emaediong Cyril, Community Mobilizer Ambrose, Prosperity, Community Mobilizer Nsisong Patrick Ekong, Community Mobilizer Edi-Ubong Umoumoh, Community Mobilizer Idongesit Harry U., Community Mobilizer Janet Nkereuwem Eneokon, Community Mobilizer Idoreyin Felix, Community Mobilizer Ubong Edwin Obot, Community Mobilizer Christiana I. Etim, Community Mobilizer Udeme Michael, Community Mobilizer Ekpo Ignatius Itu, Community Mobilizer Uduak Peter Akpan, Community Mobilizer Utomobong Peter, Community Mobilizer Linus Udoma, Community Mobilizer Mfonobong Smart O., Community Mobilizer Solomon Bassey Ema, Community Mobilizer Egeni Godspower Ken. State Based Mobilizer Tonye Ayamah, State Based Mobilizer Summerset B Kieri, State Based Mobilizer Nelson-Ebimie Rachel Ebiere, State Based Mobilizer Amgbare Clementina, Community Mobilizer Osezuwa Ovonlen, Community Mobilizer Otobo Dennis, Community Mobilizer Dickson Mokison, Community Mobilizer Oguta Seleke-Owei, Community Mobilizer Beauty B. Ozuzu, Community Mobilizer Osumanyi Amina Osman. Community Mobilizer Ombu Henry, Community Mobilizer Aroh Josephine, Community Mobilizer Egbe Ovinpreve, Community Mobilizer Ndiomu Oyinmiebi, Community Mobilizer Emmanuel Oyindoubara, Community Mobilizer Ben-Wakama Ebigoni, Community Mobilizer Patricia Oduh, Community Mobilizer Edodo Christopher, Community Mobilizer Abule Festus, Community Mobilizer Victor Omubo, Community Mobilizer Keremah Walter, Community Mobilizer Awudu Ebibiegbaghe, Community Mobilizer Roseline Ngoka, Community Mobilizer Ofoin Ben, Community Mobilizer Paul Ayibanua, Community Mobilizer Azigere Martins, Community Mobilizer Naibi Ballantyne, Community Mobilizer Ben Lawrence Ekpezu, Community Mobilizer Rose Nwokezi, Community Mobilizer Juliana Agida, Community Mobilizer Sambo Tiemote, Community Mobilizer Igoin A. Azibalamabini, Community Mobilizer

Danbokolo Ayebainaemi, Community Mobilizer Titus Seribo Godspower, Community Mobilizer Kwegbe Adendo, Community Mobilizer Minna Botamarau-Etaremi, Community Mobilizer Chamberlain Fedigha, Community Mobilizer Ifere Obeten. State Based Mobilizer Lawrencia Nseobot, State Based Mobilizer Bassy I. Ibor. State Based Mobilizer Egbe Ebe Ukera, Community Mobilizer Innocent Ojong, Community Mobilizer Christiana Okon, Community Mobilizer Godwin Wonah, Community Mobilizer Umoh Eno. Community Mobilizer Dr. Emmanuel Adaji, Community Mobilizer Maria Ofem Abam, Community Mobilizer Nkoyo Oka, Community Mobilizer Ekong Sylvanus, Community Mobilizer Agbor Martins Okon, Community Mobilizer Ajeh Onen Omenka, Community Mobilizer Mary Erim, Community Mobilizer Ekuri Kingsley Ogar, Community Mobilizer Edith Essi-Animbang, Community Mobilizer Edor Harrison Rebua, Community Mobilizer Owan Emenrecia, Community Mobilizer Justina I. Ashagwu, Community Mobilizer Janet Ubelebi Aniah, Community Mobilizer Patrick Abang, Community Mobilizer Agida Solomon. Community Mobilizer Christiana Kujoh, Community Mobilizer Joseph Okate, Community Mobilizer Kyrian Ushen, Community Mobilizer Priscilla Okuku, Community Mobilizer Catherine Igelle, Community Mobilizer Friday Ogar, Community Mobilizer Dr. Mrs. Ikwo Okpebri, Community Mobilizer Paul Inyang, Community Mobilizer Elemi Alaga, Community Mobilizer Adi Cynthia Aboli. Community Mobilizer Aia Mba. Community Mobilizer Stella Eyo, Community Mobilizer Asuquo Akpama, Community Mobilizer Mary Ekpo Bassey, Community Mobilizer Grace Sifo Obiageli, State Based Mobilizer Eris Ibi, State Based Mobilizer Onowugbeda Esther, State Based Mobilizer Uzoka Emmanuel, Community Mobilizer Okerekutu Daniel Okemute, Community Mobilizer Solace Ugochukwu Uba, Community Mobilizer Ojo Evelyn, Community Mobilizer Rita Owho, Community Mobilizer Dorcas Owhojero, Community Mobilizer Simeon Newton, Community Mobilizer Ojugbo Ogar Augustine, Community Mobilizer Ogbinaka Donatus, Community Mobilizer Momoh Victor, Community Mobilizer Lauretta Onieba, Community Mobilizer Amrete Cynthia, Community Mobilizer Mercy Alakis Awana, Community Mobilizer Nkpo Isaiah Uwa, Community Mobilizer Anthony Nwachukwu, Community Mobilizer

Ezolome Kadiri, Community Mobilizer Andrew Agboro Eseoghene, Community Mobilizer Udjor Augustine, Community Mobilizer Chibueze Sixtus Uchegbu, Community Mobilizer Florish Izibili, Community Mobilizer Johnson Omoni Florence. Community Mobilizer Bridget Kubiangha, Community Mobilizer Helen Lelekumo. Community Mobilizer Nanu Ola Micheal, Community Mobilizer Peter Anighoro, Community Mobilizer Edafe Hitler, Community Mobilizer Nwaeli Chidinma Paschal, Community Mobilizer Evekomogba Grace, Community Mobilizer Seifegha Tare-Out, Community Mobilizer Omokaro Felicia, State Based Mobilizer Israel Owoade, State Based Mobilizer Ukponahiunsi Lawrence, State Based Mobilizer Francis Osayande, Community Mobilizer Gbenoba Nancy Nkem, Community Mobilizer Osamudiamen Igbinoba, Community Mobilizer Eghomwanre Ayere, Community Mobilizer Uwadiae Oboghene, Community Mobilizer Urowayino Omayemi, Community Mobilizer Odigie N. Sandra, Community Mobilizer Irorere Peter, Community Mobilizer Osebhor Juliet, Community Mobilizer Roseline Odiase, Community Mobilizer Abdullateef Bashorun. Community Mobilizer Paul Ovarenua. Community Mobilizer Bartholomew Okondo, Community Mobilizer lyoribhe Michael, Community Mobilizer Esther Enekhor, Community Mobilizer Obasanmi Jude, Community Mobilizer John Odion Unuigbe, Community Mobilizer Kedi Cynthia, Community Mobilizer **Omozee Vivian, Community Mobilizer** Umoru David, Community Mobilizer Haija Aperua Yusuf, Community Mobilizer Kadiri Blessing Brown. Community Mobilizer Shaka Sherifat, Community Mobilizer Ozeigbe Ighodaro, Community Mobilizer Itua Osasunmhen, Community Mobilizer Akpan, Community Guide Friday Udo Isong, Community Guide Chief Akpan Joshua, Community Guide Christian Faith Mission, Community Guide Bassey Edet Aya, Community Guide Edueno Inyang, Community Guide Udesi Udung Okpo, Community Guide Cecilia Peter, Community Guide Francis Nkuda, Community Guide Benjamin Timothy, Community Guide Sunday John Uwe, Community Guide Peter Okon Ekwere, Community Guide Chief Ekidem, Community Guide Oduok, Community Guide Engr Sunday Inyang, Community Guide Chief A U Ukpong, Community Guide Monday Sammy Jacob, Community Guide Uton John Ene, Community Guide

Akpan Dickson Attat, Community Guide Reuben Nkanah Akpan, Community Guide Idem Eld Enefiok, Community Guide Archibong, Community Guide Michael William, Community Guide Joseph Daniel David, Community Guide Edem Eyo, Community Guide Etim Udo Iko Akpabio. Community Guide Chife Anthony Ekpe, Community Guide Emmanuel Edem Okon, Community Guide Chife Bassey Joshua, Community Guide Chife Ezekiel D Akpan, Community Guide Engr Okon M. Umoren, Community Guide Chife Titus Udom, Community Guide Monday Brownson, Community Guide Aniekan Ikpong, Community Guide Sunday Udoekong Akwa, Community Guide Lawrence Udosen, Community Guide Solomon Joshua, Community Guide Justine Edet Jimmy, Community Guide Akpan Job Udobong, Community Guide Jim Jonah Etukudo, Community Guide Efanga Inyang, Community Guide Akpan Asua, Community Guide Godwin Archibong, Community Guide Ekanem Ekanem, Community Guide Chief Edet O Umoren, Community Guide Emmanuel Hanson, Community Guide Paul Okokon, Community Guide Edet Umo Akpan, Community Guide Edem Esa, Community Guide Akpan Umoibe, Community Guide Essiet Umoh, Community Guide Ikot Ekpat, Community Guide Friday Udoette, Community Guide Patrick Dick, Community Guide Dominic Johnson, Community Guide Usoikpong, Community Guide Monday Dick Ntoto, Community Guide Evo Nkanta, Community Guide Chief Okon Udomfu. Community Guide John Akpan Ikonah, Community Guide Chief James Ekwere, Community Guide Dickson Umoh, Community Guide Chief Udo Ntino, Community Guide Chief Sunday Frank, Community Guide Nicholas Kende, Community Guide Bolanle Ebi, Community Guide Barugu O. Utavie, Community Guide Felix Micheal, Community Guide Delipule Alex Peters, Community Guide Promise Otonye Ayamah, Community Guide Dagana Godwin, Community Guide Joy Igoin, Community Guide Kai Bolouzimo, Community Guide Sunday Mgbeke, Community Guide Felicia Yinkore, Community Guide Enos Igoni, Community Guide Sarah Elvin, Community Guide Godknows Assumpta, Community Guide

Azou Wisdom, Community Guide Kosuowei I. Patrick, Community Guide Thomas Awiki, Community Guide Francis Amaitari, Community Guide Bonny Fiezibeya, Community Guide Omokewe Godgift. Community Guide Ugele Kingsley Tumini, Community Guide Golpin Osiki, Community Guide Edolor Hope, Community Guide Ogoinja Oyindoubara, Community Guide Pereladei Gbenefadei, Community Guide Asanaebi Edward, Community Guide Afili Oweilakeme, Community Guide Orhvertakpo Peter, Community Guide Ayibanua A. Oweika, Community Guide Oyobolo Mattew, Community Guide Oyobolo Ebi Clifford, Community Guide Itiedu Pretty, Community Guide Tari Clement, Community Guide Nelson-Ebimie Ayibamiete, Community Guide Omiete Alfred, Community Guide Mark Orlu, Community Guide Ambrose A. George, Community Guide Joel Aprebo, Community Guide Goodluck Don-Solomon, Community Guide Bomo Blessing Serace, Community Guide Omieworio S. Berenengia, Community Guide Omubo Festus Suovo. Community Guide Jane Ifeoma Ifekwe, Community Guide Agnes Inoh, Community Guide Philomena Abubu Onyanga, Community Guide Ndiomu Tamaraebi, Community Guide Samuel Bioduomoye, Community Guide Deigh Minengiyefa, Community Guide Robinson Atonbara, Community Guide Asechemie Eunice Amiebi, Community Guide Naomi Robinson, Community Guide Powedei Debekeme. Community Guide Albeson Francis. Community Guide Suboh Stephen, Community Guide Ogbotimibo Ebimokemini, Community Guide Frank Inatari, Community Guide German Inangonimi, Community Guide Bestman Ogopadei, Community Guide Benjamin Osia, Community Guide Woyinkuro Mattew, Community Guide Ebimuan Opuaye, Community Guide German Inagonimi, Community Guide Sunday I. David, Community Guide Ebimene Osiakeme, Community Guide Ebibotei.D. Egeun, Community Guide Izonfadei Timilaemi, Community Guide Fredrick Suoeri, Community Guide Adokiye Macaulye, Community Guide Horsefal Ibiye Nancy, Community Guide Adiki-Teke Ibibia, Community Guide Mokwunye Chima, Community Guide Emmanuel Godbless Umkpa, Community Guide Coleman Dede, Community Guide Egapekpar Paul, Community Guide

Efere Godknows, Community Guide Koteteh Anyens, Community Guide Benson Azibagiri, Community Guide Azibapu Maclean, Community Guide Rohdric Moses, Community Guide Elekele Larry. Community Guide Eminence Royal Chiamaka, Community Guide Simon Izonfadei. Community Guide Imbazi Denyefa, Community Guide Oniso Inoukiye, Community Guide Ayawari A. Amaebi, Community Guide Abuja Okobokebidei, Community Guide George Thompson, Community Guide Tekeme Emmanuel Oti, Community Guide Oguta Gooday Prince, Community Guide Nemina Dineni Elemobiri, Community Guide Johnson Ebikonrein, Community Guide Cylon Young, Community Guide Maxwell Linus Tam, Community Guide Odubo Ebikeseye, Community Guide Isaac Biakpara, Community Guide Daupade Emmanuel, Community Guide Saviour Rufus, Community Guide Newman Amas, Community Guide Imoro Famous, Community Guide Siboke Preye, Community Guide Ibifiri Okujagu, Community Guide Solomon Anthony E. Community Guide Ezeamaiwe Innocent, Community Guide Odumegwu Amaka, Community Guide Igumbor Waziri, Community Guide Okpali Joseph, Community Guide Nweke Paul, Community Guide Kwuhodu Anthony, Community Guide Pius Chidi, Community Guide Alfred Gebriel O, Community Guide Chikagwai Andrew Jideofor, Community Guide Imafidon Lizzy Nneka. Community Guide Vera Okafor. Community Guide Nsolo Azuka Augustine, Community Guide Okolugbo Ijeoma Christy, Community Guide Odogbo Onyeakaluziam Joseph, Community Guide Omuni Ugochukwu Fred, Community Guide Udeh Emmanuel Chuks, Community Guide Elujekor Endurance Onyekachi, Community Guide Odu Evelyn, Community Guide Eboagwu Happy Nonyelum, Community Guide Rapu Valentine, Community Guide Egonu Emmanuel, Community Guide Adinkwu Evelyn, Community Guide Osokogu Faith Chidinma, Community Guide Anochie Nwayobuije, Community Guide Onyenike Romanus Emeka, Community Guide Sunday Osogbue, Community Guide Ngozi Udome, Community Guide Echi Sunday C, Community Guide Ochor Robert Chika, Community Guide Ogodu Ngozi Caro, Community Guide Opia Gabriel, Community Guide Daniel Miller, Community Guide

Ochuko Odudu, Community Guide Julius Ederiene, Community Guide Adogbeji Ochuko, Community Guide Ebah Esther Akpor, Community Guide Ozuem Collins, Community Guide Caroline Usikpede. Community Guide Christmas Joseph, Community Guide Gabriel Prince Esiere. Community Guide Oghenerhoro Onoriode Lucky, Community Guide Faith Akitikori, Community Guide Daniel Avwomakpa, Community Guide Friday Jewo, Community Guide Atamometa Godstime, Community Guide Blessing Ogbodu, Community Guide Ngwu Desmond, Community Guide Igba Ejime Edith, Community Guide Eziomedafe J Josephine, Community Guide Ewono Azino, Community Guide Omozue Dennis, Community Guide Okeri Sunday, Community Guide Igorigo Emamuzo, Community Guide Clifford Efekodo, Community Guide Felicia Waripouador, Community Guide Oshare Pius, Community Guide Ayede Emmanuel, Community Guide Jede Geofrey, Community Guide Chovwe Ejiroseejay Jent, Community Guide Alakis Victor. Community Guide Alika Osajie Chuks, Community Guide Atanometa Elijah, Community Guide Ogbesor Nurat, Community Guide Idubor Safra, Community Guide Deborah Favour, Community Guide Egwerhide Samson, Community Guide Edewor Egedegbe, Community Guide Uvo Cynthia Owede, Community Guide Voke Ighorodie, Community Guide Kene Andrew Aondona. Community Guide Everusi John E., Community Guide Oghenetega Richard, Community Guide Daniel Okpolor, Community Guide Ovwa J. Aghogho, Community Guide Mathew Abu, Community Guide Agatha Bloy, Community Guide Izibili Sylvester, Community Guide Agbeyiwa David, Community Guide Omatsogunwa Toritse, Community Guide Justina Eki, Community Guide Audu Onome Esther, Community Guide Okirika Julie, Community Guide Olayinka Johnson, Community Guide Sene God'spower, Community Guide Lyon Akpode Amaju, Community Guide Isaac Ogalula, Community Guide Omare Rita, Community Guide Agu Timi Priscilia, Community Guide Anighoro Irene Erhuvwu, Community Guide Marian Oke, Community Guide Oghenechovwe Alero, Community Guide Winner Aganbi, Community Guide

Doghor Roy E., Community Guide Oyibo Christy E., Community Guide Okoro Happy, Community Guide Oyeyemi Ibojoh Tennison, Community Guide Iroupade W. Morzimor, Community Guide Adighoro Pere, Community Guide Willie Goodluck, Community Guide Uwaiegre Justice Obukohwo, Community Guide Anthony Tare, Community Guide Ebiwarebo Lucky Oyinkepre, Community Guide Grace Obakina, Community Guide Ogbeide Collins, Community Guide Loveth Emovon, Community Guide Joshua Aisiriuwa, Community Guide Amos Oviasu, Community Guide Efosa Igbinedion, Community Guide Ozougwu Chinelo Marian, Community Guide Lawani Deborah Imenfan, Community Guide Nosa Odelevbo, Community Guide Prince Ogwu, Community Guide Gbenoba Patricia Okwudili, Community Guide Eganbor Frederick, Community Guide Moses Omoregie Ugbo, Community Guide Olukayode Ajayi, Community Guide Edobor Michael, Community Guide Ogbomwan George, Community Guide Daniel Osagie Arnold, Community Guide Edobor Michael, Community Guide Edobor Michael, Community Guide Joseph Ameosa, Community Guide Oyadele Sunday, Community Guide Ngozi Monday, Community Guide Agagha Poweite Endurance, Community Guide Odeh Faith, Community Guide Michael Enofe Osawoname, Community Guide Christopher Ekhator, Community Guide Aghafekokhian Samuel, Community Guide Pst. Michael Amagbakhen, Community Guide Chinedu Okunbor Benard, Community Guide William Akpede, Community Guide Ifioma Johnbull. Community Guide Afesumen Peace, Community Guide Aigbodion Queen, Community Guide Uanserume Stephen, Community Guide Agidigbi Rebecca, Community Guide Momodu Yakubu, Community Guide Monday Saeedlar Umar, Community Guide Aigbokhai Edeki, Community Guide Aimuan Osamudiamen, Community Guide Oyamhenda Thursday Osazuwa, Community Guide Aigbosare Omoyemwen Loveth, Community Guide Onwugbenu Calistus E., Community Guide Uwadiae Elisha Uyi, Community Guide Chris Aigbovoriuwa, Community Guide Edoja Kennedy E., Community Guide Osiogwe Ilegogie, Community Guide Igho Grace, Community Guide Blessing Uwadiae, Community Guide Jonathan Okpere Ehigie, Community Guide Osonokwu Blessing, Community Guide

Udi Christabel, Community Guide Kelvin Osemwegie, Community Guide Damiro Richard, Community Guide Adewumi Richmond Lawrence, Community Guide Olashipo Friday, Community Guide Roland Aiveiina. Community Guide Paul Christiana Olu, Community Guide Isaac Sunday. Community Guide Ajiboye Daniel Idowu, Community Guide Ogah Vincent, Community Guide Kelimat Iyamah, Community Guide Ikerodah Nefisat, Community Guide Rukayetu Garuba, Community Guide Alao Zekeri, Community Guide Subedat Braimah, Community Guide Idowu Dauda, Community Guide Okotie S. Shiabu, Community Guide Momodu Oshioayemheya, Community Guide Amodu Ibrahim Mustapha, Community Guide Samuel Omoh Sado, Community Guide Oboh Abdulazeez, Community Guide Idris Musa Afegbua, Community Guide Sunday Magdaline Omoti, Community Guide Salufu Bose, Community Guide Imion Gift, Community Guide Augustine Okojie, Community Guide Odion Peter, Community Guide Nathaniel Atoel. Community Guide Eigbejiale A. Abel, Community Guide Akhuemhonkhan Obokhalufoh Racheal, Community Guide Enohuean Itihan Lucia, Community Guide Eigbedion Alexendar E., Community Guide Solomon Osimhen, Community Guide Lucky Jonathan, Community Guide Peter Idemudia, Community Guide Oliha Cyrril, Community Guide Ehimhen Lawrence, Community Guide Esene Osev0mon Fancis. Community Guide Igene A. Morison, Community Guide Ikekhuamen Feguson, Community Guide Uwoghiren Blessing Osariemen, Community Guide Edogun Ehimwwenma Strphanie, Community Guide Esohe Valentino O., Community Guide Aifuwa Samson, Community Guide Edigin H. Oghogho, Community Guide Osazomwangie Ogida Roland, Community Guide Lori Joshua, Community Guide Mike Osakue, Community Guide Osemwengie Alexander, Community Guide Osunde Osazee, Community Guide Abel Osatohanmwen Iyamu, Community Guide Okunghae Henry, Community Guide Ehkhator Jeffrey Enoyose, Community Guide Uhunmwangho Nosa Abeieve, Community Guide Onyenma Loveday H., Community Guide Nweke Chuks, Community Guide Isioma Joan Oknonkwo, Community Guide Eleta Anslem, Community Guide Theresa Izeogu, Community Guide Victor Otutu, Community Guide

Charles Chukwuma, Community Guide Maduabuchukwu Nwabueze, Community Guide Ugochukwu Wogbo, Community Guide Prince Chile Igbokwu, Community Guide Samuel Dick, Community Guide Onua Chinvere. Community Guide Wilson Gift, Community Guide Frank Chigba, Community Guide Eric Victor Godspower, Community Guide Nwaugha Okechukwu, Community Guide Nworgu Onyedikachi Prince, Community Guide Njoku Prince Udo, Community Guide Chinedu G. Nwankwo, Community Guide Nwala A. Amadi, Community Guide Friday San-Nen, Community Guide Cletus Bakor Mbari, Community Guide Zormuu Christopher, Community Guide Barinaagbaalo-Op Monsi, Community Guide Kinanee Taanadee, Community Guide Ogunka Nnamdi Kelvin, Community Guide John Ogbongbo, Community Guide Ene C. Iringe, Community Guide Benjamin Godgift, Community Guide Goodluck Tamunotoku, Community Guide Ateke Sunday, Community Guide Edmund Banigo, Community Guide Adiki Ibibia John, Community Guide Stephen Chimezie Owiriwa, Community Guide Amgbaduba Daniel, Community Guide Isreal W. Agbirigba, Community Guide Denebari Ndaadaa Uzu, Community Guide Nzene Monday Lebete, Community Guide Emenike Chineme Cyril, Community Guide Brown Karapiribo-Ofori, Community Guide Sofeipirim F. Hart, Community Guide Appolus Matthew, Community Guide West Oluji Obeta, Community Guide Agbara Cyril Isaac, Community Guide Gomba Godspower, Community Guide Awa Susan Adamimi, Community Guide Elewa Fynah Ogoma, Community Guide Chukwu E. Sunday, Community Guide Wokeh Cyril Ikechi, Community Guide Boma Obeg, Community Guide Danlo Ayebaemi Goodluck, Community Guide Worlu F. Okocha, Community Guide Ichebadu Echem, Community Guide Sunny Odum, Community Guide Maxwell Amadi, Community Guide Oscar Karibi Siminialayi Jaja, Community Guide Jaja Emmanuel Bruce, Community Guide Rogers Ibibo, Community Guide Osimaa P. Whyte, Community Guide Ebenezer Dango Johnson, Community Guide West Alabo, Community Guide Maxwell Irisoanga Sekibo, Community Guide Lilian Otugbo, Community Guide Dokibo Albert, Community Guide Pst. Jeremial I. Bulongo, Community Guide Johnpaul Woruka, Community Guide

Edith Edoghotu John, Community Guide Jonathan Sunday, Community Guide Emeh Kenneth, Community Guide Chinedu Francis, Community Guide Ordukwu Ozoemenam, Community Guide Promis Ibuchim Nlemogu, Community Guide Justice H. Woke-Kinika, Community Guide Acholonu Gift Onumbu. Community Guide Diepreye West, Community Guide Akonta Ediyekio, Community Guide Theresa Cotterell, Community Guide West Biokpo T.S., Community Guide Tekena Dapper, Community Guide Iderefama Braide, Community Guide Tubobelem Humphrey, Community Guide Syder Odwanivi Daniel, Community Guide Epow-Swei Sunday Soloman, Community Guide Ubulom Loveday James, Community Guide Herbert Isreal Herbert, Community Guide Usende Festus E, Community Guide Ogbidor Crowther, Community Guide Achugo Goddey Jackson, Community Guide Uwame Chima Samuel, Community Guide Ijah Uwhetu Godspower, Community Guide Willie Godbless, Community Guide Owobe Onyekwere, Community Guide Elo Imiete, Community Guide Ezekiel Ake Joseph. Community Guide Ismeal Suotor, Community Guide Wariboko Bright, Community Guide David Mercy, Community Guide Etire Okinaye, Community Guide Nwidoobee Wole, Community Guide Deesor Napiogi, Community Guide Nwikonzor Menekor Prince, Community Guide Igereh Paul Nwidum, Community Guide Aborlo Promise Ndoni, Community Guide David Tambari, Community Guide Okit E. Emmanuel. Community Guide Asuguo E. Emmanuel, Community Guide Sunday O. Saimon, Community Guide Iferi Donatus Oyamo, Community Guide Eno Cosmos Tom, Community Guide Charles Archine, Community Guide Offiong F. Ephraim, Community Guide Samuel E. Offiong, Community Guide Eyo Patrick Ene, Community Guide Offiong E. Bassey, Community Guide Okon Eyo Essien, Community Guide Esther Eyo, Community Guide Dorathy Ene, Community Guide Offiong A. Ita, Community Guide Patrick O., Community Guide Enyong Valentine, Community Guide Roselineline Udofot, Community Guide Uduak Okon, Community Guide Samuel T. Inyang (Ete Iwaat), Community Guide Margaret Umo Umo, Community Guide Ene Edet Okon, Community Guide Okon Asuquo Okon, Community Guide

Invene Edem, Community Guide Patience Bassey Eyong, Community Guide Roland Ubi, Community Guide Ayei Sylvester Eni, Community Guide Usang Effiom Eteng, Community Guide Affiong Sunday Edet, Community Guide Wofai Ofem Egom, Community Guide Ibor Ofem Bassey, Community Guide Maria Amon, Community Guide Joseph Emmanuel, Community Guide Ekpong Natty, Community Guide Ivali Solomon, Community Guide Mary John. Community Guide Raphael Neji, Community Guide Eyam Ntun Eyam, Community Guide Takon Nsed, Community Guide Simon Arop, Community Guide Ayeiamon O. Omenka, Community Guide Nkim Ojong Nsan, Community Guide Cyril Ewu Okpa, Community Guide Augustine Eka Mathew, Community Guide Emmanuel Agbor Ojong, Community Guide Owan Patrick A., Community Guide Anthony Obi, Community Guide Awo Righteous, Community Guide Otu Kenneth, Community Guide Philips Abang, Community Guide Clifford Ofre Kekong, Community Guide Donald Tiku, Community Guide Ijoko O. Emmanuel, Community Guide James O. Emeka, Community Guide Oko David Agabi, Community Guide Ogar Timothy I., Community Guide Mary Gaga, Community Guide Stephen Ashep, Community Guide Cecilia Aruku, Community Guide Joseph Ndifon, Community Guide David Obi. Community Guide Patrick Agida, Community Guide Simon Okpe, Community Guide Julianbenita Ogar, Community Guide Emmanuel Odey, Community Guide Abugbe Undiandeye, Community Guide Robert Ashie, Community Guide Philip Ekwetiong, Community Guide Wisdom Libeh, Community Guide Emmanuel Kayang, Community Guide Boniface Abia, Community Guide Christopher Akebke, Community Guide Abru Augustine, Community Guide David Ogomade, Community Guide Okwori Oko, Community Guide Odey Atukpa, Community Guide Odey Otegu, Community Guide Emmanuel Ebiale, Community Guide James Egede, Community Guide Kingsley Bassey, Community Guide Angela, Community Guide Effiong Holmes, Community Guide Umoh Uwakmfon, Community Guide

Jesam Bassey, Community Guide Pastor Sunny Nkanu, Community Guide Akama Sam, Community Guide Emeh Ekoro Ekpoto, Community Guide Epoto Henry, Community Guide Fanny. Community Guide Lawrence Slot Onang, Community Guide Envi Urom. Community Guide Erom Uno, Community Guide Prince Effiong Ekpenyong, Community Guide Moses Aniefiok James, Community Guide Innocent Ugunanim Ekpo, Community Guide Nyong Ekpo Nyong, Community Guide Rosemary Effiom, Community Guide Obo Effiom, Community Guide Samuel Nya Okon, Community Guide Gabriel Okon, Community Guide Victor Eyibio Nteri, Community Guide South East Zone

Osinachi Dim, Zonal Mobilizer Onwuka Edith Nkechi, Zonal Mobilizer & State Based Mobilizer Okeke Johnbosco Nkemdilim, State Based Mobilizer Rejoice Oluchi U, State Based Mobilizer Okafor Nkiruka Juliana, Community Mobilizer Ementa Edmond Emeka, Community Mobilizer Obiekwe Stella Ngozi, Community Mobilizer Ikenna Onyekachukwu Awgu, Community Mobilizer Aduba Niideka Amalachukwu. Community Mobilizer Bernard I L, Community Mobilizer Obeche Ifeanyi, Community Mobilizer Onwuka Chiamaka Stella, Community Mobilizer Okeke Charles Obinna, Community Mobilizer Peter Chukwuweike Okolie, Community Mobilizer Christiana Ozuah Obiageli, Community Mobilizer Nwaboh Mirian Azuka, Community Mobilizer Chiezie N G Chiezie, Community Mobilizer Okoye Nkiru, Community Mobilizer Ogu Caroline Nkechi, Community Mobilizer Nweke Justina Chinvere, Community Mobilizer Ewuzie Jennifer Chinelo, Community Mobilizer Umegbolu Gladys Onvemaechi, Community Mobilizer Onwujiobi Andrew Ekenedirichukwu, Community Mobilizer Ikeh Alphonsus Uwamezezie, Community Mobilizer Okolo Kingsley C, Community Mobilizer Enemo Rebecca, Community Mobilizer Obagha Onyedika Harrison, Community Mobilizer Onuora Mary Florentina (Rev. Sr.), Community Mobilizer Nduka Roseann Amaka, Community Mobilizer Nnubia Vero Oluchi, Community Mobilizer Ezeibe L.I., Community Mobilizer Okafor Modestus, State Based Mobilizer Ezurike Edwin Okey, State Based Mobilizer Abanobi Felix Chinwe P., State Based Mobilizer Mgborogwu Ijeoma, Community Mobilizer Ezurike Maryann, Community Mobilizer E Gbuka Festus, Community Mobilizer Orji Bettel Ikechukwu, Community Mobilizer Ikenna Pamela C, Community Mobilizer Amadi Anthony, Community Mobilizer Benneth Colette, Community Mobilizer

Ikealugbu Nneka, Community Mobilizer Okezie Juliana, Community Mobilizer Okafor Vivian, Community Mobilizer Amadi Matthew, Community Mobilizer Echeobina Adaku, Community Mobilizer Ihekarie Samuel, Community Mobilizer Ugochukwu Caroline, Community Mobilizer Arodiwe Victor, Community Mobilizer Nnamdi Bridget, Community Mobilizer Onyeagba Goodness, Community Mobilizer Njioku Chioma, Community Mobilizer Akamadu Ngozi, Community Mobilizer Ozims Stella, Community Mobilizer Onwuliri Paschal, Community Mobilizer Osueke Johnson, Community Mobilizer Admike Caroline, Community Mobilizer Agor Mary, Community Mobilizer Nwaorgu Assumpta, Community Mobilizer Amadi Clara, Community Mobilizer Iwuji Benedette, Community Mobilizer Onwuama Henrietta, Community Mobilizer Nzepume Ikechukwu C, Community Mobilizer Mary Ann Ezurike, Community Mobilizer Okorie Esther, Community Mobilizer Amadi Anthony, Community Mobilizer Ejiofor Clementina, Community Mobilizer Maureen Obih, Community Mobilizer Chieke Christian. Community Mobilizer Okolo Chidimma, Community Mobilizer Mkpuma Victor O, State Based Mobilizer Nwali Benson O, State Based Mobilizer Ibiam Azu Agwu, State Based Mobilizer Vincent Uma, Community Mobilizer Sampson Nweke, Community Mobilizer Elom Isaac, Community Mobilizer Onyinye Oyudo, Community Mobilizer Abara Blessing, Community Mobilizer Mba Kate, Community Mobilizer Chima Emmanuel, Community Mobilizer Geradine Nweke, Community Mobilizer Nwafor Chukwunonso, Community Mobilizer Ogodo Arinze, Community Mobilizer Onwe Ubaka W., Community Mobilizer Ayoyo Uchenna, Community Mobilizer Josphin Chukwu N., Community Mobilizer Simeon Obiya, Community Mobilizer Inyimagu Joseph, Community Mobilizer Emma Nworie, Community Mobilizer Darlington Okwudili N., Community Mobilizer Clement Ogodo, Community Mobilizer Nweke Nebechi, Community Mobilizer Inya Emeka, Community Mobilizer Odah Ruth, Community Mobilizer Ikpor Nkechinyere, Community Mobilizer Oji Onyinyechi, Community Mobilizer Orji Ikechukwu, Community Mobilizer Elijah O. Uduma, Community Mobilizer Okike Felicia, Community Mobilizer Orji Theophilus, Community Mobilizer Emmanuel Ayowuo, Community Mobilizer

Uneke Christiana, Community Mobilizer Ekwe Francis, Community Mobilizer Elebe Elizabeth, Community Mobilizer Kalu Gold N., Community Mobilizer Rev. Jonathan Emenikeh, State Based Mobilizer John Ife Aiogwu. State Based Mobilizer Eze Martina Onuabuchi, State Based Mobilizer Mercy N Ezema, Community Mobilizer Eze Franklyn Onyekachukwu, Community Mobilizer Rita Ngozi Nwafor, Community Mobilizer Nwafor Onyebuchi M, Community Mobilizer Ezeoma Sylvanus Okechukwu, Community Mobilizer Onah Nkiruka Francisca, Community Mobilizer Aninwonye Patience Chinenye, Community Mobilizer Sunday Samuel Okonkwo, Community Mobilizer Eze Fidelia Ndidiamaka, Community Mobilizer Ugwoke Nkeiruka Cynthia, Community Mobilizer Emmanuel Umeh Okafor, Community Mobilizer Onwuka Alfreda, Community Mobilizer Ugwu Georgina Ifeoma, Community Mobilizer Vivtor Onwura Nwagbo, Community Mobilizer Onuora Scholastica Ifeyinwa, Community Mobilizer Igwe Innocent, Community Mobilizer Nzekwe Stella Ifeyinwa, Community Mobilizer Esomchi Humphrey, Community Mobilizer Egwuagu Jude Okechukwu, Community Mobilizer Sampson Eze, Community Mobilizer Ene Sabina Ozoemena. Community Mobilizer Ogene Chiesonu Justina, Community Mobilizer Nnajiofor Cyril Osondu, Community Mobilizer Agbo Jude Obiorah, Community Mobilizer Ugwu Joy Anulika, Community Mobilizer Blessing O Onyema, Community Mobilizer Beatrice Ngozi Egu, Community Mobilizer Ugwu Charity Onyedika, Community Mobilizer Meniru Hamilton Chidozie, Community Mobilizer Ndie Grace Ngozichukwuka, Community Mobilizer Amadi Babian Ufuoma, Community Mobilizer Offiah Ephraim Junior. Community Mobilizer Adama Josephine Obioma, Community Mobilizer Violet Ezenwali, Community Mobilizer Okoroafor Chineme Cynthia, State Based Mobilizer Samson Ugochukwu Joseph, State Based Mobilizer Joseph I. Anosike, State Based Mobilizer Ekeoma Chigozie Akidi, State Based Mobilizer Kigsely Okoro, Community Mobilizer Anosike Michael, Community Mobilizer Uloma Onwuso, Community Mobilizer Florence Agwu, Community Mobilizer Emilia Arisa, Community Mobilizer Chukwuma Nwabuko, Community Mobilizer Emilia Imaga, Community Mobilizer Ogbonne Okorie, Community Mobilizer Chinedu Nduke Uduma, Community Mobilizer Ochu Kalu, Community Mobilizer Uche Eni, Community Mobilizer Uchechi Oleka, Community Mobilizer Ihueze Joy, Community Mobilizer Lucky Meregini, Community Mobilizer ljeoma Obasi, Community Mobilizer

Kelechi Orji, Community Mobilizer Nkemjika Nneji, Community Mobilizer Ijeoma Okoro, Community Mobilizer Chioma Ehiemere, Community Mobilizer Paul Cherechi, Community Mobilizer Kalu Ihudiva Thelma. Community Mobilizer Happiness Adugba, Community Mobilizer Maduka Rita. Community Mobilizer Ejim Ndukwe, Community Mobilizer Ifeanyi Chimeze, Community Mobilizer Cynthia Emeonye, Community Mobilizer Ann Chioma Eze, Community Mobilizer Obasinta Caroline, Community Mobilizer Hope Onwumelu, Community Mobilizer Okpokiri Nkeiru, Community Mobilizer Onyeka Princewill Okorie, Community Mobilizer Chimezie Salvation, Community Mobilizer Ukoha-Eze Joy I, Community Mobilizer Patience Ekekwe, Community Mobilizer Precious Njoku, Community Mobilizer Rachael Alaribe, Community Mobilizer Onyeka Eze, Community Guide Nwofoe Joseph, Community Guide Nwora Ebere, Community Guide Nwosu Innocent, Community Guide Nwajiaku Emma, Community Guide Theo Nwangwu, Community Guide Arinze Ugochukwu, Community Guide Nwakwo Chidozie, Community Guide Ifeoma Okafor, Community Guide Obi Onura Lucky, Community Guide Ifeakandu Umechukwu, Community Guide Mgbakaogu Benjamin, Community Guide Egbuchiem Chiamaka, Community Guide Orachusi Ngozi, Community Guide Agabakoba Richard, Community Guide Olisa Morah, Community Guide Okechukwu Johnson, Community Guide Ezenwanne Chizoba. Community Guide Nwazuluigbo Innocent, Community Guide Cletus Elemuo, Community Guide Ozoh Christopher, Community Guide Lawerence Kene Okeke, Community Guide Nwosu Charles, Community Guide Nwokoye Eziekel, Community Guide Obanaka Jude, Community Guide Emeka Okezie, Community Guide Okoye Christian, Community Guide Ositadimma Okechukwu, Community Guide Ubong Sunday, Community Guide Okoye Kenechukwu, Community Guide Uchechukwu Kingsley O., Community Guide Agada Onu, Community Guide Obiagulu Mugosiobo, Community Guide Nliam Ifeanyi, Community Guide Godwin Ikem, Community Guide Mbaneme Chukwudi, Community Guide Bona Nwosu, Community Guide Prince Okwelogu A., Community Guide Obidiegu Diamain, Community Guide

Ambrose Obimo, Community Guide Ifejiaka Chiwado, Community Guide Ekwunife Ifesinachi, Community Guide Okechukwu Iloanya, Community Guide Aniekwe Ewello, Community Guide Chinvere Onvekwelu, Community Guide Hon. Julius Uchekwe, Community Guide Chinedu Anene. Community Guide Hon. Basil Ateli, Community Guide Anayo Nwajide, Community Guide Iloani Mattew, Community Guide Anagor Chizoba, Community Guide Okafor Samuel, Community Guide Vincent Nwasike, Community Guide Odigbo Peter, Community Guide Orefo William, Community Guide Muokwe Onuorah, Community Guide Amara Okeke, Community Guide Anthony Chukwudube, Community Guide Ibekwe Josaih, Community Guide Ezeamama Patirck, Community Guide Agagwo Fransis, Community Guide Nwadinaobi Chika, Community Guide Chikwu Benarad, Community Guide Onumonu Lazerus, Community Guide Onyemechi Oraegbunam, Community Guide Uju Ugochukwu, Community Guide Emengini Nwankwo B., Community Guide Shederake Ifeaku, Community Guide Pual Akaosa, Community Guide Patrick Udeze, Community Guide Godwin Oraguih, Community Guide Ezeanowai Chigozie, Community Guide Obi Sunday, Community Guide Ofoma Sunday, Community Guide Eme Okonkwo, Community Guide Chidiebele Chikwueloka, Community Guide Okechukwu Celment, Community Guide Nnaemeka Chinedu, Community Guide Ekwenze Nnemeka, Community Guide Gibriel Ibekwe. Community Guide Ude Ngozi, Community Guide Ani Ikechukwu, Community Guide Aniekwe Chukwuebuka, Community Guide Okafor Sunday, Community Guide Paschal Godfery, Community Guide Odina Peter, Community Guide Okonkwo Ngozi Joy, Community Guide Eto, Community Guide Luke Ezeji, Community Guide Nweke Sunday, Community Guide Ifezue Jerimaih, Community Guide Onuwa Obiaesie, Community Guide Ezeagha Daniel, Community Guide Beatirice Okonkwo, Community Guide Mbanefo Ideh, Community Guide Christian Opala, Community Guide Okoye John, Community Guide Anowai Rapheal, Community Guide Emma Ihekwaba Emma, Community Guide

Peter Chukwudi, Community Guide Chidiebere Iwuchukwu, Community Guide Nwoko Christopher, Community Guide Nwosu Malachi, Community Guide Ugwumba Onwulili, Community Guide Gabriel Osuagwu, Community Guide Vi Aguecheta, Community Guide Chukwuma Edmond, Community Guide Onwuzurike Ugochukwu, Community Guide Sampson Amaechi, Community Guide Chidiebere Uzoamaka, Community Guide Gadriel Ottih, Community Guide Raymond Ogbuji, Community Guide Okeukwu Ruth, Community Guide Ononikpo Nkiruka, Community Guide Adaku Ojimba, Community Guide Ekereonyeonwu Joy, Community Guide Benjamin Noduru, Community Guide Uzoukwu Chinyere, Community Guide Eric Egeruo, Community Guide Joseph Okoro, Community Guide Christian Onuoha, Community Guide Chibuzo Oguoro, Community Guide Hellen Duru, Community Guide Rapheal Mba, Community Guide Livinus Anyakudo, Community Guide Juliana Iwuanyanwu, Community Guide Onumegbu Gregory, Community Guide Grace Ahuchi, Community Guide Peter Ijeoma, Community Guide Onwudiwe Kelechi, Community Guide Chidozie Anyanwu, Community Guide Igbo Cyril, Community Guide Obinna Okani, Community Guide Chima Ekweremba, Community Guide Ikwo Flavin, Community Guide Onugha Jideofor, Community Guide Cliford Nwanoke. Community Guide Samuel Okonkwo. Community Guide Purity Nnamdi, Community Guide Ogochi Dike, Community Guide Chibuike Ohueokpu, Community Guide Eboh Uwaezoke, Community Guide Charity Umezurike, Community Guide Justice Nnaihu, Community Guide Mbagwu Calista, Community Guide Felix Ekezie, Community Guide Davidson Oguebuka, Community Guide Samuel Onyego, Community Guide Grace Anyelle, Community Guide Chukwudi Ihejrika, Community Guide Agujiobi Charles, Community Guide Unegbu Jonah, Community Guide Ebele Chukwuma, Community Guide Chukwuebuka Echeta, Community Guide Ogbonna Mercy, Community Guide Nnasiri Magreth, Community Guide Iwueke Samuel, Community Guide Iheanaeho Aloysius, Community Guide Ozuruigbo Chinasa, Community Guide

Ann Emeh, Community Guide Nkiru Nwaribeaku, Community Guide Mike Ajagwuuno, Community Guide Inno Obiejiofor, Community Guide Damian Emeruo, Community Guide Odu Habert. Community Guide Chukwu Christian, Community Guide Nwamuo Ben. Community Guide Uchenna Ayoha, Community Guide Opara Rapheal, Community Guide Ugochukwu Chidi, Community Guide Osuagwu Casimir, Community Guide Adiukwu Happiness, Community Guide Ejim Madu, Community Guide Chukwuebuka Hyginus, Community Guide Anyanwu Augustina, Community Guide Magnus Okolo, Community Guide Chinwe Stanley, Community Guide Iwunze Eucharia, Community Guide Nwaogu Samuel, Community Guide Julieth Chinyere, Community Guide Anumadu Faith, Community Guide Mgborogwu Emmanuel, Community Guide Onwumere Anthony, Community Guide Vincent Nwokocha, Community Guide Obaji Nnamdi, Community Guide Daniel Ugo, Community Guide Raymond Nkwocha, Community Guide Opara Ejike, Community Guide Oparaiwu Francisca, Community Guide Bright Ajoku, Community Guide Roseline Agor, Community Guide Innoma Maduagwu, Community Guide Mr. Alex Nwaozuzu, Community Guide Godwin Ubughu, Community Guide Ebuka Godwin, Community Guide Cecilia Egbonu, Community Guide Thaddeus Asiegbu, Community Guide Rita Odume. Community Guide Ndubuisi Ogechi, Community Guide Duru Jude, Community Guide Ukazu Fortunatus, Community Guide Ikechukwu Nwifuru, Community Guide Vincent Nwege, Community Guide Chukwuka, Community Guide Francis Nwogha, Community Guide Victor Nwigube, Community Guide Prince Hycienth Alieze, Community Guide Patrick Okoye, Community Guide Okoche Ugwu, Community Guide Ekuma Emmanuel, Community Guide Uche Ken Akwuba, Community Guide Gabriel O. Amadi, Community Guide Oko Michael Anwara, Community Guide Uche Nicholas, Community Guide Joseph O. Uwa, Community Guide Ude Livinus Oko, Community Guide Ogbonnaya Ukpai Okoro, Community Guide John Igwe Jack, Community Guide Janet Eseni Ama, Community Guide

Orji Chukwu, Community Guide Ude Nnachi Azuenya, Community Guide Kalu Udu, Community Guide Ugochukwu Nwokpuru, Community Guide Ogbanya John, Community Guide Nworie Chibueze. Community Guide Nwodom Okechukwu Daniel, Community Guide Mbam Chukwuma, Community Guide Achu Kingsley, Community Guide John Nwochi, Community Guide Nwafor Williams, Community Guide Eze Paul, Community Guide Nwamkpu Timothy, Community Guide Nwali Jeremaiah, Community Guide Nwali Ijeoma, Community Guide Eze Patrick, Community Guide Uguru Victor Onvemaechi, Community Guide Chukwu Linda, Community Guide Igboke Vincent N., Community Guide Igwe Joseph Chukwudi, Community Guide Otubo Elijah, Community Guide Ogbaga Sunday, Community Guide Edukwu Anayochukwu N., Community Guide Chukwuma Mbam, Community Guide Sunday Nwali, Community Guide James Eleke, Community Guide Nwoku Chinenye, Community Guide Sunday Nweke, Community Guide Nwali Friday Ekwueme, Community Guide Aligbo Cletus, Community Guide Eze Ejike, Community Guide Vincent Omoha, Community Guide Oguji Kingsley, Community Guide Chinasa Nnaji, Community Guide Usulor Sunday, Community Guide Obioma Emmanuel, Community Guide Peter Onwe, Community Guide Oke Chukwuma Joseph, Community Guide Aia Boniface. Community Guide Tony Dickson, Community Guide Ajah John Chibuike, Community Guide Joshua Obasi, Community Guide Michael Onyinyechi, Community Guide Nwibo Nwachi Ogbonna, Community Guide Utazi Simeon, Community Guide Jude Nwogha, Community Guide Nwibo Michael, Community Guide Angel Pius, Community Guide Alieze Ugochukwu, Community Guide Nwankwoagu Harrison, Community Guide Ogodo Hycient, Community Guide Sunday Nkwuda, Community Guide Okemini Felix, Community Guide Innocent Nwogha, Community Guide Chukwu Okoro, Community Guide Isaiah Chukwu, Community Guide Ogbonna Ugbana, Community Guide Benjamin Okereke, Community Guide Nsude Anoke, Community Guide Ndudi Kenechi, Community Guide

Ogbonnaya Nwafor, Community Guide Chibueze Emmanuel, Community Guide Ome Chukwuemeka, Community Guide Ajima James, Community Guide Ugadu Innocent, Community Guide Ituma John. Community Guide Ituma James Ubochi, Community Guide Anvigor Esther, Community Guide Nwanga Esther, Community Guide Ikechukwu Nwokpor, Community Guide Sunday Ndubuisi, Community Guide Sunday Amos, Community Guide Abel Nome. Community Guide Clement Orie, Community Guide Pius Chukwu, Community Guide Uchechukwu Ogbonnaya, Community Guide Chinedu Okoro, Community Guide Paulinus Onyemaechi, Community Guide Igwe Ifeanyi Nweke, Community Guide Nnamdi Ineke, Community Guide Ameh Paul & Daniel, Community Guide Eze Stella, Community Guide Omeh Chukwudi, Community Guide Ajibo Chika, Community Guide Chizoba Eze, Community Guide Ejike Onoh, Community Guide Odoh Oliver, Community Guide Okechukwu Michael, Community Guide Omeh Emmanuel, Community Guide Usman Ikedichukwu Eze, Community Guide Eze Josephine (Mama Ike), Community Guide Okeke Moses, Community Guide Eugene Idoko, Community Guide Okpe Ambrose, Community Guide Boniface Eze, Community Guide Egwu Kenneth, Community Guide Eze Jude, Community Guide Chidozie Julliet Chisom. Community Guide Nnamchi Allovsius. Community Guide Dominic Odo, Community Guide Enoch Ugwu, Community Guide Odo Emmanuel, Community Guide Pius Nnaji, Community Guide Ugwuoju Bethrand, Community Guide Ozioma Ezugwu, Community Guide Ezugwu Mathias, Community Guide Chinemerem, Community Guide Emeka, Community Guide Ukpazi Sunday, Community Guide Odo Thomas, Community Guide Ibiam Thomas, Community Guide Ajibo Joseph, Community Guide Emeka Omeje, Community Guide Nnah Kelvin, Community Guide Ozotta Alfred, Community Guide Onyishi Fidelis, Community Guide Afam Odo, Community Guide Ezeugwu Kelvin, Community Guide Sunday Eze, Community Guide Ezeugwu Kingsley (Otega), Community Guide

Hyacinth Oluku, Community Guide Ikechukwu Cletus Ifeanyi, Community Guide Ekwueme Sylvernus Okafor, Community Guide Chioma Okongwu, Community Guide Chidera Nebokike, Community Guide Akwusie Uche. Community Guide Adolphus Ani, Community Guide Ephraim Madubueze, Community Guide Mathias Ojukwu, Community Guide Engr. Chris Ojoto, Community Guide Anthony Ene (Warrior), Community Guide Aniagbo Purity, Community Guide Innocent, Community Guide Hon. Aniekwe Kananyochukwu I., Community Guide Ezeabia Cyril, Community Guide Azuka Amalinze, Community Guide Monday & Chibueze, Community Guide Chibuzo Nnam, Community Guide Michael Ugwumba, Community Guide Ogbu Ikechukwu, Community Guide Fredrick Nweke, Community Guide Ebere Ani, Community Guide Emmanuel Nweke, Community Guide Ani Ifeanyi, Community Guide Johnson Onyibo, Community Guide Ugomma Egeonu, Community Guide Ani Maureen, Community Guide Onvia Maureen. Community Guide Chinenye Obute, Community Guide Madu Ijeoma, Community Guide Chidere Celestina, Community Guide Desmond Ogbozulu, Community Guide Adaora Ugwuede, Community Guide Ngwu Chukwuebuka, Community Guide Eze Chinenye, Community Guide Solomon Nweke, Community Guide Ene Josephine, Community Guide Aniugwu Allovsius. Community Guide Nnam Chijioke S. Community Guide Ikechukwu Ede, Community Guide Nwobodo Chukwuma. Community Guide Uchenna Chukwuokoh, Community Guide Igbokwe Kenneth, Community Guide Mbamalu Felix, Community Guide Ani Emmanuel, Community Guide Ogbomma Peter, Community Guide Chidi Owoene, Community Guide Okafor Chikamso, Community Guide Zeluwa Onuoha, Community Guide Ibe Kenneth, Community Guide Joseph Ezie, Community Guide Ume Anuo Darlington, Community Guide Francis Onwuaji, Community Guide Obiekpo China, Community Guide Onyeka Ikechukwu, Community Guide Chidubem Jonah, Community Guide Ijeoma Omenazu, Community Guide Elder Onyenweaku C, Community Guide Merit Anaba, Community Guide Uguru Ejere, Community Guide

Chukwu Orji, Community Guide John Chukwu, Community Guide Amarachi Ikwegbu Mary, Community Guide Agwu Ogbu Ukoji, Community Guide Prince Uduma Uka, Community Guide Odo City. Community Guide Collins Chidi, Community Guide Chinaza Nwachukwu. Community Guide Marvelous Ekpendu, Community Guide Uzoma Nwauzor, Community Guide Eze Ogbonna, Community Guide Chief Loveday Emmanuel, Community Guide Benjamin Chile, Community Guide Prince Godwin Njoku, Community Guide Owuala Azubike, Community Guide Prince Uzoma Asonye, Community Guide Apia Okoroafor, Community Guide Amos Okore, Community Guide Okkore Nwankwo Ifi, Community Guide Ajunwa Ihuoma U, Community Guide Dickson Orji, Community Guide Nnenna Agwu, Community Guide Orieji Nmong, Community Guide Micheal Orji Ogudu, Community Guide Stanley Oriaku, Community Guide Teddy, Ogbonna, Community Guide Nandu Chima, Community Guide Collins Chucks. Community Guide Ogbonna Nwadiobi, Community Guide Ekwuribe Ejike, Community Guide Igwe Endurance, Community Guide Nwakama Arthur, Community Guide Enyinnaya Alilionwu, Community Guide Chief Okezie Nwaogu, Community Guide Chief Chinatu Nwosu, Community Guide Deacon Uche Festus, Community Guide Emeka Ugwumba, Community Guide Anavo Ukaumunna. Community Guide Emeka Alozie. Community Guide Izuchukwu Ida, Community Guide Chima Anthony, Community Guide Uche Mary, Community Guide Pst. Abraham Promise, Community Guide Obinna Awazie, Community Guide Ndubuisi Mgbeahuru, Community Guide Uloma Nwala, Community Guide Naomi Friday, Community Guide Bright Ezigbo, Community Guide Chigozie Nze, Community Guide Okafor Emmanuel, Community Guide Godwin, Community Guide Ikechukwu Ukeje, Community Guide Emeka Ihedinma, Community Guide Nwandire Ogumbuaja, Community Guide Samuel Otuonye, Community Guide Osundu Chukwuemeka, Community Guide James Ogbonna A, Community Guide Nwosu Basil, Community Guide Love Kanu, Community Guide Ugoeze Egege, Community Guide

Rutherford Eluwa, Community Guide Christopher Nteh, Community Guide Chief Chigbu Odimuko, Community Guide Ubabuoke Nwosu, Community Guide Ikechukwu Amaike, Community Guide Nwaogu Friday, Community Guide Chisom Sunday, Community Guide Joel Obioma Osondu. Community Guide Akpam Abara, Community Guide Osundu Chukwuemeka, Community Guide Orji Joseph, Community Guide Chimere Uka, Community Guide Ibeabuchi Luke Ngozi, Community Guide Chukwudi Ogu, Community Guide Chief Peter Nwogwugwu, Community Guide Edmond Isaac I, Community Guide Maduforo Gaius, Community Guide Chief Nwaeze Ukaumunna, Community Guide Nwadiala Dike, Community Guide Saturday Ogbonna, Community Guide Gift Ubani, Community Guide Gold Ikechi, Community Guide Anne Nwanne, Community Guide Ogechi Geoffery, Community Guide Isreal Izuogu, Community Guide Micheal Ogbonna, Community Guide Amarachi Ogbonnaya, Community Guide Esther John. Community Guide Rita Nwachukwu, Community Guide Obi Chigozie, Community Guide Anugbo F. U., Community Guide Igbo Joyce, Community Guide Nwakama Okugbua, Community Guide Ikechukwu Ahamba, Community Guide Ako Nwakama, Community Guide Chinwendu John, Community Guide South West Zone Dr. Olubunmi Avinde, Zonal Mobilizer

Ekundavo Olaiumoke Kemi. State Based Mobilizer Ajayi Oluwabaigbe Remi, State Based Mobilizer Aderonke Adefolaju, State Based Mobilizer Oladunjoye Taiwo Elizabeth, State Based Mobilizer Babatunde, Community Mobilizer Temitope Adesuyi, Community Mobilizer Mercy Oluwatoyin Olotu, Community Mobilizer Abiodun T Ayinde, Community Mobilizer Oluwabukola Adedeji, Community Mobilizer Owoeye Ronke Ajoke, Community Mobilizer Fabunmi Elizabeth Bukola, Community Mobilizer Florence Yemisi Ajiboye, Community Mobilizer Love Ogundipe, Community Mobilizer Stella Ireti Aluko, Community Mobilizer Abraham Fagbemi, Community Mobilizer Dada Dupe Tunde, Community Mobilizer Kayode Owoso, Community Mobilizer Adeyemi Stephanie Ajumobi, Community Mobilizer Mohammed Ismaila, Community Mobilizer Fasusi Felicia Adeleye, Community Mobilizer Akomolafe Elijah Olukayode, Community Mobilizer Ilesanmi Bosede Veronica, Community Mobilizer

Adeola Patricia Olayinka, Community Mobilizer Mrs. Dorcas Olubukola Oladiipo, Community Mobilizer Mrs. Florence Adebayo Olabisi, Community Mobilizer Overinde Toluwase Funke, Community Mobilizer Oluwumiju Kikelomo, Community Mobilizer Mrfaieminigba David, Community Mobilizer Mrs. Adewemimo Tolulope A, Community Mobilizer Mr. Idowu Olasunkanmi Timothy. Community Mobilizer Mrs. Adalumo Comfort Abeke, Community Mobilizer Mrs. Adeniyi Oluwatoyin, Community Mobilizer Fagbohun Itunu, Community Mobilizer Ogunsakin Anike Sanmi, Community Mobilizer Agwuagha Chinyere Elechi, Community Mobilizer Akinola Eunice, Community Mobilizer Jumoke Ayoade, Community Mobilizer Bukola Ajayi, State Based Mobilizer Ilawole Olubunmi, State Based Mobilizer Sulaimon Rasaq Adegboyega, State Based Mobilizer Usman Abdul Waheed, State Based Mobilizer Hon. Aladeyelu Azeez Adebayo, State Based Mobilizer Orolugbagbe Modupe, Community Mobilizer Kajola Abiodun Mujidat, Community Mobilizer Awodumila Dupe Stella, Community Mobilizer Animasaun Teslim Akorode, Community Mobilizer Finnih Oluwatoyin Adenike, Community Mobilizer Ayinde Mudashiru Bolaji, Community Mobilizer Sanni-Afolabi Olanike Rashidat, Community Mobilizer liaoba Nurudeen Babatunde. Community Mobilizer Seriki Basirat M, Community Mobilizer Fadipe Olayinka Sarat, Community Mobilizer Fatunbi-Lawal Falali Oluwatoyin, Community Mobilizer Olarinde Titilayo, Community Mobilizer Kowiu-Kazeem Patricia Aderemi, Community Mobilizer Akinwunmi Omodele Olatunji, Community Mobilizer Alao Tawakalitu Adejoke, Community Mobilizer Ogunyemi O. Taiwo, Community Mobilizer Olaoye Charles S, Community Mobilizer Durowoju Temilola Christianah, Community Mobilizer Odufuve Adedavo, Community Mobilizer Ahmed Ogundipe M.F, Community Mobilizer Adevemi Zainab Romoke. Community Mobilizer Ekerin Adebukola Lateefat, Community Mobilizer Usman Balikis Olaide, Community Mobilizer Okeowo Shakirat Titilope, Community Mobilizer Wakilat Muhammad, Community Mobilizer Airat Dupeola Kolawole, Community Mobilizer Olawole Abiola O., Community Mobilizer Francisco Feyinfolu, Community Mobilizer Elizabeth Olapeju, Community Mobilizer Fakunle Temitope Luk An, Community Mobilizer Adepeju Adebimpe Raji, Community Mobilizer Folami Adenike Oluwaranti, Community Mobilizer Ochowechi Vincent, Community Mobilizer Alao Tawakalitu Adejoke, Community Mobilizer Akinterinwa Temitope, Community Mobilizer Badejo Ireti, Community Mobilizer Honfor Grace Adesola, Community Mobilizer Japhet Chinedu, Community Mobilizer Olushola-Jimoh Tolulope Adebanke, State Based Mobilizer Oladele Folasade Adeseun, State Based Mobilizer

Ogunkunle Titilade, State Based Mobilizer Adio Olusegun, Community Mobilizer Tunde Onajonwo, Community Mobilizer Onifadeenitan, Community Mobilizer Ibrahim B.I., Community Mobilizer Adebisi Tovin. Community Mobilizer Femi Olubisi, Community Mobilizer Olorunfemioluwakayode, Community Mobilizer Oguntona Remi, Community Mobilizer Gidado Kehinde Yusuff, Community Mobilizer Dare Adaramoye, Community Mobilizer Shotonwa-Roagess O.M, Community Mobilizer Adelakun Adeniyi, Community Mobilizer Mayowa Adeyemi, Community Mobilizer Taiwo Abioye, Community Mobilizer Oladeji Adenike, Community Mobilizer Akinrin Adetosin, Community Mobilizer Titi Ajibola, Community Mobilizer Ayomo Folakemi, Community Mobilizer Bolanle-Ojoo Tope, Community Mobilizer Moses Adedokun, Community Mobilizer Owolabi Funmilayo, Community Mobilizer Joseph Ejekere, Community Mobilizer Olaniran Sarah, Community Mobilizer Okesina Adebare, Community Mobilizer Ogunrinde D.A., Community Mobilizer Babalola Florence, Community Mobilizer Salami O.O., Community Mobilizer Wale Akanbi, Community Mobilizer Adetoye Funmilayo, Community Mobilizer Olutayo Adisa, Community Mobilizer Alawode Oluwatoyinwunmi, Community Mobilizer Adedeji R.A., Community Mobilizer Fatoki Helen, Community Mobilizer Ogunlade Victoria, Community Mobilizer Adegoke A.T., Community Mobilizer Ojeladedaniel Taiwo, Community Mobilizer Adeleke R.O., Community Mobilizer Bola Olarenwaiu. Community Mobilizer Titilola Rotimi, Community Mobilizer Sunday Olaniyi Adeniyi, Community Mobilizer Tajudeenadetunji, Community Mobilizer Ipadeola Rasheed Lasun, Community Mobilizer Salawudeennurat, Community Mobilizer Adedeji Iyabo Nike, Community Mobilizer Shaibu Olajire, Community Mobilizer Olawunmi Adeyinka, Community Mobilizer Uteno Pauline, Community Mobilizer Babalola Motunrayo Kudirat, State Based Mobilizer Ayanniyi Temidayo, State Based Mobilizer Bolanle Durosomo, State Based Mobilizer Ayantayo Bilikisu Temitope, Community Mobilizer Fagbemi Olaronke K, Community Mobilizer Agemo Margaret Ruth, Community Mobilizer Dasaolu Oluwakemi O., Community Mobilizer Bisiriyu Felicia Abosede, Community Mobilizer Osunfowora Bolanle R., Community Mobilizer Mustapha Mariam M., Community Mobilizer Lawal Olajumoke Monsurat., Community Mobilizer Adeniji Olufunke Elizabeth, Community Mobilizer

Oyekan Ogundeji C.B., Community Mobilizer Gbadamosi Rafiat, Community Mobilizer Adesina Olusesan Temitoe, Community Mobilizer Tomori Olawunmi, Community Mobilizer Abiodunabiodun A., Community Mobilizer Aito Adeioke Olubunmi, Community Mobilizer Opeoluwa Yetunde Veronica, Community Mobilizer Adesoga Oluwakemi Victoria.. Community Mobilizer Mosudi Omolara Risikat, Community Mobilizer Sokoya Bosede Esther, Community Mobilizer Adekola Adebola Tanwa, Community Mobilizer Amusan Gideon Adepegba, Community Mobilizer Soyinka Abosede Oluwakemi, Community Mobilizer Ajibade Oluwaseun, Community Mobilizer Rome Shadrack Olaoluwa., Community Mobilizer Aregbesola Sixtus Moore, Community Mobilizer Adeogun Modupeola Oluwatoyin, Community Mobilizer Funmilayo A. Hassan, Community Mobilizer Agboola Oladoyin, Community Mobilizer Ayomide Oluwatosin, Community Mobilizer Olusanya Toyin, Community Mobilizer Shoniran Hafiz Olanrewaju, Community Mobilizer Babalola Olalekan Sunday, Community Mobilizer Opaleye Jones Olumuyiwa, Community Mobilizer Popoola Faidat Abiodun, Community Mobilizer Okediran Abiola Monsurat, Community Mobilizer Samson Toluwalope Banjo, Community Mobilizer Aiilore Olusegun Johnson, State Based Mobilizer Oyelere Bukola Esther, State Based Mobilizer Adeleke Kazeem Adeyinka, State Based Mobilizer Mr. Adeniran Adegoke, Community Mobilizer Oyeniran A.A., Community Mobilizer Oladunmoye B.I., Community Mobilizer Omotomilola Kayode, Community Mobilizer Fala R.O., Community Mobilizer Yusuf Ganiyat, Community Mobilizer Obajemu F.A., Community Mobilizer Taiwo A.A. Community Mobilizer Oroleve G.A., Community Mobilizer Oladele Sikiru, Community Mobilizer Adebayo B.S., Community Mobilizer Haleem L.O., Community Mobilizer Fabiyi E.A., Community Mobilizer Bamidele C.B., Community Mobilizer Ajibike E.O., Community Mobilizer Fakokunde, Community Mobilizer Ojuola O.L., Community Mobilizer Akinloye, Community Mobilizer Adedapo Kemi, Community Mobilizer Dosumu K., Community Mobilizer Opesetan C.A, Community Mobilizer Olaniyi, Community Mobilizer Adewale Aliyat O, Community Mobilizer Mr. Ademola Adebisi, Community Mobilizer Olufemi Oyeremi, Community Mobilizer Banji Oladipo, Community Mobilizer Ololade Osunfisan, Community Mobilizer Monsurat Oluwakemi, Community Mobilizer Orolakin Adetoro Yahaya, Community Mobilizer Omoyele Oluwaseun Omotola, Community Mobilizer

Olatunde Ajayi, Community Mobilizer Sadugba Tolulope Abosede, Community Mobilizer Mercy Awojobi, Community Mobilizer Odewole Clement, Community Mobilizer Oladipo Olawumi Yetunde, Community Mobilizer Falave Ovevemi, Community Mobilizer Olanrewaju Ojo, Community Mobilizer Akintola Olumide Tobi, Community Mobilizer Ogunlusi Abiola Felix, Community Mobilizer Benjamen Fadiji, Community Mobilizer Akinrelere F. Joyce, State Based Mobilizer Akomolafe Pius, State Based Mobilizer Falokun Rosemary Oludolapo, State Based Mobilizer Momoh B. A., Community Mobilizer Smart V.O., Community Mobilizer Awe F. D., Community Mobilizer Dr. Adegeye Solomon A, Community Mobilizer Olowo F. O., Community Mobilizer Kehinde Victoria, Community Mobilizer Salami Lateef, Community Mobilizer Alo M O, Community Mobilizer Faleyeoluwakemi C, Community Mobilizer Adekunle Ademola, Community Mobilizer Oride Olusola, Community Mobilizer Adelusi Olayinka, Community Mobilizer Letimisobijo, Community Mobilizer Metbemu Edi-Olu E., Community Mobilizer Adenuove G. O., Community Mobilizer Ademoyegun M.M, Community Mobilizer Adewole O. F., Community Mobilizer Oluwadarefemisola, Community Mobilizer Dunapo C. S., Community Mobilizer Edema Omowaire Victoria, Community Mobilizer Omotehinseifeniye R, Community Mobilizer Adegbite G. A., Community Mobilizer Akinniranyeakintade, Community Mobilizer Adekugbe Olavinka, Community Mobilizer Akaniishamsudeen, Community Mobilizer Olagundove B. K., Community Mobilizer Akinola Clement, Community Mobilizer Fasawe T. A., Community Mobilizer Koledoye Ayokunle, Community Mobilizer Asogbon S. D., Community Mobilizer Oluwatuyi G. O., Community Mobilizer Anjorin Cecilia B., Community Mobilizer Highest Eloho Yvonne, Community Mobilizer Akinwande Mayowa, Community Mobilizer Sam-Omoolorun, Community Mobilizer Coker Felicia, Community Mobilizer Adelegan Mary, Community Mobilizer Adewumi Modupe, Community Mobilizer Akinkunmi Olusegun Adisa, Community Guide Oluwaseyi Samuel Akinlabi, Community Guide Uthman Abdulrahman Olalekan, Community Guide Ajiboye Taofeek Adesina, Community Guide Adisa John Gbadebo, Community Guide Samuel Oyetunji, Community Guide Gbadamosi Jelili, Community Guide Olawale Owolabi, Community Guide Musiliu Kareem, Community Guide

Ojetola Ojerinde, Community Guide Rafiu Ajani Lamidi, Community Guide Shamsudeen Abdulsalam, Community Guide Nafiu Moruff Kehinde, Community Guide Overogba Joshua, Community Guide Arivin Godpower, Community Guide Olagunju, Olatunde Ayomide, Community Guide Rasidat Dasola Muritala. Community Guide Lasekan Johnson Joshua, Community Guide Eniola James Idowu, Community Guide Babatunde Alarape Ade, Community Guide Gbadegesin Johnson Bolaji, Community Guide Safiu Kolapo Akinleye, Community Guide Adebiyi Tosin Oluwawumi, Community Guide Olufemi Dada, Community Guide Mohammed Muritala, Community Guide Yusuff R O, Community Guide Adelere Taiwo Odunola, Community Guide Sulyman Mufutau, Community Guide Rahman Diediea Jimoh, Community Guide Jimoh Oguniyi Alabi, Community Guide Olujide Solomon Ogunshola, Community Guide Kamorudeen Hammed Gbolahan, Community Guide Ganiyu Aremu, Community Guide Rasaq Babatunde Lasisi, Community Guide Oke Sarafa Ayeke, Community Guide Kehinde George Ogunlade, Community Guide Adeagbo Oluwatavo Abiodun, Community Guide Rasheed A Oladeio. Community Guide Olanrewaju Saheed Turayo, Community Guide Adebola Bukola Mary, Community Guide Mukaila Ishola Oduola, Community Guide Adegoke David Oladeji, Community Guide Oluwasola Olasunka Sotanmide, Community Guide Abdulsalaam Abdu Fatai Idowu, Community Guide Remi Irefin, Community Guide Ajayi Elizabeth Temilade, Community Guide Salau Afees Bavonle. Community Guide Azeez, Mutairu Babatunde, Community Guide Aderoju Adegoke Isiaka, Community Guide Timileyin Sodig Olapade, Community Guide Abiola Idris Akinsoji, Community Guide Azeez Akeem Babatunde, Community Guide Oladimeji Olayinka Sulaiman, Community Guide Giwa, Olalekan Muideen, Community Guide Daramola Lasisi Oladipupo, Community Guide Oludare Olawoyin Afolabi, Community Guide Ogunola Korede, Community Guide Tijani Olaide Ismail, Community Guide Fasasi Quadri Bamidele, Community Guide Aderibigbe Afeez Olooto, Community Guide Azeez Kabiru Adekunle, Community Guide Titilayo Yemi Matthew, Community Guide Yekeen Dauda Abiodun, Community Guide Emmanuel Muraina Alade, Community Guide Fabamise Y. Racheal, Community Guide Adeoye Ismaila Abiodun, Community Guide Odekunle Kudirat Igbehinadun, Community Guide Muhideen O. Mamud, Community Guide Kamoldeen Alao Ishola, Community Guide

Akano Oluwatobi Ayodeji, Community Guide Ajayi Hammed Kolawole, Community Guide Bolatito Bolaji Tawa, Community Guide Kayode Lawrence Adenrele, Community Guide Amidu Ramoni Solademi, Community Guide Balogun Soliu Ivanda, Community Guide Funke Dorcas Atanda, Community Guide Abdullateef Olagbenro, Community Guide Tijani Jiamiu Adetunji, Community Guide Ganiyu Ademola Tajudeen, Community Guide Quadri Adeneye Olalekan, Community Guide Ganiyu Semiu Omotayo, Community Guide Olayinka Olatunbosun Sofowora, Community Guide Ogunleke Motunrayo, Community Guide Yakubu Bello Adisa, Community Guide Tawakalitu Iyabo Abdulrafiu, Community Guide Mukthar Ishola Issa, Community Guide Tajudeen Akeem, Community Guide Gbolahan Taiwo Aderemi, Community Guide Kayode Seyi Adegboyega, Community Guide Adepoju Dauda Adetunji, Community Guide Nurudeen Adisa Kareem, Community Guide Bakare Alani Hassan, Community Guide Afolabi Asaa, Community Guide Adeyeye Abel Ayoola, Community Guide Eyinade Johnson Adebayo, Community Guide Musibau Olosho, Community Guide Oiedele Felicia Olaiumoke. Community Guide Salami Babatunde Mukaila, Community Guide Tajudeen Akinkunmi Olayiwola, Community Guide Yunusa Alaji Busari, Community Guide Ashimolowo Mikisu Akande, Community Guide Temitayo Salewa Asamu, Community Guide Adeniyi Abdulahi Ayodeji, Community Guide Adebayo A. Ezekiel, Community Guide Temitope Beatrice Oyegoke, Community Guide Oluwatosin Abayomi Popoola, Community Guide Akande Yetunde Omolade. Community Guide Alalade Oluwaseun Adekemi. Community Guide Ogundeji Obadebo Olasunkanmi, Community Guide Abolanle Jinadu, Community Guide Alimi Adijat Olubukonla, Community Guide Asenaike Adeola Omotayo, Community Guide Saidi Olalekan Samson, Community Guide Opeyemi Esther Bantefa, Community Guide Emmanuel Olayinka Olatunde, Community Guide Yakub Temitope Adijat, Community Guide Shobule Hannah Olayinka, Community Guide Ashade Jamiu Ajani, Community Guide Musibau A Kareem, Community Guide Ariyo Adeoye, Community Guide Onayemi John Olumide, Community Guide Hassan Adewale Jamiu, Community Guide Ajani Afeez Femi, Community Guide Akinsanya Olaniyi, Community Guide Manasseh Osunkoya, Community Guide Jegede Taiwo Damilola, Community Guide Balikisu Fasina, Community Guide Adelakun Gbemi Mathew, Community Guide Bello Nurudeen Ajao, Community Guide

Adenike Safiat Sadig, Community Guide Omowunmi Funmilayo Ogunyemi, Community Guide Akindele Milikat Afolashade, Community Guide Tobi Joseph Akineyin, Community Guide Ogundipe Suleman, Community Guide Muda Oluwatunmise A. Community Guide Sherif Olamilekan Raheem, Community Guide Ekungba Olubunmi M. Community Guide Ogunyemi Oluwa Shola, Community Guide Oseni Toyin Remileku, Community Guide Hammed Olayinka Yusuf, Community Guide Owodunni Sodeeg Olalekan, Community Guide Bankole Tunde Emmanuel, Community Guide Abayomi Elizabeth Aderoju, Community Guide Ayoade Towobola Ogundeji, Community Guide Babatunde Fatima Enitan, Community Guide Adetona Adedeji, Community Guide Olajide Amos Akanji, Community Guide Babatunde Oshola, Community Guide Mary Ochuko Unuarara, Community Guide Amusa Rasidat Temitope, Community Guide Sotola Segun, Community Guide Ogunyinka Arike Tayo, Community Guide Akinbami Akintayo, Community Guide Solola Oluwaseun Aina, Community Guide Olutola Idowu Jolly, Community Guide Ali Nafiu, Community Guide Oluwasola M. Seriki. Community Guide Akanji Lukman Ajasa, Community Guide Olakanmi Olumide, Community Guide Babalola Sulaimon Olayinka, Community Guide Fausat Laide Kilani, Community Guide Shodiya Omolara Funmilayo, Community Guide Dawood Bamidele Saheed, Community Guide Ominike Sikiru Olaoluwa, Community Guide Olaleye Hezekiah Oluwakunle, Community Guide Aina O O, Community Guide Oietola Olanrewaiu Akanni, Community Guide Amusan Oluwole Omotunde. Community Guide Olatumise Oladimeji Aikulola, Community Guide Avodeji Abiodun Ipave, Community Guide Matonmi Dauda Olasunkanmi, Community Guide Lawal Olayinka Jubreel, Community Guide Odebunmi Oluwabunmi, Community Guide Ajao Omowumi Funke, Community Guide Babatunde Willaims, Community Guide Oladipo Oluwatosin Emmanuel, Community Guide Oyewole Adenike, Community Guide Rauf Abosede Tope, Community Guide Abubakare, Lekan Hameed, Community Guide Amusan Michael Alao, Community Guide Ezekiel Olabimtan, Community Guide Fatata Mulero, Community Guide Arioye Abolaji Monsurat, Community Guide Adelayi Yemi Adenike, Community Guide Francis Ahisu Joseph, Community Guide Segun Nugboyon Zannu, Community Guide Fanu Abidemi, Community Guide Johoachim Adeola Adewale, Community Guide Amosun Peter Nupo, Community Guide

Okusanya Bamidele Olufemi, Community Guide Odunyemi Bukanla Omitogun, Community Guide Ogunyombo Mujidat Oluwaseun, Community Guide Idowu Adewumi, Community Guide Adeigbe Aishat Omowunmi, Community Guide Sulaimon Gani Adekunle. Community Guide Ajah Mercy Favour, Community Guide Rasheedat Temitope Osivemi, Community Guide Fatai Adeshina Olusanya, Community Guide Idris A Aruna, Community Guide Adetola Oyindamola Omotomiwa, Community Guide Odusanya Olalekan O, Community Guide Olufemi A Adenuga, Community Guide Fati Olusola Iyabo, Community Guide Habeebat Eniola Hussein, Community Guide Saidi Olalekan Samson, Community Guide Ovejide Temitope Akinleye, Community Guide Obaleye Gabriel Oluwatosin, Community Guide Nojeeb Sulaimon Ololade, Community Guide Zohirah Adedamola Adediran, Community Guide Olufemi Kolawole Gbenga, Community Guide Deji Apalowo, Community Guide Alli-Balogun Olamilekan Tajudeen, Community Guide Olayiwola Basirat Tanwa, Community Guide Ipadeola Opeyemi Rachael, Community Guide Mary Adedoyin Abayomi, Community Guide Seun Bamidele, Community Guide Munirudeen Samurat Aioke, Community Guide Qulzeem Abiodun Olaide, Community Guide Tajudeen Onaolapo Jayeola, Community Guide Odeleye Omolola, Community Guide Ogundapo Sesan Stephen, Community Guide Sefiat Aina Oladapo, Community Guide Oyegoke M Boladale, Community Guide Muhammad Saminu Okutagidi, Community Guide Adeniran Unice Kehinde, Community Guide Dairo Oreoluwa Ayobami, Community Guide Oladele Julius Olalekan. Community Guide Gideon Oluwaseun Odebode. Community Guide Abiodun Bukola Oyebamji, Community Guide Ibukun Funmilokun Adepoiu, Community Guide Halimat Ikeade Adewole, Community Guide Yusuff Motunrayo Afusat, Community Guide Oladipupo Tajudeen Lekan, Community Guide Adewumi Toyin Asifat, Community Guide Olalude Abdullahi Akangbe, Community Guide Abayomi Philip Olatoye, Community Guide Adeola Esther Folorunso, Community Guide Folasade Maryam Adewoyin, Community Guide Omolade Idowu Adetunji, Community Guide Ayeni Eunice Abiola, Community Guide Ajayi Helen Kemi, Community Guide Awodele Lydia Toyin, Community Guide Musibau Adebowale Abdulmumeen, Community Guide Adiatu Musiliyu Alade, Community Guide Ojeniran Funmilola Jaye, Community Guide Sanjo Sunday Eladiya, Community Guide Abioye Olaleye Noah, Community Guide Omilegbe Olaspo, Community Guide Owolabi Ronke, Community Guide

Akangbe Akinbowale Oluropo, Community Guide Abiodun Olafewa Atewogbola, Community Guide Ajiteru Mary, Community Guide Omotomilola Blessing, Community Guide Ovewole Adenike Ayobami, Community Guide Oni Folorunsho Olakunle. Community Guide Aderibigbe Folorunso Etaoko, Community Guide Kehinde Sefiu Adeagbo, Community Guide Omosangba Oluwaseun Omotola, Community Guide Akintunde Akeem Omoniyi, Community Guide Ogunlade J T, Community Guide Akanbi Imoleoluwa Oyekunle, Community Guide Bushra Fausat, Community Guide Dada Sunday Michael, Community Guide Ayoola Florence Bosede, Community Guide Ogunremi P O, Community Guide Muideen Latifat Aduke, Community Guide Akinbiyi Adebola Solomon, Community Guide Olatoye Hannah Abosede, Community Guide Adebisi Maru Tope, Community Guide Adefeyiju Oluwaponmile Gabriel, Community Guide Adewale Musibau Salawudeen, Community Guide Rabiu Lateef Abefe, Community Guide Tiamiyu Adewunmi M, Community Guide Oyekunle Adebayo Oluwole, Community Guide Oyewole Abiodun Sikiru, Community Guide Kayode Anuoluwapo Bogunjoko, Community Guide Alade Taoreed, Community Guide Adisa Oyeyemi Bello, Community Guide Yisau Abiodun Ademola, Community Guide Musa Taliatu, Community Guide Sulatu Asakun Makinde, Community Guide Ajayi Ayomide Enoch, Community Guide Fatunbi Adesoji Seriff, Community Guide Akanbi Akeem Olubukola, Community Guide Agbaje Adegboyega Wale, Community Guide Ojeleve Nureni Ajagbe, Community Guide Adesivan Waeel Avinde, Community Guide Bamidele Adedavo. Community Guide Agulejika Ajibade Ezekiel, Community Guide Adegbite Adesina Raphael, Community Guide Fatunwase Olakunle David, Community Guide Olatunji Abidemi Esther, Community Guide Adebisi Opeyemi Olalekan, Community Guide Ibrahim Kehinde Modinat, Community Guide Erinle Sesan Nathaniel, Community Guide Kajogbola Rashidat Ayo, Community Guide Ayodeji Olusola Fakeye, Community Guide Adeyemo Oluwashina Oluwadamilare, Community Guide Ogunniyi Abigail Damilola, Community Guide Abass Ayotunde Nasiru, Community Guide Oderinde Festus Olumide, Community Guide Adepoju Olaolu Moses, Community Guide Funmilade Abiosun, Community Guide Morili Adenike Oyelami, Community Guide Oyeremi Olubunmi Oluwatoyin, Community Guide Ronke Rukayat Sanusi, Community Guide Olanrewaju Adeola Jumoke, Community Guide Bisiriyu Ayansola Ojuade, Community Guide Onoriede Emmanuel Ogbevira, Community Guide

Ademola Raifu Lawal, Community Guide Odewale Sarafa Olalekan, Community Guide Fakiyesi Cecilia Bosede, Community Guide Kayode Joshua Ogunwale, Community Guide Akinduni Foluke Fola, Community Guide Alhaii Gomina Lawal, Community Guide Olanrewaju Banke Tokunbo, Community Guide Maruf Kofoworade. Community Guide Peter Babasola Ajayi, Community Guide Adaramola Akinola Wa, Community Guide Olusola Moses Ademurele, Community Guide Damilola Ayomiposi Adeniyi, Community Guide Fagbohun Oluwanifemi Treasure, Community Guide Adetuberu Stella Funke, Community Guide Fausat Lola Daramola, Community Guide Obayemi Femi Joshua, Community Guide Atolagbe Adeola Iyabo, Community Guide Gbadura Idowu Olubunmi, Community Guide Esther Morohunmubo Olatunbosun, Community Guide Adesina Taiwo, Community Guide Olomu Omoremi O., Community Guide Michael Aderogba Amos, Community Guide Adeniyi Busayo Michael, Community Guide Abigail Bunmi Olabode, Community Guide Yomi Adetuberu Saudat, Community Guide Dada Blessing Bidemi, Community Guide Audu Hamsat, Community Guide Grace Taiwo Iginla. Community Guide David Rachael Funmilayo, Community Guide Fayomi Ilesanmi, Community Guide Ibimoroti Peter, Community Guide Kareem Abiodun Abodede, Community Guide Olanipekun Akeem, Community Guide Esther Idowu Bankole, Community Guide Igbalajobi Victoria Funmilayo, Community Guide Waliyat Omowunmi Bakare, Community Guide Abiodun Owoeye, Community Guide Adeleke Bimbo Fagboro, Community Guide Fadevi Oluwasevi Emmanuel. Community Guide Badmus Bashir Olasunkanmi, Community Guide Solape Regina Adeyanju, Community Guide Rufina Ibiyemi Faleto, Community Guide Akilo Olanike, Community Guide Daramola James Ajibola, Community Guide Ajiboye Samuel Afolayan, Community Guide Oluwafemi Adegboyega Isaac, Community Guide Ganiyu Jinadu Kayode, Community Guide Anthony Niyi Dairo, Community Guide Emmanuel Yinka Olukotun, Community Guide Aladejana Idowu Emmanuel, Community Guide Oguntimehin Toyin Ayodeji, Community Guide Adedoja Adeleke Gabriel, Community Guide Owolabi Rotimi Patrick, Community Guide Adebayo Olayinka E, Community Guide Adeyemi Ajolayo Praise, Community Guide Ojo Ifedayo Ogundoro, Community Guide Omirin Muyiwa Victor, Community Guide Ogundipe Adesuyi Ojo, Community Guide Tosin Akin Sarumo, Community Guide Adevemi Aribake Mary, Community Guide

Olakanlo Emmanuel Dotun, Community Guide Oyewole Samuel Gbenga, Community Guide Florence Bamitale Ogunsan, Community Guide Jumoke Fadeyi, Community Guide Tolulope Ayomide Olatuyi, Community Guide Daramola Ramota Moiisola. Community Guide Badmus Abimbola Khadijat, Community Guide Ibitove Akintunde Abavomi, Community Guide Ebenezer Femi Owoseni, Community Guide Fakorede Funke Rachael, Community Guide Kehinde Paul Owoyele, Community Guide Otunlape Taiwo Amos, Community Guide Oluremi Oluwaseun Ojo, Community Guide Isaac Olaniyi Ige, Community Guide Sunday Solomon Aina, Community Guide Ilesanmi Oluwatosin Adejoke, Community Guide Adebisi Opeyemi Grace, Community Guide Ige Oluwaseun Olaonipekun, Community Guide Alake Deborah Temidayo, Community Guide Adegunle S S, Community Guide Samuel Ojo Olofinlade, Community Guide Femi Adeyemi, Community Guide Dare Joseph Aladekomo, Community Guide Oguntuase Funke, Community Guide Ajifowobaje Florence Oluwatoyin, Community Guide Afelebe Bola Jacob, Community Guide Kareem Lasisi Kayode, Community Guide Adeagbo Tunmise Avomiotan, Community Guide Bamidele Akinwale. Community Guide Daramola Idowu Gabriel, Community Guide Adeyemo Ige David, Community Guide Adeniyi Emmanuel Wahab, Community Guide Afuye Oluwafunke Olaife, Community Guide Olawumi Oluwafemi Samuel, Community Guide Akinyemi Taiwo, Community Guide Omolusi John Oluyemi, Community Guide Oluojo Hannah Funke, Community Guide Aregbesola Kehinde Micheal, Community Guide Osho Christianah Folasade. Community Guide Johnson Oluwatoyin Olorunfemi, Community Guide Yusuf Medinat Aina, Community Guide Ogunsemoyin S. Bayo, Community Guide Ebenezer Daramola, Community Guide Ige Elemo, Community Guide Janet Aina Babadele, Community Guide Agbebi Ayodele Mercy, Community Guide Oriola Bolanle, Community Guide Etofo Temitope Helen, Community Guide Oladele Ebenezer Kolawole, Community Guide Lawal Victoria, Community Guide Oluwafemi Omobewaji Omotoba, Community Guide Kassim Adamu, Community Guide Abeleje Odunayo Martins, Community Guide Olabomi Olaniyi, Community Guide Maku Funke Victoria, Community Guide Akerele Ojo Moses, Community Guide Abu Ozovehe Segun, Community Guide Tayo Comfort Ogunsakin, Community Guide Ibitoye Anjimoh Mojisola, Community Guide Akerele Adebayo Fredrick, Community Guide

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Tukur Bobboi, Community Guide Yahya Bapetel, Community Guide Aminu Ibrahim, Community Guide Joda Talala, Community Guide Shehu Adamu Abdullahi, Community Guide Daivabu Abubakar. Community Guide Aliyu Isa Ahmed, Community Guide Kalangi Japheth Jatimi, Community Guide Edisson Tonnaha, Community Guide Ephraim Kemuel, Community Guide Aminu Ishaku Gambo, Community Guide Emmanuel Hyaki, Community Guide Samson K. Nasi, Community Guide Ibra Ugusta, Community Guide Husseini Musa, Community Guide Wakili Adamu Ali, Community Guide Saidu Adamu Barde, Community Guide Sani Usman, Community Guide Umar Dahiru, Community Guide Mustapha Alim, Community Guide Yahaya Musa, Community Guide Justina Hebron, Community Guide Jacob Audi, Community Guide Abdulraheed Ibrahim, Community Guide Monday Eli, Community Guide Munbu Aggi, Community Guide Jeriel Jedison, Community Guide Amos Abbare. Community Guide Walle Ezra, Community Guide Abubakar Jauro, Community Guide Falilatu Aliyu, Community Guide Yunana Jidauna, Community Guide Peter Anthony, Community Guide Michael Musa Loko, Community Guide Maxwell Chaslan, Community Guide Auwalu Ibrahim, Community Guide Diana Emmanuel, Community Guide Rahima Isa. Community Guide Benham Musa. Community Guide Friday Stephen, Community Guide Abubakar T.J. Sale, Community Guide Ezra Samson Audu, Community Guide Abubakar Bello, Community Guide Adadiyon Dumne, Community Guide Mansur Moh'd, Community Guide Adam Ahmadu Adam, Community Guide Suleiman Abubakar, Community Guide Penuel Dabal, Community Guide Farida Abdullahi, Community Guide Faisal Gidado, Community Guide Ibrahim Dalhatu, Community Guide Ahmed Abdulhamid, Community Guide Luka Sajo, Community Guide Zaham Zakariya, Community Guide Ladipwety Enderly, Community Guide Gaddafi Mohammed, Community Guide Umar Sa'ad, Community Guide Saidu Mohammed, Community Guide Ahamdu Yugudu, Community Guide Abubakar Aliyu, Community Guide

Enon Ali Toms, Community Guide Ahmadu Hamadu, Community Guide Gibson Elisha, Community Guide Abdullahi Jiji, Community Guide Salihu Bakari Bello, Community Guide Elam Katsina. Community Guide Jibril Baba, Community Guide Jethro Zidon. Community Guide Jauro Ahmadu, Community Guide Hebron Bulus, Community Guide Solomon David Kwabe, Community Guide Lydia Yohanna, Community Guide Mathias Zira, Community Guide Danladi Kwatri, Community Guide Bada A Mallam, Community Guide Mustapha Babagana, Community Guide Kollo Mustapha, Community Guide Isiyaka Haruna, Community Guide Ibrahim Lawan Bukar, Community Guide Babagana A Buja, Community Guide Konto Ali, Community Guide Sani Suleiman, Community Guide Ahmed Shattima, Community Guide Mohammed Makin, Community Guide Babagana Modu, Community Guide Hamza Abubakar, Community Guide Fatima M Bulama, Community Guide Mohammed Musa, Community Guide Usman Wadu, Community Guide Ndaye Samson, Community Guide Ishaku Bulum, Community Guide Ali Gana, Community Guide Shatima Isa, Community Guide Alh Kadafur Y Birma, Community Guide Ali Mohd Usman, Community Guide Ibrahim Mohammed, Community Guide Abdulkariam Lawan Mohd, Community Guide Musa Pamun. Community Guide Ishaku Mai Kaji, Community Guide Usman Ali, Community Guide Mai Anguwa Haruna, Community Guide Ezikel Samaila, Community Guide Danladi Inusa, Community Guide Bulama Musa, Community Guide North Central Zone Nakoto Esther Useni, Zonal Mobilizer Zubairu Kudirat Bolanle, State Based Mobilizer Gbadeyan Olawale James, State Based Mobilizer Alabi Ibrahim, State Based Mobilizer Alabi Aminat Titilayo, Community Mobilizer Allasoka Lisala Elkana, Community Mobilizer Abdulraman Fatimoh, Community Mobilizer Oke Comfort, Community Mobilizer Suleiman Ajape, Community Mobilizer Woli Bilkisu Adejimi, Community Mobilizer Yusuf O. Rasheedat, Community Mobilizer Giwa Idowu Muhibat, Community Mobilizer Mohammed Amdalat Toyin, Community Mobilizer

Ajiboye TaibatArinola, Community Mobilizer

Rafiu Alhassan, Community Mobilizer

Bashirat Hassan, Community Mobilizer Ishola Fatai (Laca), Community Mobilizer Olaitan Jimoh (Laca), Community Mobilizer

Akanbi Ibrahim Abiodun, Community Mobilizer Owolabi Titilayo, Community Mobilizer Afolayan Idowu, Community Mobilizer Wale Raphael Ajibaye, Community Mobilizer Raji Modupe, Community Mobilizer Agbede Obafemi, Community Mobilizer Omotosho Felicia Funke, Community Mobilizer Odofin MonisolaAdijat, Community Mobilizer Afolabi Ajape, Community Mobilizer Suleiman Yoniki Ahmed, Community Mobilizer Saidu Lawal, Community Mobilizer Mohammed Mudi, Community Mobilizer Usman Zikki Nasir, Community Mobilizer Bayo Apata, Community Mobilizer Haruna Adamu, Community Mobilizer Adam Aliyu, Community Mobilizer Fatimoh Abubakar, Community Mobilizer Gana Paul, Community Mobilizer Yakubu Mamman, Community Mobilizer Umar S Salihu. Community Mobilizer Abbas S. Liman, State Based Mobilizer Victoria Matthew. State Based Mobilizer Usman Aisha Hajiya, State Based Mobilizer HanatuWochiko, Community Mobilizer Ahmed Bawa Abubakar, Community Mobilizer Ahmad, Muhammad Adamu, Community Mobilizer Usman Alhaji Muhammed, Community Mobilizer Garba Aishatu Paiko, Community Mobilizer Tani Shagabe, Community Mobilizer Yaro Martha Otsahel, Community Mobilizer Sabina Chinchan, Community Mobilizer Adie Josiah Ashue, Community Mobilizer Idris Abdulmalik Musa, Community Mobilizer Ibrahim Ishaku Dodo, Community Mobilizer Samaila Garba, Community Mobilizer Shuaibu Faruna, Community Mobilizer Adamu A. Usman, Community Mobilizer Abubakar Abdul-Hamid, Community Mobilizer Umar Abdulkarim Y., Community Mobilizer Yakubu Abdulakeem, Community Mobilizer Hassan Wachiko, Community Mobilizer Synthia Faithful Kpetu, Community Mobilizer Markus, Grace Nemah, Community Mobilizer Hajara Bala, Community Mobilizer Waziri Yakubu Bagudu, Community Mobilizer Ibrahim Mohammed, Community Mobilizer Mohammed Ibrahim Sanusi, Community Mobilizer Mohammed Abdullahi Ndana, Community Mobilizer Abdulmalik Mustapha, Community Mobilizer Tsado Rachel Kaka, Community Mobilizer Mairiga Alhaji Aliyu, Community Mobilizer Sule Aminu A., Community Mobilizer Nmadu Solomon Ndagi, Community Mobilizer Acheku Yusuf Kemso, State Based Mobilizer Hamza Aliyu, State Based Mobilizer Mathias A. Okpanachi, State Based Mobilizer Mamudu Sadiq Akaba, Community Mobilizer

Muhammed Eneze Habibat, Community Mobilizer Esther Oluwaninshola Kayode, Community Mobilizer Bako Helen, Community Mobilizer Slyvester Atabor, Community Mobilizer Florence M. Adomu, Community Mobilizer Omolaive Edisha. Community Mobilizer Osho John Torunleke, Community Mobilizer Taive Aroioiove David. Community Mobilizer Joseph Sesan, Community Mobilizer Badaki Emily Bosede, Community Mobilizer Ibinaiye Joseph Kehinde, Community Mobilizer Ekunrin Folashade M., Community Mobilizer Bosede Toyin Micah, Community Mobilizer Yakubu Rekiyat, Community Mobilizer Ojo Emmanuel O., Community Mobilizer Alao O Williams, Community Mobilizer Abdulraheem Sefinat, Community Mobilizer Abdulhakim Bello Mayaki, Community Mobilizer Akor Sani, Community Mobilizer Peter Ejigbo Ibrahim, Community Mobilizer Shedrack Ojochegbe Mathias, Community Mobilizer Yakubu Mohammed, Community Mobilizer David Mary Lade, Community Mobilizer Abaniwo Nathaniel, Community Mobilizer Mohammed M. Ndagi, Community Mobilizer Onuh Sunday, Community Mobilizer Rakiya J. Shuaibu, Community Mobilizer Mohammed Lawal. Community Mobilizer Shittu Jibrin. Community Mobilizer Adama Patience Ojone, Community Mobilizer Yunusa Abdullahi, Community Mobilizer Muhammed Yusuf Awal, Community Mobilizer Achimugu Paul Odoma, Community Mobilizer Egbunu Abigail, Community Mobilizer Idoko Rebecca, State Based Mobilizer Dooshima Alpha Iorzua, State Based Mobilizer Utume Josephine M, State Based Mobilizer Aaver Japhet Aondowase, Community Mobilizer Abava Comfort Msurshima. Community Mobilizer Enger Terdoo Jerome, Community Mobilizer Achigili Florence, Community Mobilizer Musa Sediq Achadu, Community Mobilizer Agor Odeh Godwin, Community Mobilizer Tijani Mohammed, Community Mobilizer Agum Kuma Naga, Community Mobilizer Albert A Finbar, Community Mobilizer Ambe Cletus Atakpa, Community Mobilizer Abdullahi Bala Giwa, Community Mobilizer Anza Grace Teraver, Community Mobilizer Helen Ashaver, Community Mobilizer Cletus O. Honn, Community Mobilizer Edeh Ocheje Amos, Community Mobilizer Elizabeth Onuh, Community Mobilizer Martha Ichapi, Community Mobilizer Gwaza Mwuese, Community Mobilizer Member Rachel Hanior, Community Mobilizer Vincent Anza, Community Mobilizer Inalegwu John Freeman, Community Mobilizer Isah Yahaya, Community Mobilizer Ivarave Fanen Martins, Community Mobilizer Jeiyol Salome Nguveren, Community Mobilizer

Lilian Otugbo, Community Mobilizer Ahire Mercy, Community Mobilizer Adi Charles Ordain, Community Mobilizer Gudu Mrumun Umbur, Community Mobilizer Nelson Emmanuel Ogor, Community Mobilizer Oko Lazarus Idankpa, Community Mobilizer Veronica Idoko, Community Mobilizer Omaive Fredrick Sunday, Community Mobilizer Emmanuel Elaigwu, Community Mobilizer Ishimayina Christopher, Community Mobilizer Sugh Emmenuel, Community Mobilizer Anyam Serumun Solomon, Community Mobilizer James K Wattan, State Based Mobilizer Garos M Bature, State Based Mobilizer Umar Farouk Musa, State Based Mobilizer Micah Luka, Community Mobilizer Bemgba G Martins, Community Mobilizer Adams Kabir Moh, Community Mobilizer Cecilia Mike Omonaiyer, Community Mobilizer Grace C. Job, Community Mobilizer Miriam Gish, Community Mobilizer Esther Umukoro, Community Mobilizer Almagani Emmanuel, Community Mobilizer Alfred Nakoto, Community Mobilizer Kachollom Abdul, Community Mobilizer Dung Chundung Bulus, Community Mobilizer Hannatu Zang Samuel, Community Mobilizer Chuwang Joseph Fom. Community Mobilizer Francis Kargwak Zitta, Community Mobilizer Nanji Fazing, Community Mobilizer Grace N. John, Community Mobilizer Elizabeth T. Panyim, Community Mobilizer Dinatu G. Nuhu, Community Mobilizer Musa Ataki, Community Mobilizer Tahdok Domye Raymond, Community Mobilizer Joshua Dajen, Community Mobilizer Arung Charity Chatbenet, Community Mobilizer Thomas Ngwim, Community Mobilizer Christiana Sabo Watson, Community Mobilizer Benjamin Musa Dung, Community Mobilizer Bashir Abdulhamid, Community Mobilizer Simdul S Nimyel, Community Mobilizer Yankuka Mary Gerji, Community Mobilizer Kangyang John, Community Mobilizer Mwanret Longkum, Community Mobilizer Fati Bello, Community Mobilizer Elisha Andebutop, State Based Mobilizer Umbugus Mercy, State Based Mobilizer Sattong Patience Augustine, State Based Mobilizer Lilian A Gonji, Community Mobilizer Igwe Casmir, Community Mobilizer Agenyi U. E. Abel, Community Mobilizer Yakubu Yahaya, Community Mobilizer Christiana Luka Gish, Community Mobilizer Abigail Maji, Community Mobilizer Inkab Majimris Jatau, Community Mobilizer Alice Adamu, Community Mobilizer Simon Tyolumun Blessing, Community Mobilizer Nwachukwu Amaechi, Community Mobilizer Edward Luka, Community Mobilizer Peter Onuh, Community Mobilizer

Hafsat Mohammed, Community Mobilizer Tukura Nana, Community Mobilizer Inuwa Bawa, Community Mobilizer Musa Mohammed, Community Mobilizer Francis Ochefije, Community Mobilizer Ochika Joshua Okakpunoli, Community Mobilizer Azie Emenike, Community Mobilizer Toluwalope Ajisegiri, Community Mobilizer Garba Mohammed Salisu. State Based Mobilizer Yusuf Muhammad, State Based Mobilizer Aminu Waziri Lamino, State Based Mobilizer Yahaya Abubakar Ishagye, State Based Mobilizer Abubakar Yahaya Ishagye, Community Mobilizer Hassan Awe Ibrahim, Community Mobilizer Suleiman Alh Mahmud, Community Mobilizer Osude Danlami Samson, Community Mobilizer Abubakar O. Mamman, Community Mobilizer Illah Obadiah, Community Mobilizer Dauda Omeri, Community Mobilizer Ahmed Ogoshi Adamu, Community Mobilizer Gandu Gideon Akpazi, Community Mobilizer Ismaila Ogande Umar, Community Mobilizer Aminu Waziri Lamino, Community Mobilizer Ahmadu Kaduna Joseph, Community Mobilizer Nicodemus Joseph Shari, Community Mobilizer Aliyu Isa Abba, Community Mobilizer Obed Ishaya Shade, Community Mobilizer Yakubu Abdullahi Yakubu. Community Mobilizer Abdullahi Mohammed Tanko, Community Mobilizer Tella Patience Samson, Community Mobilizer Garba Muhammed Salisu, Community Mobilizer Dogara Danjuma, Community Mobilizer Mustapha Abubakar, Community Mobilizer Abubakar Isa, Community Mobilizer Muhammed Sani Kasimu, Community Mobilizer Haruna Danladi, Community Mobilizer Lauva Muhammed Gali, Community Mobilizer Yusuf Muhammed. Community Mobilizer Kinze Ebenezer Ladan. Community Mobilizer Vengegyang A. Simon, Community Mobilizer Sulaiman Qasim Yamusa, Community Mobilizer Yusuf Asibatu, Community Mobilizer Abe Jonathan Oshi, Community Mobilizer Abbakari Likita Bahago, Community Mobilizer Musa Aliyu Abdulahi, Community Guide Sani Zayyan Abubakar, Community Guide Esther Danjuma, Community Guide Benjamin U Ezra, Community Guide Kaura Isaac, Community Guide Kadayi Allahyayi Jude, Community Guide David Douglas, Community Guide Maimuna Usman, Community Guide Mohammed Hamidu, Community Guide Udele Julian Amarachi, Community Guide Mary Alide, Community Guide Charles Akubueze Isiga, Community Guide Matthew E Godwin, Community Guide Solomon Baba Jagaba, Community Guide Abigail Hosea, Community Guide Gideon Dauda, Community Guide Sumaila Adamu, Community Guide

Muhammed Ismaila, Community Guide Haruna Agenyi James, Community Guide Sunday Denda, Community Guide Friday Yakubu, Community Guide Isah Abubakar, Community Guide Usman Umoru. Community Guide Samuel Agumu, Community Guide Daniel Abuh. Community Guide Abubakar Mohammed Sani, Community Guide Yakubu A. Aliyu, Community Guide Salami Ojochide, Community Guide Alege Motunrayo, Community Guide Dauda A. Abdulganiyu, Community Guide Alh Abdulrahman Mahmood, Community Guide Ibrahim Mohd, Community Guide Muhammed Awwal Muhammed, Community Guide Saidu Maiungwa, Community Guide Hauwa Abubakar, Community Guide Salihu Mohd, Community Guide Basiru Jibrin, Community Guide Fatima Sani, Community Guide Alhassan Shadaki, Community Guide Mahmud Idris Mairiga, Community Guide Yusuf Adamu, Community Guide Usman Baba Usman, Community Guide Gabriel O Janet, Community Guide Rita Andrew, Community Guide Usman Moses. Community Guide Emmanuel Ochidi, Community Guide Abisoye Adeyemi, Community Guide Isa Abdul, Community Guide Olukotun B Sunday, Community Guide Joseph Olorunmosunle, Community Guide Akin Obagbemi, Community Guide Jimoh Halila, Community Guide Samuel Sumona, Community Guide Ahmed Dauda, Community Guide Amichable Danladi Emmanuel. Community Guide Mohammed Hassan, Community Guide Jabuna Titus B., Community Guide Abdul Shehu, Community Guide Salihu Lawal, Community Guide Omale Seidu, Community Guide Paul Audu, Community Guide Abdullahi Ben Peter, Community Guide Mohd S Bawa, Community Guide Mohammed Umar, Community Guide Ibrahim Bawa, Community Guide Arogundade Shogo, Community Guide Amina Manko Yahaya, Community Guide Abubakar B Mohammed, Community Guide Amina Haruna, Community Guide Sunday Labija, Community Guide Amos Exodus, Community Guide Joseph Amegulu, Community Guide Zubair Ramatu, Community Guide Ann Toyin Johnson, Community Guide Suleiman O. Abdul, Community Guide Ajibulu Henry O., Community Guide Michael Adada, Community Guide Arogbenga John, Community Guide

Yunusa J. O. Ireba, Community Guide Ayeni Joseph Ayo, Community Guide Akomolafe Adekunle, Community Guide Eseyin Samuel, Community Guide Shaibu Ibrahim, Community Guide Shaibu A. Ipemida, Community Guide Salihu Muaz Owuda, Community Guide Abdulganivu Muraina, Community Guide Lateef Muhamad, Community Guide Dangana Ezekiel, Community Guide Umar Aliyu Omeiza, Community Guide Ahmed D. Balogun, Community Guide Abubakar Abdulaziz, Community Guide Adeyemi Jonathan Olusegun, Community Guide Olubiyo Ayodele, Community Guide Ochu Malika, Community Guide Jibril Jamiu, Community Guide Owojaiye Olajide David, Community Guide Ibidunni Emmanuel, Community Guide Akaba Abdulazeez, Community Guide Ajakaye Suleiman O., Community Guide Joseph Austin, Community Guide Musa A. Tijanni, Community Guide Ibrahim Iya Abdullahi, Community Guide Momoh Abdulwahab, Community Guide Alhassan Ibrahim, Community Guide Blessing Ugbede, Community Guide Simon Haruna, Community Guide Abubakar Haruna, Community Guide Odah Jacobs, Community Guide Yunusa Ahidu, Community Guide Haruna Sheu, Community Guide Augustine Maji, Community Guide Ahmed Ndagi Hassan, Community Guide Zakariyah Habibullah, Community Guide Suleiman Alhaji Musa, Community Guide Yushau Iliyasu, Community Guide Jamilus Ragada, Community Guide Yusuf Suleiman Sabiseko, Community Guide Ibrahim K. Yahaya, Community Guide Paul Usman, Community Guide Akor Joseph George, Community Guide Musa Idris, Community Guide Alex Idris, Community Guide Moses Emmy James, Community Guide Isah Abubakar, Community Guide Musa Idris, Community Guide Alex Idris, Community Guide Ejigbo Onoja, Community Guide Lawal Yusuf Ali, Community Guide Ulugh Takur James, Community Guide Nomigo Dooshima, Community Guide Luga Joseph, Community Guide Twer Oryiman, Community Guide Zachariah Waku, Community Guide Felix Tsegba, Community Guide Asongo Seember Sandara, Community Guide Aleje Dennis, Community Guide Isah Mali, Community Guide Michael Okoko, Community Guide John Peter, Community Guide

Ademu Monday, Community Guide Nyam Msughter, Community Guide Tsav Emmanuel, Community Guide Usman Moses Cg, Community Guide Emmanuel Ochidi, Community Guide Jennifer Dzegeji, Community Guide Iorshe Gbar Bbar, Community Guide Gbertyo Tyolumin, Community Guide Samuel Orsar, Community Guide Ternenge Tarnongu, Community Guide Abugh Aondongu, Community Guide Torough Iorember, Community Guide Ikyaagba Joseph, Community Guide Nabo Terlumun, Community Guide Adejir Jerome, Community Guide Fave Louise Nguyiman, Community Guide Togo Janet, Community Guide Mlumu Akangee, Community Guide Shima Cornelius, Community Guide Akuratse Matthew, Community Guide Dikpo Hingin David, Community Guide Ebilima Promise Blessing, Community Guide Ube John Ola, Community Guide Elaigwu Michael, Community Guide Hyembekyaa Monday, Community Guide Oche Jacobs, Community Guide Godwin Onminyi, Community Guide Eyikwaje Oga, Community Guide Abdullahi Yunusa, Community Guide Ocheje Oche, Community Guide Ude Victoria, Community Guide Okolike Blessing, Community Guide Idoko Sunday Cletus, Community Guide Omadewu Matthew, Community Guide Johnson Ojochogwu, Community Guide Aliwo Michael, Community Guide Akpakpa Okpe, Community Guide Igoche Iduh. Community Guide Sunday Adole, Community Guide Ominivi Job, Community Guide Ada Ojecho, Community Guide Solomon Njogen, Community Guide Ukeyima Agbakyor, Community Guide Kumun Moses, Community Guide Azege T. Gabriel, Community Guide Gabriel O. Janet, Community Guide Atumba Michael, Community Guide Kahimo Amachigh, Community Guide Mhongor Terzungwe, Community Guide Utile Polycarp, Community Guide Tyoakosu Bemdoo, Community Guide Victor Akegh, Community Guide Zaatyough T. Francis, Community Guide Ugese Terlumun, Community Guide Apine David, Community Guide Asaatse Aondowase, Community Guide Kindan Simon Liamngee, Community Guide Yaatsav Tergu, Community Guide Adoh Samuel, Community Guide Ngeven Aondover, Community Guide Akaaza Christopher, Community Guide

Ugeeh Paul, Community Guide Kachina Hungurga, Community Guide Kwaghee Lartin, Community Guide Yiye Dominic, Community Guide Emmanuel Ulaa, Community Guide Abee Moses Shileve. Community Guide Hindan Timothy, Community Guide lorwuese Num. Community Guide Ajo T. Terwase, Community Guide Ikyumen Gabriel Msuhter, Community Guide Ibav Cyprain Akua, Community Guide Iorkyaa Member, Community Guide Igyam Joshua, Community Guide Edward Utile, Community Guide Twer Oryiman, Community Guide Okpe Samson, Community Guide Asue Iorungwa, Community Guide Ezek Patrick, Community Guide Orga Andyar Stephen, Community Guide Seltim Nanben, Community Guide Nancwak Poncwat, Community Guide Sunday Peter, Community Guide Sanusi Baba, Community Guide Pam Baja, Community Guide Jame John, Community Guide Jame Mandu, Community Guide Shakaa Msuega, Community Guide Sunday Tasha. Community Guide Gambo Abukakar, Community Guide Khadija Mahmmad, Community Guide Garba Sani, Community Guide Sadisu Moh, Community Guide James Umaru, Community Guide Dagang Tengwang Pam, Community Guide Gyang Davou, Community Guide Yakubu Udiya, Community Guide Musa Saleh, Community Guide Joseph Shedrack, Community Guide Iliva Amos. Community Guide Davou Ayuba Dangyang, Community Guide Agwom Jiji, Community Guide Nuhu Anita Jonathan, Community Guide Manot Luka, Community Guide Patrick Molshakat Michael, Community Guide Friday Gima, Community Guide Daniel Panye, Community Guide Shadrack Wupanma, Community Guide Abdulhamid Muhammad, Community Guide Hutep Luka Kwal, Community Guide Ewenshiwe Bako, Community Guide Alkasim Haruna Mallam, Community Guide Zakari Mwancgung, Community Guide Lukman M. Muhammed, Community Guide Muhammed Maigari, Community Guide Ezra Adamu, Community Guide Muhammed Hudu, Community Guide Micha Koppussa, Community Guide Pyenkikwam Jngnap, Community Guide Stephen Sekat, Community Guide Joseph Longmyap, Community Guide Mathias Lepse, Community Guide

Wudena Inusa, Community Guide Yusuf Kyedyen, Community Guide Joseph Danlami, Community Guide Denis Dakum, Community Guide Nenfwang Mwolche, Community Guide Isma'il Adam. Community Guide Isma'il Tahiru Abubakar, Community Guide AyubaBitrus, Community Guide Mary Moses Izung, Community Guide Chong Luka Pam, Community Guide Anthony Davou, Community Guide Victor Dung Pam, Community Guide Samuel Temitope Ojiti, Community Guide Gabriel Moses Timjas, Community Guide Godwin Kelvin Unabor, Community Guide Gabriel Moses Timias, Community Guide Istifanus Yusuf, Community Guide Kadiya Tewi, Community Guide Irimiya Davou Pam, Community Guide Ezekiel Yakubu, Community Guide Dung Esther Boyl, Community Guide Bagu Ndam, Community Guide Lep Ngyang Sambo, Community Guide Daniel Yakubu Bakwai, Community Guide Chuwang Joseph Fom, Community Guide Anthony Isaac, Community Guide Nimyel Bala, Community Guide Philip Fashep, Community Guide Binven Vennim, Community Guide Timothy Sudubam, Community Guide Napdul Salven Durven, Community Guide Joseph N. Dabup, Community Guide Danjuma Dajan, Community Guide Panshak Yoila, Community Guide Dabiet Cletus Koppian, Community Guide Bature Mantoe Twotkwal, Community Guide Dandladi Ezra Chinmang, Community Guide Avuba Dakwot, Community Guide Hvacinth Hoomen Longs. Community Guide Naannan Longwan, Community Guide Danladi Dasvereng, Community Guide Bogolnaan Kaatnaan, Community Guide Sylvanus Danjuma Shekarau, Community Guide Pannan G. Damues, Community Guide Fohotnan Patrick, Community Guide Tambo Baba, Community Guide Fanzhi Nanmwa Longwa, Community Guide Clement Sunday, Community Guide Meimuna Usman, Community Guide Salisu Ibrahim, Community Guide Udele Juliana Amarachi, Community Guide Lucky Asemota, Community Guide Afinki John Sotaya, Community Guide Daniel Anold, Community Guide Ibrahim Emmanuel, Community Guide Kaura Isaac, Community Guide Odimara Azu Obinna, Community Guide Buachie Jerry, Community Guide Onongaya Joy Uju, Community Guide Abubakar Isah, Community Guide Jonah Asuguo Etim, Community Guide

Abraham Asuguo, Community Guide Dauda Abuhuraira Igashi, Community Guide Isreal Nsikea Okon, Community Guide Olayemi Yetunde Esther, Community Guide Francis Yakubu Papa, Community Guide Ukpanwanne Ifeanyi, Community Guide Ukwuije Onvinyechi Precious, Community Guide Muhammad Zainab Ibrahim, Community Guide Mary Alidu, Community Guide Ukpanwanne Kelvin, Community Guide Charity Amike, Community Guide Yusuf Ibrahim, Community Guide David Douglas, Community Guide Isaac Monday, Community Guide Gideon Dauda, Community Guide Victor Kelechi John, Community Guide Salihu Bashiru Barde, Community Guide Michael Deborah, Community Guide Elijah Emmanuel, Community Guide Hulera Bashiru, Community Guide Sule Jemila Idris, Community Guide Nancy Biyama Jesmiel, Community Guide Onuh Oche, Community Guide Solomon Baba Jagaba, Community Guide North West Zone Shuaibu Musa Kafingana, Zonal Mobilizer Mohammed A.S. Muhammadu, State Based Mobilizer Sani Yusuf. State Based Mobilizer Yusuf Hamza. State Based Mobilizer Saleh Garba, Community Mobilizer Ado Ya'u, Community Mobilizer Nafisa Mudi, Community Mobilizer Rukayya Muhd Iliya, Community Mobilizer Maryam Aliyu, Community Mobilizer Furera Muhd Usman, Community Mobilizer Daso Garba, Community Mobilizer Basira Yahaya, Community Mobilizer Biniva Alivu. Community Mobilizer Avuba Muhammad. Community Mobilizer Mansur Salisu, Community Mobilizer Faruku Isah, Community Mobilizer Usman A. Musa, Community Mobilizer Farouk Musa, Community Mobilizer Hadiza Ibrahim, Community Mobilizer Jabir Usman Muhd, Community Mobilizer Lawan Alasan, Community Mobilizer Haruna Abdullahi, Community Mobilizer Ismail Ishak, Community Mobilizer Abdulmalik Muhd Adamu, Community Mobilizer Aliyu Salisu, Community Mobilizer Salisu Idris Karshi, Community Mobilizer Sadiq Haruna, Community Mobilizer Muzammil Sani Musa, Community Mobilizer Muhammad Danaro Yusuf, Community Mobilizer Sunusi Aliyu, Community Mobilizer Abubakar Garba Ibrahim, Community Mobilizer Auwalu Abba Hussein, Community Mobilizer Salisu Ado, Community Mobilizer Umar Sani Yahaya, Community Mobilizer Bala Malam, Community Mobilizer Musa Lawal Roni, Community Mobilizer

Nasiru Sa'id Nasidi, State Based Mobilizer Adam Abdullahi Ado, State Based Mobilizer Binta Umar Abdullahi, State Based Mobilizer Aliyu Musa Shehu, State Based Mobilizer Sani Gali, Community Mobilizer Hadiza Ghali. Community Mobilizer Bello Ali Sadik, Community Mobilizer Salisu Abdulwahab, Community Mobilizer Shehu A Ilu, Community Mobilizer Fatima Nasiru, Community Mobilizer Shamsiyya Tijjani, Community Mobilizer Abdulrahman Abdulhamid, Community Mobilizer Mukhtar Sani K/Mata, Community Mobilizer Nura Musa Sulaiman, Community Mobilizer Isa Lawan Ibrahim, Community Mobilizer Hafizu Aliyu, Community Mobilizer Zainab Rabe Abdullahi, Community Mobilizer Maryam Aliyu Abdullahi, Community Mobilizer RabiuA Sarari, Community Mobilizer Yahaya Abdullahi Yargwanda, Community Mobilizer Rakiya Bala, Community Mobilizer Hassan Muhammad Tukur, Community Mobilizer Yusuf Kabir Yusuf, Community Mobilizer Bashir Sulaiman, Community Mobilizer Khalil Ibrahim, Community Mobilizer Fatima Ibrahim Muhd, Community Mobilizer Rukayya Abdulrahman, Community Mobilizer Hannatu Kabir Sulaiman. Community Mobilizer Umar Muhammad, Community Mobilizer Abubakar Abdullahi Ado, Community Mobilizer Fatima Nasir Mu'azu, Community Mobilizer Ahamad Abdullahi Ado, Community Mobilizer AuwalSani Muhd, Community Mobilizer Auwal Abba Hussaini, Community Mobilizer Abdurrazak Umar, Community Mobilizer Amina Umar Abdullahi, Community Mobilizer Sunusi Ali Sadig, Community Mobilizer Rugavva Ibrahim. Community Mobilizer Marvam Ibrahim. Community Mobilizer Ibrahim Nasidi, Community Mobilizer Fatima Habib Sadauki, Community Mobilizer Yahanasu Bello Bashir, Community Mobilizer Zainab Nasidi Abdullahi, Community Mobilizer Aliyu Yunusa Bare, Community Mobilizer Sani Abdu Garko, Community Mobilizer Aisha Umar Abdullahi, Community Mobilizer Jibril Abdullahi Bello, Community Mobilizer Mustapha Muhammad Idris, Community Mobilizer Umar Haliru Muhd, Community Mobilizer Aliyu Salisu, Community Mobilizer Maryam Isa, Community Mobilizer Maryam Abdullahi, Community Mobilizer Mansur Wada, Community Mobilizer Aliyu Yusuf Gano, Community Mobilizer Auwalu Uba, Community Mobilizer Shehu Abdulwahab, Community Mobilizer Jibril Umar, Community Mobilizer Ali Shehu, Community Mobilizer Nafisa Muhammad, Community Mobilizer Mika'ilu Musa Zango, Community Mobilizer Fadimatu Muhammadu Nasidi, Community Mobilizer

Hussaini Muhammad Gwarzo, Community Mobilizer Nura Garba, Community Mobilizer Usaina Magaji, Community Mobilizer Gwaggoliya Auwalu, Community Mobilizer Aisha Bello, Community Mobilizer Safiva Muhd Lawal. Community Mobilizer Muhsin Sa'id Salihu, Community Mobilizer Ibrahim Suleiman Baba. Community Mobilizer Hajara Umar, Community Mobilizer Sulaiman Hashim Ibrahim, Community Mobilizer Usman Dauda, Community Mobilizer Idris Rabiu, Community Mobilizer Abubakar Umar, Community Mobilizer Aisha Sani Musa, Community Mobilizer Abubakar Yahaya, Community Mobilizer Sulaiman Auwal, Community Mobilizer Habibu Ya'u Shu'aibu, Community Mobilizer Dalhatu Salisu Galadanchi, Community Mobilizer Abdullahi Nura, Community Mobilizer Zainab Auwal Umar, Community Mobilizer Ibrahim Bala, Community Mobilizer Balarabe Muhd K/Naisa, Community Mobilizer Abdurra'uf Sulaiman, Community Mobilizer Aminu Halliru Muhammad, Community Mobilizer Sagir Umar Aliyu, Community Mobilizer Jibril Sule Adamu, Community Mobilizer Abdu Alfindi, Community Mobilizer Mujahid Sa'id Salihu. Community Mobilizer Garba Balarabe, Community Mobilizer Saminu Idris, Community Mobilizer Sadi Musa, Community Mobilizer Salihu Muhammad Yusuf, State Based Mobilizer Bashiru Abubakar Moriki, State Based Mobilizer Sanusi Lawali, State Based Mobilizer Muhammad Shamsu, Community Mobilizer Murtala Abubakar, Community Mobilizer Garba Bello, Community Mobilizer Aminu Lawali, Community Mobilizer Suleiman Abdullahi, Community Mobilizer Nura Bello, Community Mobilizer Aminu Abubakar. Community Mobilizer Yahaya Usman, Community Mobilizer Surajo Abubakar, Community Mobilizer Jamilu Musa, Community Mobilizer Ibrahim Kabir, Community Mobilizer Jamilu Bello, Community Mobilizer Umar Badamasi, Community Mobilizer Muhammad Tukur Adamu, Community Mobilizer Yusuf Ibrahim, Community Mobilizer Abdullahi Adamu Sidi, Community Mobilizer Jamilu Sale, Community Mobilizer Abdullahi Samaila, Community Mobilizer Addau Halilu, Community Mobilizer Abdulrashe Balarabe, Community Mobilizer Umar Aliyu Zurmi, Community Mobilizer Sani Usman Akko, Community Mobilizer Shafi'u Lawali, Community Mobilizer Lawali Ibrahim, Community Mobilizer Lawali Musa, Community Mobilizer Mustapha Abubakar, Community Mobilizer Mansur Abubakar, Community Mobilizer

Muaze Dinah Balgis, State Based Mobilizer Musaddiq Bala Usman, State Based Mobilizer SanusiSani Zamgo, State Based Mobilizer Ayman Yusuf Sani, Community Mobilizer Ubale Ibrahim Maigari, Community Mobilizer Muhammed Junaidu. Community Mobilizer Sagir Yusuf, Community Mobilizer Ibrahim Dahiru. Community Mobilizer Hassan Salmanu, Community Mobilizer Yakubu Bala, Community Mobilizer Aminu Ismaila, Community Mobilizer Ya'u Abubakar, Community Mobilizer Murtala Waziri, Community Mobilizer Halima Abubakar, Community Mobilizer Amina Abubakar, Community Mobilizer Rukayya Abdullahi, Community Mobilizer Hindatu Ghali, Community Mobilizer Khadija Aliyu, Community Mobilizer Abdullahi Ahmad Salele, Community Mobilizer Auwal Ibrahim, Community Mobilizer Sada Muhammad, Community Mobilizer Abdulmudalib Muhammad, Community Mobilizer Umar Buhari, Community Mobilizer Suleiman Hamza, Community Mobilizer Auwal Bukar, Community Mobilizer Yusuf Buhari, Community Mobilizer Abubakar Aliyu, Community Mobilizer Nasif Ahmad. Community Mobilizer Murja Mu'azu, Community Mobilizer Muhammad Suleiman, Community Mobilizer Rufa'i Hussaini, Community Mobilizer Lawal Usman, Community Mobilizer Ibrahim Hussaini, Community Mobilizer Abdulrasheed Salisu, Community Mobilizer Nasir Usman Karofi, Community Mobilizer Auwal Yakubu, Community Mobilizer Shamsudeen Idris, Community Mobilizer Abdulmaieed Kabir, Community Mobilizer Mustapha Haliru Gwarzo. Community Mobilizer Muhammed Hassan Goronyo, State Based Mobilizer Abdulhamid Buhari, State Based Mobilizer Abubakar Aliyu Danmafara, State Based Mobilizer Aminu A. Sadi, Community Mobilizer Badamasi Garba, Community Mobilizer Sirajo Yusuf, Community Mobilizer Malami Attahiru A, Community Mobilizer Nasiru Abubakar, Community Mobilizer Chika Mahe, Community Mobilizer Asma'u Muhd, Community Mobilizer Bello Shehu Gwadabawa, Community Mobilizer Aliyu Muazu, Community Mobilizer Idris Y. Idris, Community Mobilizer Murtala Abdullahi, Community Mobilizer Bala Oroji, Community Mobilizer Nasiru Abubakar, Community Mobilizer Iliyasu Marafa Balle, Community Mobilizer Hamza Ibrahim Turaki, Community Mobilizer Muslim Umar, Community Mobilizer Balkisu Yusuf, Community Mobilizer Abdulmalik Abubakar, Community Mobilizer Ishaka Mainasara, Community Mobilizer

Yahaya Halilu, Community Mobilizer Abubakar M. Abubakar, Community Mobilizer Abubakar Buhari, Community Mobilizer Farida Ibrahim Turaki, Community Mobilizer Nasiru Maiturare, Community Mobilizer Rufai Halilu. Community Mobilizer Bashir A. Ib Nideen, Community Mobilizer Abubakar Galadima. Community Mobilizer Zainab Nasidi, Community Mobilizer Hauwa A. Aminu, Community Mobilizer Shamsudeen Haruna, Community Mobilizer Bello Sambo, Community Mobilizer Abdullahi Nb Aliyu, Community Mobilizer Umar Abdullahi Marnona, Community Mobilizer Jidda Binta Danladi, Community Mobilizer Jabiru Abubakar, Community Mobilizer Abdulkarim Idris Abubakar, Community Mobilizer Aliyu Musa, State Based Mobilizer Bilal Nabiye Gloria, State Based Mobilizer Umar Ibrahim, State Based Mobilizer Muktar A. Mustapha, Community Mobilizer Usman Abubakar, Community Mobilizer Auwalu Abba Hussein, Community Mobilizer Lawal Mohammed, Community Mobilizer Mohammed Rukaiyat Adam, Community Mobilizer Umar Ibrahim, Community Mobilizer Mohammad Haruna, Community Mobilizer Joseph Audu, Community Mobilizer Benjamine Maigari, Community Mobilizer Atuke Ganga Meshach, Community Mobilizer Uhuami Anataku Sumaila, Community Mobilizer Obanewo Fibi Sandra, Community Mobilizer Linda Daura, Community Mobilizer Anthony Lord Thaddeys, Community Mobilizer Hassan Ahmed, Community Mobilizer Evelyn N Rohbam, Community Mobilizer Chinazo Anthonia Umenwobi, Community Mobilizer Aminu Babangida, Community Mobilizer Yashim Hilda Zwahu. Community Mobilizer Kure Imam Habila, Community Mobilizer Jibril Isa. Community Mobilizer Mishael Yakubu, Community Mobilizer Isa Bawa, Community Mobilizer Halima Mohammed Sani, Community Mobilizer Bakut Joel Kaboshio, Community Mobilizer Haruna Aaron Sunday, Community Mobilizer Hajara Aliyu, Community Mobilizer Daha Mohammad, Community Mobilizer Ismaila Aliyu, Community Mobilizer Abdulamid Ahmad, Community Mobilizer Hafsat Idris, Community Mobilizer Sulaiman Idris, Community Mobilizer Felicia Boman, Community Mobilizer Rakiya Ado Shehu, Community Mobilizer Umar Garba, Community Guide Muhd Auta Maiwaunguwa, Community Guide Maigari Zubaru Shehu, Community Guide Abdullahi Iliyas Fago, Community Guide Muhd Isa Dagali, Community Guide Salisu Dayyabu, Community Guide Maiunguwa Manniru, Community Guide

Maiunguwa Abdullahi Abu, Community Guide Sunusu Maiunguwa, Community Guide Mal. Lawal Yankwashi, Community Guide Salisu Usman, Community Guide Zahairu Sale, Community Guide Maigari Usman, Community Guide Maiunguwa Rabiu Kanya, Community Guide Muhd Aminu, Community Guide Maigatari Maiunguwa, Community Guide Kaya Maiunguwa, Community Guide Bulama Muazu, Community Guide Bulama Hannun Giwa, Community Guide Bulama Maitsamiya, Community Guide Idris Alasan, Community Guide Bula Haru Sani, Community Guide Salisu Rawai, Community Guide Tata Inakili, Community Guide Musa Alili, Community Guide Maigari Abdu, Community Guide Kawu Sule, Community Guide Gambo Alhaji Saidu, Community Guide Maigari Yanono, Community Guide Muhd Ibrahim, Community Guide Muhammad Abubakar, Community Guide Alh. Adam Bayero, Community Guide Dauda Adamu, Community Guide Maigari Muhd, Community Guide Musa Suleiman. Community Guide Rabiu Haruna, Community Guide Malam Ali, Community Guide Hussaini Muhd, Community Guide Abdullahi Hamza, Community Guide Musa Muhammad Zugo, Community Guide Muhd Zanki Haruna, Community Guide Musa Najabo, Community Guide Abuabakar Muhd Maigari, Community Guide Umar Muhd, Community Guide Balama Amadu. Community Guide Garba Dahiru, Community Guide Aliyu Sale, Community Guide Madubbo Garbou, Community Guide Ya'u Maiuguwa, Community Guide Alhassan Umar, Community Guide Muktar Abdullahi, Community Guide Abdlmuddalib Abdulrashid, Community Guide Bala Aliyu Maiunguwa, Community Guide Jirbrin Madaki, Community Guide Adamu Abubakar Wakilin, Community Guide Ibrahim Hudu Maiunguwa, Community Guide Sarki Ibrahim S. Daral, Community Guide Yunusa Dalhatu Kodoma, Community Guide Adamu Da'u Sadau, Community Guide Hamza Maiunguwa Tokai, Community Guide Abdullahi Muhd Tuje, Community Guide Usman Usaini, Community Guide Maiunguwa Babannan Manzo, Community Guide Yakubu Usman, Community Guide Isa Alhaji Yusuf, Community Guide Musa Gandu, Community Guide Yusuf A. Ali, Community Guide Alhaji Salisu Maiunguwa, Community Guide

Hamisu Yusuf, Community Guide Maiunguwa Uzairu, Community Guide Musbahu Abdullahi, Community Guide Shukuranu Harisu, Community Guide Mainuguwa Bala Ibrahim, Community Guide Hamisu Yahuza Isa. Community Guide Maiunguwa Lafiya, Community Guide Abba Gwadavi, Community Guide Usaini Maruta, Community Guide Abubakar Saleh, Community Guide Ahmadu Usaini, Community Guide Mallam Yusuf, Community Guide Kabiru Kafinata. Community Guide Abubakar Muhd, Community Guide Sama'ila Abdulsalam, Community Guide Ibrahim Galadima, Community Guide Usman Sa'idu, Community Guide Abubakar Sabiu, Community Guide Surajo Kabiru, Community Guide Murtala Ibrahim, Community Guide Mansur Sule, Community Guide Bello Rabiu, Community Guide Sani Ahmad, Community Guide Mukhtar Abdullahi, Community Guide Abubakar Abdu, Community Guide Kabiru Bello, Community Guide Kabiru Bala, Community Guide Malam Habu Shanono, Community Guide Garba Galadima, Community Guide Majidadi Ibrahim, Community Guide Tukur Babba, Community Guide Habibu Mukhtar, Community Guide Saidu Musa, Community Guide Rabiu Muhammad, Community Guide Saminu Aliyu, Community Guide Malan Sani, Community Guide Dahiru Hamza, Community Guide Dini Abubakar. Community Guide Haruna Uba. Community Guide Shamsu Adamu, Community Guide Yazid Hassan, Community Guide Idris Ya'u, Community Guide Muhammad Zaharadden, Community Guide Usman Muhammad, Community Guide Abdulhamid, Community Guide Salisu Maifada, Community Guide Garzali Maifada, Community Guide Labaran Abdullahi Me Ung, Community Guide Hamisu Aminu Indabawa, Community Guide Abba Lawan Daneji, Community Guide Abbas Abdulkadir, Community Guide Abdullahi Mai Kano, Community Guide Saddiku Kuka, Community Guide Shehu Ilyasu, Community Guide Usaini Ibrahim, Community Guide Muhammad Musa, Community Guide Usaini Abba, Community Guide Ahmad Magaji, Community Guide Sule Abdulkadir, Community Guide Bashir Muhammad, Community Guide Ahmad Hunainu, Community Guide

Adamu Mukaddas, Community Guide Sani Lawan, Community Guide Sama'ila Abdulsalam, Community Guide Adamu Sulaiman, Community Guide Sa'idu Garba, Community Guide Muhammad Lawal, Community Guide Ibrahim Gora, Community Guide Musa Ibrahim. Community Guide Haruna Sule, Community Guide M. Unguwa Malan Garba, Community Guide Alh. Abubakar Usman, Community Guide Halilu Umar, Community Guide Malan Sani Tela, Community Guide Malan Abdullahi Lawan, Community Guide Mika Ilu Zangina Me Ung, Community Guide Shehu Abdussalam, Community Guide Ismaila Magaji, Community Guide Bala Danjuma, Community Guide Bala Me Unguwa, Community Guide Amadu Zakari, Community Guide Ado Garba, Community Guide Shehu Umar, Community Guide Datti Umar, Community Guide Mal Ahmadu Bala, Community Guide Bala Hamza, Community Guide Hamisu Yusheu, Community Guide Shitumuhd, Community Guide Adamu Ibrahim, Community Guide Haruna Abdulhamid, Community Guide Abdllahi Abdulmalik, Community Guide Yakubu Abdullahi, Community Guide Kabiru Manya, Community Guide Idris Garba, Community Guide Shitu Dauda, Community Guide Musa Mansur, Community Guide Abubakar Rafi, Community Guide Bala Roka, Community Guide Mohammed Dutsi. Community Guide Umaru Kura, Community Guide Muhammad Dan Bukkuyum, Community Guide Nasiru Abubakar Mazaje, Community Guide Dan Amo Magaji Nasarawa, Community Guide Abubakar Shugaba, Community Guide Sabon Gari Aliyu, Community Guide Adamu Abdullahi, Community Guide Abu S/Malami, Community Guide Mansur Salisu, Community Guide Sabiu Salisu, Community Guide Murtala Abdullahi, Community Guide Magaji Aliyu, Community Guide Murtala Tukur, Community Guide Sani Maccido, Community Guide Sani Galadima, Community Guide Ibrahim Abdullahi, Community Guide Sani Usman Dan Ajawo, Community Guide Abubakar Nabuba, Community Guide Ashiru Ibrahim, Community Guide Malam Umar Waziri, Community Guide Malam Lawali, Community Guide Beelo Saidu Gura-Guri, Community Guide Maisallah Muhammad, Community Guide

Bilyaminu Murtala, Community Guide Lawali Dangaladima, Community Guide Murtala Yellow, Community Guide Mamman Dandutsi, Community Guide Jamilu Bakwai, Community Guide Kabiru Bala. Community Guide Yusuf Baburde, Community Guide Alivu Bawa. Community Guide Aliyu Buhari, Community Guide Daudu Galadima, Community Guide Sanusi Ibrahim, Community Guide Audu Dogari, Community Guide Malam Dahiru, Community Guide Ibrahim Rafi, Community Guide Muhammadu S. Fada, Community Guide Mustapha Madaro, Community Guide Abubakar Mustapha, Community Guide Ibahim Abdullahi, Community Guide Hamza Isa, Community Guide Abdullahi Salmanu, Community Guide Muhammed Bature, Community Guide Samaila Aliyu, Community Guide Nasiru Muhammad, Community Guide Anas Magaji, Community Guide Umaru Muhammad, Community Guide Maiunguwa Adamu, Community Guide Aminu Maiunguwa, Community Guide Sani Marafa. Community Guide Hameed Abdullahi, Community Guide Bello Umar, Community Guide Ibrahim Adamu, Community Guide Muhammad Wike, Community Guide Salisu Abubakar, Community Guide Shafiu Umar, Community Guide Sarkin Dogarai, Community Guide Magajin Gari, Community Guide Nura Muhammad, Community Guide Sufivanu Shuaibu, Community Guide Shehu Idris, Community Guide Sani Isah, Community Guide Sani Ibrahim, Community Guide Usman Lawal Danladi, Community Guide Muazu Jaafar, Community Guide Maiunguwa Tijjani Abdullahi, Community Guide Dalha Rabe, Community Guide Zaharaddeen Abbas, Community Guide Dayyabu Idris, Community Guide Magaji Abdulrahman, Community Guide Danmulki Sawani, Community Guide Husaini Abubakar Tsamiya, Community Guide Nasiru Musa, Community Guide Aminu Dageji, Community Guide Maiunguwa Yankuku, Community Guide Hamisu Abdullahi (Babangida), Community Guide Salisu Tukur, Community Guide Maiunguwa Bala, Community Guide Tasiu Abdu, Community Guide Hon. Alhasan Abdullahi, Community Guide Abdulrahman Mohd, Community Guide Maryam Muhammed, Community Guide Maigari Amadu, Community Guide

Musa Maigari, Community Guide Maiunguwa Radi, Community Guide Abu Damaga, Community Guide Hayatu Ashiru, Community Guide Maiunguwa Buhari, Community Guide Mal Umar Mustafa. Community Guide Usman Badamasi, Community Guide Salisu Musa, Community Guide Maiunguwa Muhammad Saadu, Community Guide Murtala Umar, Community Guide Maiunguwa Sadi Abdu, Community Guide Abdu Mamman, Community Guide Ayuba Abdullahi, Community Guide Muhammadu Sani Ibrahim, Community Guide Kabiru Rabiu, Community Guide Atiku, Community Guide Maiunguwa Musa Kyauta, Community Guide Yahya Gulbi, Community Guide Alhaji Sale Mamman, Community Guide Zayyana Ishaq, Community Guide Maiunguwa Adamu, Community Guide Muhammad Mustapha, Community Guide Maiunguwa Dawa, Community Guide Aminu Saidu, Community Guide Sani Abba, Community Guide Kabir Umar, Community Guide Bawa Na Wakili Maiunguwa, Community Guide Alhaji Hamza Maiunguwa, Community Guide Bukadi Tamawa, Community Guide Mal Ibrahim Sarkin Tasha, Community Guide Jaridu Tsuge, Community Guide Maigari Unguwar Gobir, Community Guide Lawal Yau, Community Guide Audu Yau, Community Guide Babangida Lawai, Community Guide Maiunguwa Lawai Salisu, Community Guide Shamsuddeen Abdullahi, Community Guide Haruna Usman. Community Guide Zakari Iliyasu, Community Guide Abubakar Lawal, Community Guide Sule Maiunguwa, Community Guide Maiunguwa Sani, Community Guide Maiunguwa Salisu, Community Guide Sadisu Unguwar Ganye, Community Guide Ahmad Danladi, Community Guide Abdulhadi Nasiru, Community Guide Maounguwa Aminu, Community Guide Maiunguwa Halilu, Community Guide Rabiu Saadu, Community Guide Sadam Yusuf, Community Guide Nazifi Usman, Community Guide Aminu Ibrahim, Community Guide Ibrahim Sani, Community Guide Murtala Abdulrazak, Community Guide Maiunguwa Sabiu, Community Guide Muhammad Dayyabu, Community Guide Maigari Sani, Community Guide Musbahu Yusuf, Community Guide Jamilu Fararu, Community Guide Abu Dandare, Community Guide Jafaru Abbas, Community Guide

Dan Isa Hakimi, Community Guide Garba Manuga Dan Auta, Community Guide Ibrahim Magaji, Community Guide Muhammadu Maiyaki, Community Guide Amadu Buda Hakimi, Community Guide Zavvanu Muhammad. Community Guide Nasiru Garba, Community Guide Garba Mai Katuru. Community Guide Rabiu Sarkin Fada, Community Guide Usman Garba, Community Guide Alh Salihu, Community Guide Samaila Illo, Community Guide Salihu Tudu, Community Guide Abdullahi Jima, Community Guide Ishaka Ibrahim Gada, Community Guide Dadi Dangaladima, Community Guide Salihu Aliyu Sarkin Yaki, Community Guide Bashiru Dan Jummai, Community Guide Sani Anguwa, Community Guide Mamuda Aliyu (Mudi), Community Guide Muhammadu Yahaya, Community Guide Haruna Alhassan, Community Guide Abdullahi Shawaki, Community Guide Ibrahim Yakubu, Community Guide Yahaya Turaku, Community Guide Abdullahi Ibrahim, Community Guide Junaidu Abdullahi, Community Guide Sukeiman Abubakar Milo, Community Guide Gado Hashimu. Community Guide Kasimu Ahmed, Community Guide Uwaisu Adamu, Community Guide Garba Hakimi, Community Guide Umar Abdu, Community Guide Abubakar Maigari Zayyara, Community Guide Chika Wakilin Maigari, Community Guide Gidado Maigari, Community Guide Alh. Adu Gada, Community Guide Dogari Shamaki Yar Tsakuwa, Community Guide Yusuf Abubakar Kware, Community Guide Ismaila Muhammad, Community Guide Sarkin Rafin Dunguji, Community Guide Halilu Mamman, Community Guide Bashir Alkali, Community Guide Mallam Kabiru Abdullahi, Community Guide Ibrahim Danzaria, Community Guide Umaru Maishanu, Community Guide Muktari Aliyu, Community Guide Malami Bello Mai Karfi, Community Guide Bello Shehu, Community Guide Muhammad, Community Guide Kasimu Muhammad, Community Guide Yusuf S. Gandu, Community Guide Mubarak Mubi, Community Guide Muhammad Roron Hakimi, Community Guide Bello Isa, Community Guide Abdullahi Maigari, Community Guide Dandare Taru, Community Guide Babangida Garba, Community Guide Dan Yaya Barmando, Community Guide Dogo Maidawa Sankira, Community Guide Umaru Mode, Community Guide

Musa Bello, Community Guide Abubakar Magani Mai Dange, Community Guide Yusuf Ibrahim, Community Guide Umaru Muhammadu, Community Guide Suleiman Aliyu, Community Guide Muhamadu Rafi. Community Guide Mallam Hassan, Community Guide Hamisu Aliyu, Community Guide Umaru Magaji, Community Guide Nura Umar, Community Guide Sulaiman Abubakar Dikko Dan Dauda, Community Guide Ali Maikifi, Community Guide Shehu Dangara, Community Guide Abubakar Sahabi, Community Guide Bello Maigari Tudu, Community Guide Shehu Garba, Community Guide Nasiru Dodo, Community Guide Haliru Sarki/Hali Kwardo, Community Guide Mustapha Bunu, Community Guide Magaji Bazai, Community Guide Hamidu, Community Guide Kaka Hakimi, Community Guide Livinus Timothy, Community Guide Bisi, Community Guide Bawa Kaduna, Community Guide Ezekiel, Community Guide Pius Kazah, Community Guide Jeffrev Ashu. Community Guide Nuhu Bako, Community Guide Irimiya Nuhu, Community Guide Lucious Emmanuel, Community Guide Banbaki James, Community Guide Sunday Peter, Community Guide Joshua Dandoka, Community Guide Caleb Danjuma, Community Guide Simon, Community Guide Isa Abdullahi, Community Guide Caleb. Community Guide Mai Angwa Bala Ango, Community Guide Ishaku Tanko, Community Guide Sani Yahaya, Community Guide Shehu Abdullahi, Community Guide Rayyanu, Community Guide Muhammed Mugatakarda, Community Guide Rabiu, Community Guide Genesis Yakubu, Community Guide Mr. John, Community Guide Alh. Yahaya, Community Guide Yahaya John, Community Guide Bakariya Sagir, Community Guide Mai Ungwa Nura Wata, Community Guide Yusuf Bawa, Community Guide Hassan Umar, Community Guide Baban Audi, Community Guide Ahmed Aliyu, Community Guide Usman Abdullahi, Community Guide Mai Ugwa Abubakar Muhammed, Community Guide Muhammed Auwal Adamu, Community Guide Aliyu Bello Zuata, Community Guide Idris Tahir, Community Guide Mai Ungwa Ayuba, Community Guide

Annas Zubairu, Community Guide Dalhatu Saidu Sarki, Community Guide Emmanuel Ogbole, Community Guide Haruna Hussaini D/Wai, Community Guide Ungwan Idi, Community Guide Zulvadani Alkasim. Community Guide Elisha Lawal, Community Guide Mai Angwa Shehu Samaidi, Community Guide Abubakar Abbas, Community Guide Mai Angwan Danjume, Community Guide Sa'adu Garba, Community Guide Munkaila Adamu, Community Guide Aliyu Audu, Community Guide Abubakar Yusuf, Community Guide Suleiman Abdullahi, Community Guide Mukkaila Adamu (Omo), Community Guide Jude Mayira, Community Guide Rabiu Inwura, Community Guide Shuaibu Tanimu, Community Guide Mallam Ibrahim Abdulkadir, Community Guide Musa Idris Ibrahim, Community Guide Murtala Adamu, Community Guide Ibrahim Chairman, Community Guide Saidu Abdulkarim, Community Guide Rabui Mohammed Taju, Community Guide Saidu Abdulkarim, Community Guide Silas Samaila, Community Guide Rabo Sarki. Community Guide Sarki Abdulhamid, Community Guide Abdul Ibada, Community Guide Daniel Danjuma, Community Guide Charlse, Community Guide Josiah Gwara, Community Guide Elisha Abba, Community Guide John Akawu, Community Guide Yahuza Aliyu Kakangi, Community Guide Hakim Adamu, Community Guide Christopher Sale, Community Guide Lawal Umar, Community Guide Michael Kunama, Community Guide Daniel Dudu Audu, Community Guide

## Laboratory Management

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Onokevbagbe Edewede, Lab Support HQ Staff Egbulefu Isaac, Lab Support HQ Staff North Central Zone

Chidi Ihesiaba, Zonal Lab Coordinator Emily Meshack, Sub-zonal Coordinator

## North East Zone

Musa Akusuk, Zonal Lab Coordinator Rita Wakili, Sub-zonal Coordinator

## North West Zone

Mikhail Abubakar, Zonal Lab Coordinator Abubakar Y. Koki, Sub-zonal Coordinator South East Zone

Sylvester Ojuigo, Zonal Lab Coordinator Immaculata Okoechya, Sub-zonal Coordinator South South Zone

Ogboi Sonny Johnbull, Zonal Lab Coordinator Promise Eneze, Sub-zonal Coordinator

### South West Zone

Jenrola Olarewaju Idris, Zonal Lab Coordinator Shafiu Gumel, Sub-zonal Coordinator

## **Satellite Lab Specialists**

Tinja Bukar, Satellite Lab Specialist Babagana Mohammed Aji, Satellite Lab Specialist Ukwen Riyebande Riken, Satellite Lab Specialist David Elija, Satellite Lab Specialist Natty Gilber, Satellite Lab Specialist Lynn Maori, Satellite Lab Specialist Usman Sadisu, Satellite Lab Specialist Obed Tibi, Satellite Lab Specialist Muhammed Musa, Satellite Lab Specialist Lubabaty A. Yusuf, Satellite Lab Specialist Ayuba Haruna Mallah, Satellite Lab Specialist Florence Ezekiel Pwana, Satellite Lab Specialist Tima Chida Male, Satellite Lab Specialist Christopher Rimamnyang M., Satellite Lab Specialist Mohammed Nuhu, Satellite Lab Specialist Sunday Liman Irmiya, Satellite Lab Specialist Fatima Alhaji Ajiya, Satellite Lab Specialist Zara Alkali Mustapha, Satellite Lab Specialist Glory Didam, Satellite Lab Specialist Mohammed Yahaya, Satellite Lab Specialist Aminu Minjibir Ibrahim, Satellite Lab Specialist Nasiru Tijjani Zubbairu, Satellite Lab Specialist Mansur Aminu, Satellite Lab Specialist Hajia Amina Ibrahim, Satellite Lab Specialist Amos Tonak, Satellite Lab Specialist Abubakar Babangida Usman, Satellite Lab Specialist Ibrahim Muhammad Kamilu, Satellite Lab Specialist Yahaya Ayuba, Satellite Lab Specialist Mohammed Kabir, Satellite Lab Specialist Badamasi Musa, Satellite Lab Specialist Nasiru Magaji Sadiq, Satellite Lab Specialist Bala Auna Isah, Satellite Lab Specialist Ahmed Habibu Badawi, Satellite Lab Specialist Ibrahim Muhammed Hassan, Satellite Lab Specialist Fatima Baba Suye, Satellite Lab Specialist Abdulrazak Dabjuma, Satellite Lab Specialist Veronica Umoh, Satellite Lab Specialist Kufreabasi Isaac, Satellite Lab Specialist Idongesit Udoh, Satellite Lab Specialist

Thomas Odey Jeremiah, Satellite Lab Specialist Thompson Ejuba, Satellite Lab Specialist Eseoghenemaro Jarikre, Satellite Lab Specialist Onuwa Ushiadi, Satellite Lab Specialist Henry Ugbor, Satellite Lab Specialist Ernest Igbinovia, Satellite Lab Specialist Valentine Ikalumhe, Satellite Lab Specialist Loveday Zeebdee, Satellite Lab Specialist Brown Princewill Emmanuel, Satellite Lab Specialist Andy-Nwokocha Mary, Satellite Lab Specialist Goodness Omu, Satellite Lab Specialist Kelechi Uzoma, Satellite Lab Specialist Lorine Daniel Ogheneke, Satellite Lab Specialist Chidera Florence Eke, Satellite Lab Specialist Elendu Kalu Eke, Satellite Lab Specialist Blessing Okezie, Satellite Lab Specialist Ikelionwu John, Satellite Lab Specialist Queenet Okeke, Satellite Lab Specialist Thomas Mbam, Satellite Lab Specialist Ikechukwu Ukeni, Satellite Lab Specialist Chima P. Chima, Satellite Lab Specialist Nkechi Umeh, Satellite Lab Specialist Ijeoma Assumpta Onyinbo, Satellite Lab Specialist Adaeze Ikeru, Satellite Lab Specialist Sabastine Chigozie Nwafor, Satellite Lab Specialist Victor Oma, Satellite Lab Specialist Joy Agu, Satellite Lab Specialist Ezeike Ogbu Michael, Satellite Lab Specialist Nri-Ezedi Chukwuebuka C., Satellite Lab Specialist Ejiofor Agbo, Satellite Lab Specialist Are Olawaremi, Satellite Lab Specialist Egwumah Christian, Satellite Lab Specialist John Atizi, Satellite Lab Specialist Grace Adachi, Satellite Lab Specialist Regina Aluku, Satellite Lab Specialist Princess Young, Satellite Lab Specialist Orji Chiamaka Chisolyte, Satellite Lab Specialist Onvinve Joe Alago, Satellite Lab Specialist Stephen Anawo, Satellite Lab Specialist Gabriel Bolaji, Satellite Lab Specialist Stephen Davou, Satellite Lab Specialist Aniobi Frances Chinelo, Satellite Lab Specialist Elizabeth Duile, Satellite Lab Specialist Florence Roland, Satellite Lab Specialist Nwaiwu Chioma, Satellite Lab Specialist lyke Adebi, Satellite Lab Specialist Izegbe Chukwunoso, Satellite Lab Specialist Muyiwa Olaiya, Satellite Lab Specialist Kelechi Uzoma Ibezim, Satellite Lab Specialist Yinka Akinfenwa, Satellite Lab Specialist Olusegun Ayinla Fasina, Satellite Lab Specialist Faderera Ogunoye, Satellite Lab Specialist Peter Olowoniyi, Satellite Lab Specialist Oluwaseyi Bamisaye, Satellite Lab Specialist Julius Ademoyegan, Satellite Lab Specialist Adetunji Alao, Satellite Lab Specialist Samuel olalere Obadire, Satellite Lab Specialist Afeez Rasheed, Satellite Lab Specialist Olarinde Olaide, Satellite Lab Specialist Folake Abiodun, Satellite Lab Specialist Oluwafemi Omokayode, Satellite Lab Specialist

Bamidele Fatade, Satellite Lab Specialist Opeyemi Laluwoye, Satellite Lab Specialist Opeyemi Ojo, Satellite Lab Specialist Roseline Anerunoye, Satellite Lab Specialist Emmanuel Olawale Ogunmola, Satellite Lab Specialist Oiokuku Hammed, Satellite Lab Specialist Adeveye Adetunji Tam, Satellite Lab Specialist Similoluwa Afolabi, Satellite Lab Specialist Shande Thomas, Lab Focal Person Eikojonwa Jibrin Alabila, Lab Focal Person Enokela Moses Omene, Lab Focal Person Ahaneku Anthony I. Osuji, Lab Focal Person Alao Oluwasina Ezekiel, Lab Focal Person Mrs. Mbah Nwando, Lab Focal Person Yusuf Paul Omolori, Lab Focal Person Iduh Jeremiah Adama, Lab Focal Person Baba Abraham Ajoru, Lab Focal Person Alamu Abimbola Rukayat, Lab Focal Person Ishaq Zainab Nosu, Lab Focal Person Loyede Bidemi Terasar, Lab Focal Person Etosu Ogoh Stephen, Lab Focal Person Kelechi Ibezim, Lab Focal Person Maga Ishaya Ayuba, Lab Focal Person Mohammed Kudu Shehu, Lab Focal Person Major Khanu, Lab Focal Person Aliyu Alhassan, Lab Focal Person Rindap NimzeJohn, Lab Focal Person Timothy Nuhu Pam, Lab Focal Person AjalaEse, Lab Focal Person Nayingi Kefas, Lab Focal Person Chris Lawrence, Lab Focal Person Pwakutti Theodore, Lab Focal Person Denis Wayagoron, Lab Focal Person Yusuf Abdul, Lab Focal Person Abubakar Sarafa, Lab Focal Person Wo Kadala Reuben/Kevin Ajayi, Lab Focal Person Manu Abubakar Dauda, Lab Focal Person Dibal Arhvel Wandali. Lab Focal Person Luka Joseph, Lab Focal Person Famoriyo Lateef, Lab Focal Person Godwin Nwep, Lab Focal Person UsmanAdbdulrasheed, Lab Focal Person Stephen Funam, Lab Focal Person Modu Aji Kolo, Lab Focal Person Mohammed Yasidi, Lab Focal Person Ado Mohammed Salisu, Lab Focal Person Sulaiman Abdulkadir Saeed, Lab Focal Person Mohammed Tukur Abubakar, Lab Focal Person Bayei Kezaih D.J., Lab Focal Person Sadiya H. Umar, Lab Focal Person Haruna Abdullahi Dauda, Lab Focal Person Samuel Onyekwere, Lab Focal Person Iro Mamman Kkr, Lab Focal Person Babangida Samuel, Lab Focal Person Kabiru Haruna Yeldu, Lab Focal Person Ene Martina Onyilo, Lab Focal Person Nura Altine, Lab Focal Person Sani Y. Mohammed, Lab Focal Person Muhammad Alto Abubakar, Lab Focal Person Usman Aliyu Turaki, Lab Focal Person

Sulaiman Ahmad, Lab Focal Person Aminu Shehu, Lab Focal Person Frederick Okosun, Lab Focal Person Yarima Aliyu Ibrahim, Lab Focal Person David Chioma Blessing, Lab Focal Person Ulu Okechukwu, Lab Focal Person Onvekonwu Vivian, Lab Focal Person Chioma Opara, Lab Focal Person Elder Dr. Dan Onyia, Lab Focal Person Idam Frederick, Lab Focal Person Onwuka Kalu Chima, Lab Focal Person Emmanuel Ngwu, Lab Focal Person Ohanaka Juliana Chinyere, Lab Focal Person Nsonwu Cajetan Chibuike, Lab Focal Person Mr. Ederi Aginaye Solomon, Lab Focal Person Mrs. Ebasi Nneka Nwokorie, Lab Focal Person Mr. Amang Richard, Lab Focal Person Mr. Wilson Omang, Lab Focal Person Ogban Ibor Eni, Lab Focal Person Ukwamedua Henry, Lab Focal Person Nze Ikechukwu Francis, Lab Focal Person Mr. Francis Omuera, Lab Focal Person Mrs. Evelyn Okorie, Lab Focal Person John-Wuzuigwe Roseline, Lab Focal Person Mr. John Alwell, Lab Focal Person Dr. Friday Ido, Lab Focal Person Mrs. UmohBenedict Christiana, Lab Focal Person Mrs. Tolu Fafure Benson, Lab Focal Person Idowu Adenike Adebimpe, Lab Focal Person Yusuf Rafiu Adekunle, Lab Focal Person Peter Mauton, Lab Focal Person Ibikunle Margaret Olufemi, Lab Focal Person Mrs. Oke A.O., Lab Focal Person Akintaju Felix, Lab Focal Person Mrs. Adesola Alawode, Lab Focal Person Mrs. Ogunbiyi M.A., Lab Focal Person Mr. Ajayi Olalekan, Lab Focal Person Mr. Esan Olubunmi E., Lab Focal Person Mrs. Kolawole Lydia Iyabo, Lab Focal Person Mrs. Onavade Temitope, Lab Focal Person Mr. Niyi Raheem, Lab Focal Person Mr. Adetona Atiba, Lab Focal Person Major Abidoye Yetunde, Lab Focal Person

# APPENDIX E HOUSEHOLD QUESTIONNAIRE

## NIGERIA AIDS INDICATOR AND IMPACT SURVEY (NAIIS)

HOUSEHOLD QUESTIONNAIRE

IDENTIFICATION (1)				
PLACE NAMENAME OF HOUSEHOLD HEAD ENUMERATION AREA I				
INTERVIEWER VISITS				
	1	2	3	FINAL VISIT
DATE INTERVIEWER NAME RESULT*				DAY MONTH YEAR INT. NUMBER RESULT
NEXT VISIT: DATE TIME				TOTAL NUMBER OF VISITS
*RESULT CODES: 1 COMPLETED 2 NO HOUSEHOLD MEMBER AT HOME OR NO COMPETENT RESPONDENT AT HOME AT TIME OF VISIT 3 ENTIRE HOUSEHOLD ABSENT FOR EXTENDED PERIOD OF TIME 4 POSTPONED 5 REFUSED 6 DWELLING VACANT OR ADDRESS NOT A DWELLING 7 DWELLING DESTROYED 8 DWELLING NOT FOUND 9 OTHER				TOTAL ELIGIBLE MEN (ADULTS AND MATURE MINORS)         TOTAL ELIGIBLE WOMEN (ADULTS AND MATURE MINORS)         TOTAL ELIGIBLE CHILDREN (6 TO 14 YEARS)         TOTAL CHILDREN (0 MONTHS TO 5 YEARS)
NAME AND ID OF SUPERVISOR				

# MODULE 0: HEAD OF HOUSEHOLD ELIGIBILITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
H1A	IS [NAME] AGED 18 YEARS OR OLDER?		
	HOUSEHOLD HEAD MUST BE 18 YEARS OF OLDER, OR MUST BE AN EMANCIPATED MINOR AGE 15-17 YEARS.	YES 1 NO 2	→ H2
H1B	IS [NAME] AGED 15 YEARS OR OLDER?	YES 1 NO 2	INELIGIBLE 
H1C	IS [NAME] AN EMANCIPATED MINOR?		
	AN EMANCIPATED MINOR IS 15-17 YEARS OF AGE WHO IS MARRIED, OR PREGNANT, OR A PARENT, OR HEAD OF THE HOUSEHOLD.	YES	INELIGIBLE →END INT.
H2	DOES [NAME] HAVE A HEARING DISABILITY?		
	OBSERVE IF THE PARTICIPANT HAS DIFFICULTY ENGAGING IN CONVERSATIONS.	YES 1 NO 2	→ H4
H3	CAN THE SURVEY TEAM ACCOMMODATE HEARING DISABILITY OF [NAME]?	YES	INELIGIBLE ∵END INT.
H4	CAN SURVEY BE CONDUCTED IN A LANGUAGE [NAME] SPEAKS?	YES 1 NO 2	INELIGIBLE →END INT.
H5	DOES [NAME] HAVE A VISUAL IMPAIRMENT?	YES 1 NO 2	→ H8
H6	ASK [NAME] TO READ THE TEXT BELOW.		
	Purpose of Survey: This survey will help us know how many people in Nigeria health services. Your taking part will help the Federal Minis Nigeria.		
H7	WAS [NAME] ABLE TO READ THE TEXT WITHOUT MUCH PROBLEM?	YES 1 NO 2	→ Н9
H8	IS [NAME] ABLE TO IDENTIFY A WITNESS?	YES 1 NO 2	INELIGIBLE →END INT.
H9	IS [NAME] COGNITIVELY ABLE TO CONSENT?	YES 1	→ H10
	DOES THE RESPONDENT UNDERSTAND THE TEXT		INELIGIBLE
	HE/SHE HAS READ?	NO 2	► END INT.

2A) Just te any other not listed? 2B) Are te your family usually live 2C) Are th anyone els anyone els listed?	10	60	80	07	06	05	94	03	02	01			_	NO.		Т
(2) Just to make sure that I have a complete listing: are there any other presons such as small children or infants that we have not listed? 20) Are there any other people who may not be members of 20) Are there any othersetic servants, todgers, or friends who usually two there? Scalar betwee any quests or temporary visitors staying here, or anyone else who stayed here last night, who have not been listed?											AFTER LISTING THE NAMES AND RECORDING THE REALTIONSHIP AND SEX FOR EACH PERSON ASK QS 2A-2C TO DE SURE THAT THE LISTING IS CONDETE: LISTING IS CONDETE: LISTING IS CONDETE: CIDE STONSIN IN COLUMNAS FOR FACH PERSON.	Please give me the first names of the persons who usually we in your household or guests of the household who steped have last night, starting with the head of the household can be also mean who have not usually lives in your household someone who your household and other contributes to food and other shared household resources.	2	USUAL RESIDENTS AND VISITORS		-
I listing: are there infants that we have be members of ers, or friends who ers, or friends who rs staying here, or have nd been												What is the relationship of (NAME) to the head of the household? SEE CODES BELOW.	з	RELATIONSHIP TO HEAD OF HOUSEHOLD		
	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	M F 1 2		ls (NAME) male or female?	4	SEX		
ADD TO TABLE   ADD TO TABLE   ADD TO TABLE	2	1	1 22	1 2	2	1 2	1	1 2	1 2	Y N		Does (NAME) (NAME) usually silve here?	σ	RESIDENCE		
	1 2	1 2	~ ~	1 2	1 2	1 2	1 2	1 2	1 22	Y N		Did (NAME) ( stay here last night?	6	INCE		
CODES 1 01 = HEAD 02 = WIFE 03 = SON.U 04 = SON.U 05 = GRAN 05 = GRAN 05 = PAREL 07 = PAREL 07 = PAREL 08 = BROT	2	2	^	2	2	1	^	^	^	1 2	CIRCLE 'Z FOR MONTHS IF AGE IS LESS THAN ONE YEAR 1 = YEAR 2 = MONTH	How old is (NAME)? CIRCLE '!' CIRCLE '!' CIRCLE '!' IF AGE 95 OR MORE RECORD '95'	7	AGE		
CODES FOR Q. 3: RELATIONSHIP TO H Q1 = VIEAD Q2 = WIFE OR HUSBAND OR PARTNER Q2 = SON OR DAUGHTER-IN-LAW Q2 = SON OR DAUGHTER-IN-LAW Q2 = SRANDCHLD Q3 = PARENT-IN-LAW Q3 = BROTHER OR SISTER Q4 = BROTHER OR SISTER	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	Y N DK 1 2 3	MARRIED, MARRIED, OR HARN, OR IS NO LONGER MUNDER THE UNDER THE CARE OF A PARENT/ GUARDIAN	Is (NAME) a mature minor? A MATURE A MATURE MINOR ISA PERSON 15- 17 YEARS 0F AGE VFAO IS	9	MATORE MINOR STATUS, IF AGE IS 15- 17 YEARS		
RELATIONSH AND OR PAR HTER R DAUGHTER NSTER	1 2 T 8 GO TO 11	1 2 T 8	1 2 T 8 GO TO 11	1 2 T 8 GO TO 11	1 2 T 8 GO TO 11	1 2 T 8 GO TO 11	1 2 T 8 GO TO 11	1 2 T 8 GO TO 11	1 2 7 8 GO TO 11	Y N DK 1 2 T 8 GO TO 11		ls (NAME)'s natural mother alive?	10			
CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD = HEAD = WIFE OR HUSBAND OR PARTNER = SON OK DAUGHTER: INLLAW = SONALLUD OR DAUGHTER: INLLAW = SONALUD OR DAUGHTER: INLLAW = SONALUD OR DAUGHTER: INLLAW = SARENT = SARENT: INLAW = SARENT: INLAW = SARENT: INLAW = SARENT: INLAW				<u> </u>		<u> </u>					IF YES. RECORD MOTHERS LINE NUMBER, SKIP TO 12. IF NO: RECORD '00' IF NATURAL MOTHER NOT PRESENT IN HOUSEHOLD	Does (NAME)'s natural mother usually live in this household or was she a guest last night?	10a			
HOUSEHOLD	1 2 T 8 GO TO 12	1 2 T 8 GO TO 12	1 2 7 8 GO TO 12	1 2 T 8 GO TO 12	1 2 7 8 GO TO 12	1 2 T 8 GO TO 12	1 2 7 8 GO TO 12	1 2 T 8 GO TO 12	1 2 - 8 GO TO 12	Y N DK 1 2 7 8 GO TO 12		Does (NAME) female guardian?	=	9		НОС
09 = NIECE OR NEPHEW 11 = CO-WIFE 12 = OTHER RELATIVE 13 = ADOPTE OR FOSTER OR STEPOHLD 14 = NOT RELATED 89 = DONT KNOW											FF YES: RECORD FEMALE GLARDJAN'S LINE NUMBER. IF NO: RECORD '00 IF FEMALE GLARDJAN NOT PRESENT IN HOUSEHOLD	Does (NAME's female guardian usually live in this household or was she a guest last night?	11a	ORPHAN STATUS/PARENT OR GUARDIAN	IF AGE 0-17 YEARS	HOUSEHOLD SCHEDULE
NEPHEW LATIVE OR FOSTER OR HLD TTED	1 2 8 GOTO 13	1 2 7 8 GO TO 13	1 2 7 8 GO TO 13	1 2 T 8 GO TO 13	1 2 8 GO TO 13	1 2 T 8 GO TO 13	1 2 8 GO TO 13	1 2 T 8 GO TO 13	1 2 <del>8</del> GOTO 13	Y N DK 1 2 7 8 GO TO 13		Is (NAME)'s natural father alive?	12	ARENT OR GU	ARS	TEDULE
											IF YES: RECORD FATHERS LINE NUMBER, SKIP TO 14. IF NO: RECORD '00' IF NATURAL FATHER NOT PRESENT IN HOUSEHOLD	Does natural father natural father usually live in this household or household or household or guest last guest last night?	12a	ARDIAN		
'	1 2 T 8 GO TO 14	1 2 T 8 G0 TO 14	1 2 7 8 G0 TO 14	1 2 T 8 GO TO 14	1 2 T 8 G0 TO 14	1 2 T 8 G0 TO 14	1 2 7 8 GO TO 14	1 2 <del>1</del> 8 G0 T0 14	1 2 7 8 G0 TO 14	Y N DK 1 2 7 8 GO TO 14		Does (NAME) have a male guardian?	13			
											GUARDIANS LINE NUMBER: IF NO: RECORD '00' RECORD '00' RECORD '00' RECORD '00' RECORD '00' NOT PRESENT N HOUSEHOLD	Does (NAME)'s male guardian usually live in this household or was he a guest last night? IF YES: RECORD	13a			
												LINE ULINE NUMBER OF PARENT/ GUARDAN WHO WILL FILL OUT FILL OUT CHLDREN S MODULE FOR FOR	14	IF AGE 0-14 YEARS		
	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	Y N 1 2		CHECK IF ELIGIBLE FOR SURVEY?	15	HOLD MEMBER S	FOR ALL	
	1 2 8 GO TO NEXT	1 2 T 8 GO TO NEXT	1 2 7 8 GO TO NEXT	1 2 T 8 GO TO NEXT	1 2 8 GO TO NEXT	1 2 T 8 GO TO NEXT	1 2 8 GO TO NEXT	1 2 8 GO TO NEXT	1 2 8 GO TO NEXT	Y N DK 1 2 T 8 GO TO NEXT	IF NO, GO TO NEXT MEMBER (9)	Does (NAME) have a wife or co- habiting partner who usually lives in this household or was a guest last night?	16			
												Please give name of (NAME)'s wife/partner. RECORD LINE RECORD LINE NUMBER OF NUMBER OF PARTNER	16a	WIVES AF	PONDENT IS MAL	
												Does (NAME) have any other wife or co- habiting partner who usually lives in this household or was a guest last night? IF YES, RECORD LINE	16b	ND CO-HABITAT	LE AND 18 YEARS	
												<ul> <li>Does (NAME) there will or co-habiting partner will ves in this household this household this or use a guest last night?</li> <li>IF YES RECORD LINE</li> </ul>	16c	WIVES AND CO-HABITATING PARTNERS	IF RESPONDENT IS MALE AND 18 YEARS OR OLDER, OR MATURE MINOR (SEE COLUMN 7)	
												Does (NAME) have any d ther wife or t co-habiting partner who usually lives in this household or was a guest	16d		<b>URE MINOR</b>	

2A) Just tr any other j not listed? 2B) Are tr your family USUAIP live 2C) Are th anyone eis listed?	20	19	17	16	15	14	13	12	1	1 N E	
2A) Just to make sure that I have a complete listing: are there any other persons such as small children or infants that we have not liseo? 2B) Are there any other people who may not be members of your family, such as domestic servants, lodgers, or friends who your family, such as domestic servants, lodgers, or friends who your family, such as domestic nerupoary visitors staying here, or anyone else who stayed here last night, who have not been listed?										2 Place give me the first names of the persons who usually lives in your household who shaved here last night, starting with the head of the household, who shaved here last night, starting with the head of the household who shaved here last night, starting with the head of the household who shaved here last ownhouse to food and other some of household resources. SARD RECORDING THE NAMES AND RECORDING THE NAMES AND RECORDING THE NAMES AND RECORDING THE NAMES AND RECORDING THE RELATIONSHIP AND SECK FOR EACH TERESON, AKS OS. 2A-2C TO BE SUBE THAT THE LISTING'S COMPLETE LISTING'S COMPLETE LISTING'S COMPLETE CULESTION'S IN COLUMNS 5- 160 FOR BUCH PERSON.	
e listing; are there infants that we have t be members of gers, or friends who rs staying here, or rave not been have not been										RELATIONSHIP TO HEAD OF If Walanship of (WAWE) to the NUMAWE) to the NUMAWE) to the NUMAWE of the household? SEE CODES BELOW.	
		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 M F	4 4 Is (NAME) female or female/	
<ul> <li>ADD TO</li> <li>TABLE</li> <li>ADD TO</li> <li>TABLE</li> <li>ADD TO</li> <li>ADD TO</li> <li>TABLE</li> </ul>		1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 Y 2 N	S Does (NAME) usually live here?	
s s s		1 1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 Y 2	RESIDENCE 5 6 6 8 Mis D (NAME) here? last here? night?	
01 =		1 2	1	 ≥	1 2	1 2	1 2	1	1 2	AGE 7 7 (NAME)? CIRCLE :'T FORACLE :'T FORACLE :'T FORACLE :'T FAGE IS OF MORE. NOVITHS ENCOMPAS LESS LESS LESS LESS LESS LESS LESS LE	
CODES FOR Q. 3: RELATIONSHIP TO HEAD OF HOUSEHOLD 01 = HEAD 22 = WIFE OR HUSBAND OR PARTNER 23 = SON OR DAUGHTER-IN-LAW 63 = GRANCHLD 65 = GRANCHLD 66 = PARENT-IN-LAW 66 = BROTHER OR SISTER 68 = BROTHER OR SISTER	1 1 2 2 3 3	 2 ຜ	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	Y N DK	MATURE MINOR SETUS IF ASETUS IF INVERS 9 Is (NAME) a mature mino// NAME AMATURE MINOR A MINOR IS MINOR IS OF ASE OF ASE O	
3: RELATION: BAND OR PA SHTER DR DAUGHTE DR DAUGHTE SISTER	1 2 7 8 GO TO 11		1 2 <b>↓</b> 8 GO TO 11	1 2 GO TO	1 2 T 8 GO TO 11	1 2 T 8 GO TO 11	1 2 ↓ GO TO	1 2 T 8 GO TO 11	1 2 ↓ G0 TC	F Is (NAME)'s mother alive?	
<b>SHIP TO HE</b> A ARTNER ER-IN-LAW			1 8		0 11 0 11		0 11			Does (NAME natural guestit guestit night? swume swum swume swum swum swum swume swum swum swume swum swum swum swum swum swum	
D OF HOUSE										b or	
EHOLD 09 111 12 13 98	₫ ←   ₫ ←	2 - 8 G0 T0 12 2 - 8	2 T 8 GO TO 12	2 T 8 GO TO 12	2 T 8 GO TO 12	2 T 8 GO TO 12	2 T 8 GO TO 12	2 T 8 GO TO 12	N DK 2 7 8 GO TO 12	11 (NAME) female guardian? las F	_
09 = NECE OR NEP 11 = CO-WIFE 12 = OTHER RELAT 13 = ADOPTED OR I 35TEPCHLD 88 = DONT KNOW										HAN STATUS/PAI	IF AGE 0-17 YEARS
99 = DONT KNOW 99 = DONT KNOW	GO TO 13 1 2 ↓ 8 GO TO 13	1 2 8 GOTO 13	1 2 T 8 GO TO 13	1 2 G0 T0	1 2 T 8 GO TO 13	1 2 T 8 GO TO 13		1 2 T 8 GO TO 13	Y N DK 1 2 8 GO TO 13	1     11     12     1       1     11a     11a     12       1     11a     11a     11a       1     11a     11a     11a </td <td>ARS</td>	ARS
X			-13 8	-13 8	- 8	8	- 8	- 8		GUARDIAN 12a 13 13 14 14 14 14 14 15 16 16 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 17 16 16 17 16 16 17 16 16 17 16 16 17 16 16 17 16 16 17 16 16 17 16 16 17 16 16 17 16 16 17 16 16 16 17 16 16 16 17 16 16 17 16 16 16 16 17 16 16 16 17 16 16 16 17 16 16 16 16 16 16 16 16 16 16 16 16 16	
	0 0	2 - 8 G0 T0 14	2 7 8 GO TO 14	2 7 8 GO TO 14	2 T 8 GO TO 14	2 7 8 GO TO 14	2 T 8 GO TO 14	2 T 8 GO TO 14	N DK 2 7 8 GO TO 14	13 Does (NAME) guardian? guardian? g	
										13a Does (NAME)'s male guardian male guardian tustality line in ustality line in ustality line in ustality line or was he a guest last night? guest last night? FFCORD MALE CRUARDIAN NOT FECORD NOT N	
			$\square$							IF AGE 0.14 YEARS LINE ORD LINE ORD NUMBER NUMBER PARENT/ PARENT/ PARENT/ PARENT/ PARENT/ PARENT/ PARENT/ PARENT/ PARENT/ PARENT/ PARENT/ PARENT/ PARENT/ SUCOULE FOR (NAME)	1
		1 1 2 2	1 2	1 2	1 2	1 2	1 2	1 2	×	4 HOUSE- HOUSE- S S CHECK IF (NAME) FOR SURVE? V V V V	FOR AL
	GO 1 GO	1 2 ↓ 8 GO TO NEXT	GO TO NEXT	GO TO NEXT	GO TO NEXT	GO TO NEXT	GO TO NEXT	GO TO NEXT	GO TO NEXT	Does Does A AN have or co or co habit have guess guess night hous guess fin thi hous guess	
			×	×i ®		×	8			Miles       16a       ne bese give       ne the set of the s	ESPONDENT I
										a 18 a 18 give have any trime. partner wite or could be the have any wite or could be the have any wite or could the have any the have any t	S MALE AND
										16b 16b 16b Does (NANE) have any other wife or co- mabiling partner who partner who partner who partner who partner who partner who partner who partner who have any other this household this household his household his household his household partner P. NUMBER OF NUMBER OF NU	18 YEARS OR E COLUMN 7)
										Its         Its         Its           rease give ene the ame of the those any other function.         Does (NAME) have any other have any co-habing or vas a guest of the household or vas a guest inter who under for have so inter vice have so have so h	IF RESPONDENT IS MALE AND 18 YEARS OR OLDER, OR MATURE MINOR (SEE COLUMN 7)
										s fed fed fed fed fed fed fed fed	AT URE MINOR

# HOUSEHOLD CHARACTERISTICS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	What is the <b>main</b> source of drinking water for members of your household?	PIPED WATERPIPED INTO DWELLING11PIPED TO YARD/PLOT12PUBLIC TAP/STANDPIPE13PIPED TO NEIGHBOR14TUBE WELL OR BOREHOLE21DUG WELL71PROTECTED WELL31UNPROTECTED WELL32WATER FROM SPRING	<b>→</b> 101B
		PROTECTED SPRING41UNPROTECTED SPRING42RAINWATER51TANKER TRUCK61CART WITH SMALL TANK/JERRY61CAN/CARTLESS VENDOR71SURFACE WATER (RIVER/DAM/ LAKE/POND/STREAM/CANAL/ IRRIGATION CHANNEL)81BOTTLED WATER/DISPENSER WATER91SACHET (PURE) WATER92	
		OTHER 96 (SPECIFY) 98 DON'T KNOW	
101A	Where is the water source located?	IN OWN DWELLING	
101B	Do you do anything to the water to make it safer to drink?	YES	]→ 103
102	What do you usually do to make the water safer to drink? Anything else? RECORD ALL MENTIONED	BOIL       A         USE WATER FILTER (CERAMIC/         SAND/COMPOSITE/ETC)       B         SEDIMENTATION (LET IT STAND         AND SETTLE)       C         DISINFECTION (WATERGUARD, BLEACH,         CHLORINE       D         STRAIN THROUGH A CLOTH       E         ALUM       F         SOLAR DISINFECTION       G         OTHER       X         (SPECIFY)       DON'T KNOW         V       REFUSED	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
103	What kind of toilet facility do members of your household usually use?	FLUSH OR POUR FLUSH TOILET         FLUSH TO PIPED SEWER SYSTEM         FLUSH TO SEPTIC TANK         12         FLUSH TO SEPTIC TANK         12         FLUSH TO SEPTIC TANK         13         FLUSH TO PIT LATRINE         13         FLUSH TO SOMEWHERE ELSE         14         FLUSH, DON'T KNOW WHERE         15         PIT LATRINE         VENTILATED IMPROVED         PIT LATRINE (VIP)         PIT LATRINE WITH SLAB         OPEN PIT         23         COMPOSTING TOILET         31         BUCKET TOILET         41         HANGING TOILET/HANGING LATRINE         51         NO FACILITY/BUSH/FIELD         61         OTHER         96         (SPECIFY)         DON'T KNOW         98         REFUSED       99	→ 105
104	Do you share this toilet facility with other households?	YES 1 NO 2 OTHER6	]
		(SPECIFY) DON'T KNOW	▶ 104B
104A	Including your own household, how many households use this toilet facility?	NO. OF HOUSEHOLDS IF LESS THAN 10	
		10 OR MORE HOUSEHOLDS         95           DON'T KNOW         98           REFUSED         99	
104B	Where is this toilet facility located?	IN OWN DWELLING         1           IN OWN YARD/PLOT         2           ELSEWHERE         3	
105	Does your housheold have:	Y N DK R	
	<ul> <li>a) Electricity?</li> <li>b) A connection to the national grid?</li> <li>c) A solar power or inverter?</li> <li>d) A radio?</li> <li>e) A television?</li> <li>f) A non-mobile telephone?</li> <li>g) A computer?</li> <li>h) A refrigerator?</li> <li>i) A table?</li> <li>j) A chair?</li> <li>k) A bed?</li> <li>l) A sofa?</li> <li>m) A cupboard?</li> <li>n) An air conditioner?</li> <li>o) An electric iron?</li> <li>p) A generator?</li> <li>q) A fan?</li> </ul>	a) ELECTRICITY       1       2       8       9         b) NATIONAL GRID       1       2       8       9         c) SOLAR OR INVERTER       1       2       8       9         d) RADIO       1       2       8       9         e) TELEVISION       1       2       8       9         f) NON-MOBILE PHONE       1       2       8       9         g) COMPUTER       1       2       8       9         h) REFRIGERATOR       1       2       8       9         i) TABLE       1       2       8       9         j) CHAIR       1       2       8       9         k) BED       1       2       8       9         l) SOFA       1       2       8       9         m) CUPBOARD       1       2       8       9         n) AIR CONDITIONER       1       2       8       9         o) ELECTRIC IRON       1       2       8       9         q) FAN       1       2       8       9	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
106	What type of fuel does your household <b>mainly</b> use for cooking?	ELECTRICITY       01         LIQUID PROPANE GAS       02         NATURAL GAS       03         BIOGAS       04         PARAFFIN/KEROSENE       05         COAL, LIGNITE       06         CHARCOAL FROM WOOD       07         FIREWOOD       08         STRAW/SHRUBS/GRASS       09         ANIMAL DUNG       10         NO FOOD COOKED       95         OTHER       96         (SPECIFY)       98         DON'T KNOW       98         REFUSED       99	
	FOR QUESTIONS 107-109, OBSERVE, DO NOT ASK.		
107	MAIN MATERIAL OF THE FLOOR. RECORD OBSERVATION.	NATURAL FLOOR           EARTH/SAND         11           DUNG         12           RUDIMENTARY FLOOR         12           WOOD PLANKS         21           BAMBOO SLATS         22           FINISHED FLOOR         11           PARQUET OR POLISHED WOOD         31           VINYL OR ASPHALT STRIPS         32           CERAMIC TILES         33           CEMENT         34           CARPET/RUG         35           TERAZZO         36           OTHER         96           (SPECIFY)         11	
108	MAIN MATERIAL OF THE ROOF. RECORD OBSERVATION.	NO ROOF       11         NATURAL ROOFING       12         THATCH/PALM LEAF(CIYAWA)       12         MUD       13         RUDIMENTARY ROOFING       12         WOOD PLANKS       21         CARDBOARD       22         FINISHED ROOFING       32         WOOD       33         CALAMINE/CEMENT FIBER       34         CERAMIC TILES       35         CEMENT/CONCRETE       36         ROOFING SHINGLES       37         OTHER       96         (SPECIFY)       11	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
109	MAIN MATERIAL OF THE EXTERIOR WALLS. RECORD OBSERVATION.	NO WALLS       11         NATURAL WALLS       12         DIRT       12         CANE/PALM/TREE TRUNKS       13         BAMBOO WITH MUD       14         STONE WITH MUD       15         MUD       16         RUDIMENTARY WALLS       21         CARDBOARD       21         REUSED WOOD       22         PLYWOOD       23         UNBAKED BRICKS       24         CARTON       25         FINISHED WALLS       31         WOOD PLANKS/SHINGLES       31         UNBAKED BRICKS COVERED       32         WITH PLASTER       33         BRICKS       34         CEMENT BLOCKS       35         CEMENT       36         STONE WITH LIME/CEMENT       37	
		OTHER 96 (SPECIFY)	
110	How many rooms in this household are used for sleeping?	ROOMS         98           DON'T KNOW         98           REFUSED         99	
111	Is the cooking usually done in the house, in a separate building, or outdoors?	IN THE HOUSE	]→ 113
112	Do you have a separate room which is used as a kitchen?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	
113	Does any member of this housheold own: a) A watch? b) A mobile phone? c) A bicycle? d) A motorcycle or motor scooter? e) An animal-drawn cart? f) A car or truck? g) A boat with a motor? h) A canoe? i) A Keke Napep?	Y       N       DK       R         a) WATCH       1       2       8       9         b) MOBILE PHONE       1       2       8       9         c) BICYCLE       1       2       8       9         d) M-CYCLE/SCOOTER       1       2       8       9         e) ANIMAL-DRAWN CART       1       2       8       9         f) CAR/TRUCK       1       2       8       9         g) BOAT WITH MOTOR       1       2       8       9         h) CANOE       1       2       8       9         i) KEKE - NAPEP       1       2       8       9	
114	Does any member of this household have a bank account?	YES	
115	Does this household own any livestock, herds, other farm animals, camels, or poultry?	YES	]→ 117

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
116	How many of the following animals does this household own? IF NONE, RECORD '00'. IF 95 OR MORE, RECORD '95'. IF UNKNOWN, RECORD '98'.		
	a) Milk cows or bulls?	a) COWS/BULLS	
	b) Other cattle?	b) OTHER CATTLE	
	c) Horses, donkeys, or mules?	c) HORSES/DONKEYS/MULES	
	d) Goats?	d) GOATS	
	e) Sheep?	e) SHEEP	
	f) Chicken or other poultry such as ducks?	f) CHICKENS/POULTRY	
	g) Pigs?	g) PIGS	
	h) Camels?	h) CAMELS	
	i) Dogs?	i) DOGS	
	j) Other? SPECIFY:	j) OTHER	
117	Does any member of this household own any agricultural land?	YES	<b>→</b> 119
118	How many plot/acres/hectares of agricultural land do members of this household own?	PLOT 1	
		ACRES 2	
		HECTARES 3	
		95 OR MORE UNITS	
119	Does your household have any mosquito nets that can be used while sleeping?	YES	
120	How many mosquito nets does your household have?	NUMBER OF NETS	
	ASK TO OBSERVE ALL NETS. COUNT AND RECORD NUMBER.	IF MORE THAN 7, RECORD 7.	

# APPENDIX F ADULT QUESTIONNAIRE

# MODULE 0: ADULT RESPONDENT ELIGIBILITY

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
M1A	IS [NAME] AGED 18 YEARS OR OLDER?		
	ADULT REPSONDENT MUST BE 18 YEARS OF OLDER, OR MUST BE AN EMANCIPATED MINOR AGE 15-17 YEARS.	YES 1 NO 2	→ M2
M1B	IS [NAME] AGED 15 YEARS OR OLDER?	YES 1 NO 2	INELIGIBLE →END INT.
M1C	IS [NAME] AN EMANCIPATED MINOR? AN EMANCIPATED MINOR IS 15-17 YEARS OF AGE WHO IS MARRIED, OR PREGNANT, OR A PARENT, OR HEAD OF THE HOUSEHOLD.	YES 1 NO 2	→ PARENT ELIGIBILITY /CONSENT.
M2	DOES [NAME] HAVE A HEARING DISABILITY?		
	OBSERVE IF THE PARTICIPANT HAS DIFFICULTY ENGAGING IN CONVERSATIONS.	YES 1 NO 2	→ M4
М3	CAN THE SURVEY TEAM ACCOMMODATE HEARING DISABILITY OF [NAME]?	YES 1 NO 2	INELIGIBLE →END INT.
M4	CAN SURVEY BE CONDUCTED IN A LANGUAGE [NAME] SPEAKS?	YES 1 NO 2	INELIGIBLE 
M5	DOES [NAME] HAVE A VISUAL IMPAIRMENT?	YES 1 NO 2	→ M8
M6	ASK [NAME] TO READ THE TEXT BELOW.	•	
	Purpose of Survey: This survey will help us know how many people in Nigeria health services. Your taking part will help the Federal Minis Nigeria.		
M7	WAS [NAME] ABLE TO READ THE TEXT WITHOUT MUCH PROBLEM?	YES 1 NO 2	→ м9
M8	IS [NAME] ABLE TO IDENTIFY A WITNESS?	YES 1 NO 2	INELIGIBLE →END INT.
M9	IS [NAME] COGNITIVELY ABLE TO CONSENT?	YES 1	→ M10
	DOES THE RESPONDENT UNDERSTAND THE TEXT HE/SHE HAS READ?	NO 2	INELIGIBLE →END INT.

# MODULE 1: RESPONDENT CONSENT AND BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP				
100A	ENTER LINE NUMBER OF THE RESPONDENT FROM THE	HOUSEHOLD SCHEDULE:					
100B	ENTER NAME OF RESPONDENT: (RESPONDENT'S NAME)						
C1	OBTAIN CONSENT. DOES [NAME] AGREE TO PARTICIPATE IN THE SURVEY?	YES 1 NO 2					
L1	ENTER LANGUAGE OF THE QUESTIONNAIRE	ENGLISH       1         HAUSA       2         YORUBA       3         IGBO       4					
L2	ENTER LANGUAGE OF THE INTERVIEW	ENGLISH       1         HAUSA       2         YORUBA       3         IGBO       4         OTHER       6         (SPECIFY)					
L3	ENTER NATIVE LANGUAGE OF THE RESPONDENT	ENGLISH       1         HAUSA       2         YORUBA       3         IGBO       4         OTHER       6         (SPECIFY)					
L4	WAS A TRANSLATOR USED?	YES 1 NO 2					
100	Thank you for agreeing to participate in this survey. Now, I about yourself, your education, and work.	l would like to ask you some general questions					
101	CHECK: IS RESPONDENT MALE OR FEMALE?	MALE 1 FEMALE					
102	How old were you on your last birthday?	AGE IN COMPLETED YEARS					
103	What is your religion?	ISLAM       1         CHRISTIANITY       2         TRADITIONAL       3         NO RELIGION       4         OTHER       6         (SPECIFY)       6         DON'T KNOW       8         REFUSED       9					
104	Have you ever attended school?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	]→ 108				
105	Are you currently enrolled in school?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9					

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
106	What is the highest level of school you have attended? Is it primary, secondary or higher?	PRIMARY01JUNIOR SECONDARY02SECONDARY03A-LEVEL04UNIVERSITY OR ABOVE05TECHNICAL OR VOCATIONAL06ADULT LITERACY ONLY (NO FORMALEDUCATION)07KORANIC/RELIGIOUS ONLY (NOFORMAL EDUCATION)08DON'T KNOW98REFUSED99	
107	What is the highest [CLASS/YEAR] you completed at that level?	NONE         00           YEARS	
108	Have you done any work in the last 12 months for which you received cash or goods as payment?	YES       1         NO       2         DON'T KNOW       8         REFUSED       9	
109	Have you done any work in the last seven days for which you received cash or goods as payment?	YES       1         NO       2         DON'T KNOW       8         REFUSED       9	

## **MODULE 2: MARRIAGE**

NO.	QUESTIONS AND FILTERS				CODING CATEGORIES			
201	Have you ever be [man/woman] as	een married or lived togethe if married?	er with a	NO DON'T KI	NOWD	02 98		
202		u the first time you married n/woman] as if married?	or started	YEARS				
				FIRST DON'T KI	MARRIAGE OR TIME LIVED TOGETHER NOW	98		
203	What is your marital status now? Are you married, living together with someone as if married, widowed, divorced, or separated?				D OGETHER ED ED TED NOW	2 3 4 5 8	→ END MODULE	
203A	CHECK: IS RESI	PONDENT MALE OR FEM/				→ 212		
204	Altogether, how r have?	nany wives or live-in partne	_	R		→ END MODULE		
205		embers as your wives or pa IN THE HOUSEHOLD SCH						
205a	CHECK 16a-16d. RECORD NAMES OF WIVES AND PARTNERS FROM HOUSEHOLD.	(NAME)	(NAME	E)	(NAME)	(NAM	E)	
206	Is [NAME] your wife or partner?	YES 1 NO 2	YES		YES 1 NO 2	YES		
207	Does [NAME] live in the household?	YES 1 NO 2	YES		YES 1 NO 2	YES NO	····· 1 ····· 2 208 ←	
207a	DOES THE RESPONDENT HAVE ANOTHER WIFE OR PARTNER?	YES1 GO TO NEXT WIFE/PARTNER (205a) NO2 208	GO TO NEX WIFE/PART (205a) NO		YES1 GO TO NEXT WIFE/PARTNER (205a) NO2 208			

<sup>200</sup> Now I would like to ask you about your current and previous relationships and/or marriages.

NO.	QUESTIONS AND FILTERS		CODING CATEGORIES		SKIP		
208	Do you have additional spouse(s) or partner(s) that live with you?					→ 211	
209	How many addition you?	onal spouse(s) or partners(	s) live with	NUMBEF			
210	ENTER THE NAME OF [RESPONDENT'S] SPOUSE OR PARTNER THAT LIVE IN	DON'T KNOW 8	(NAME	DW8	(NAME)		ý W8
	HOUSEHOLD.	REFUSED9	REFUSED	-	REFUSED9	REFUSED	9
211	How many other live elsewhere?	wives or live-in partners do	you have who	SPOUSE DON'T K	R OF ADDITIONAL S OR PARTNERS NOW		→ END MODULE
211A	CHECK: IS RESI	PONDENT MALE OR FEM	ALE?	1			→ END MODULE
212	Is your husband or partner living with you now or is he staying elsewhere?			LIVING TOGETHER		▶ 216	
212A	CHECK Q.212: IS THE RESPODENT STAYING ELSEWHERE (CODED '2') AND THERE IS NO PARTNER LISTED IN THE HOUSEHOLD ROSTER				→ 216		
213	HUSBAND OR P	nformation shows that [NAM PARTNER] as your [husban s with you in this household	d or				
	Is that correct?		NO DON'T K	NOW	2 8	→ 216 → 216	
214	FROM THE HOUSEHOLD SCHEDULE SELECT THE SPOUSE OR PARTNER THAT LIVES WITH THE RESPONDENT			ME OF SPOUSE OR PAR		→ 216	
215	Please tell me th lives with you?	e name of your spouse/par	tner that	(NAI	ME OF SPOUSE OR PAR	TNER)	
				-	NOW		
216	Does your husband or partner have other wives or does he live with other women as if married?		NO DON'T K	NOW	2 8		
217		f, in total, how many wives ur husband or partner have			ER OF WIVES OR LIVE- IN PARTNERS		
					NOW D		

## **MODULE 3: REPRODUCTION**

NO.	QUESTIONS AND FILTERS		CODING CATEGORIES		SKIP	
300A	CHECK: IS RESPONDENT MALE OR FE	MALE?		E		→ 335A
301	How many times have you been pregnant including a current pregnancy?		NEVEF	ER OF TIMES		→ 335A
				KNOW		<b>→</b> 334
302	Have you ever had a pregnancy that resulted in a live birth?					
	A live birth is when the baby shows signs of life, such as breathing, beating of the heart or movement.		DON'T	KNOW	8	→ 334
303	How many live births have you had since January 2015?	the 1st of	NONE		00	→ 334
	ENTER '00' IF NONE.		DON'T	ER OF CHILDREN KNOW SED		
303a	Now I would like to ask you some question of January, 2015.	regnancy that resulted in a live birth since the 1st				
304	Did your last pregnancy result in birth to tw	vins or more?	NO DON'T	KNOW	2 8	]→ 306
305	What is the name of the [INSERT ORDER OF BIRTH] born child from your last pregnancy that resulted in a live birth? A live birth is when the baby shows signs of life, such as breathing, beating of the heart or movement. IF THE CHILD WAS NOT NAMED BEFORE DEATH, ENTER 'BIRTH 1'.	(NAME)		(NAME)	(NAME)	
305a	DID THE RESPONDENT HAVE ANOTHER CHILD BORN FROM THE LAST PREGNANCY?	YES GO TO TH NEXT CHIL NO 300	∃E ←] _D	YES1 GO TO THE NEXT CHILD NO2 306	YES GO TO NEXT C NO	THE

300 Now I would like to ask you some questions about pregnancies and children.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
306	What is the name of the child from your last pregnancy that resulted in a live birth? A live birth is when the baby shows signs of life, such as breathing, beating of the heart or movement. IF THE CHILD WAS NOT NAMED BEFORE DEATH,		
	ENTER 'BIRTH 1'.		_
		(NAME OF CHILD)	
307	When you were pregnant with [NAME], did you visit a health facility for antenatal care?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	318
308	What is the main reason you did not visit a clinic for antenatal care when you were pregnant with [NAME]?	CLINIC WAS TOO FAR AWAY       01         COULD NOT TAKE TIME OFF       02         WORK/TOO BUSY       02         COULD NOT AFFORD TO PAY       62         FOR THE VISIT       03         DID NOT TRUST THE CLINIC STAFF       04         RECEIVED CARE AT HOME       05         DID NOT WANT AN HIV TEST DONE       06         HUSBAND/FAMILY WOULD NOT       12         LET ME GO       07         USED TRADITIONAL BIRTH       ATTENDANT/HEALER         ATTENDANT/HEALER       08         COST OF TRANSPORT       09         RELIGIOUS REASONS       10         OTHER       96         (SPECIFY)       00N'T KNOW       98         REFUSED       99	
308a	Now, I will ask you some questions about HIV testing. Plea confidential and will not be shared with anyone else.	l se remember that your responses will be kept	
309	Were you ever tested for HIV before your pregnancy with [NAME]?	YES	→ <sup>312</sup>
310	Did you test positive for HIV before your pregnancy with [NAME]?	YES	→ 312
311	At the time of your first antenatal care visit when you were pregnant with [NAME], were you taking ARVs, that is, antiretroviral medications to treat HIV?	YES	]→ 316
312	During any of your visits to the antenatal care clinic when you were pregnant with [NAME], were you <u>offered</u> an HIV test?	YES	
313	Were you <u>tested</u> for HIV during any of your antenatal care clinic visits when you were pregnant with [NAME]?	YES	]→ 318

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES		SKIP
314	What is the main reason you were not tested for HIV during antenatal care with [NAME]?	DID NOT WANT AN HIV TEST DONE/DID NOT WANT TO KNOW MY STATUS . DID NOT RECEIVE PERMISSION FROM SPOUSE/FAMILY AFRAID OTHERS WOULD KNOW ABOUT TEST RESULT! DID NOT NEED TEST/LOW RISK OTHER (SPECIFY) DON'T KNOW REFUSED	1 2 3 4 6 8 9	318
315	What was the result of your last HIV test during your pregnancy with [NAME]?	POSITIVE NEGATIVE UNKNOWN/INDETERMINANTE DID NOT RECEIVE RESULTS DON'T KNOW REFUSED	1 2 3 4 8 9	318
316	Did you take ARVs during your pregnancy with [NAME] to stop [NAME] from getting HIV?	YES NO DON'T KNOW REFUSED	1 2 8 9	→ 318 ]→ 318
317	What was the main reason you did not take ARVs while you were pregnant with [NAME]?	NOT PRESCRIBED         FELT HEALTHY/NOT SICK         COST OF MEDICATIONS         COST OF TRANSPORT         COST OF TRANSPORT         RELIGIOUS REASONS         TAKING TRADITIONAL MEDICATIONS         DID NOT WANT PEOPLE TO         KNOW HIV STATUS         DID NOT RECEIVE PERMISSION         FROM SPOUSE/FAMILY         OTHER         (SPECIFY)         DON'T KNOW	01 02 03 04 05 06 07 08 96 98	
318	Where did you give birth to [NAME]?	REFUSED         AT HOME         AT A HEALTH FACILITY         IN TRANSIT         OTHER         (SPECIFY)         DON'T KNOW         REFUSED	99 1 2 3 6 8 9	→ 325 ]→ 325
319	Were you offered an HIV test during labor (at time of delivery)?	YES NO DON'T KNOW REFUSED	1 2 8 9	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
320a	CHECK 310: WAS RESPONDENT HIV POSITIVE BEFORE PREGNANCY WITH [NAME]?	YES 1 NO 2	→ <sub>322</sub>
320b	CHECK 315: DID RESPONDENT GET A POSITIVE TEST RESULT DURING PREGNANCY WITH [NAME]?	YES 1 NO 2	→ 322
320	Were you tested for HIV during labor?	YES       1         NO       2         DON'T KNOW       8         REFUSED       9	→ 325
321	What was the result of the HIV test?	POSITIVE1NEGATIVE2UNKNOWN/INDETERMINANT3DID NOT RECEIVE RESULTS4DON'T KNOW8REFUSED9	→ 325
322a	CHECK 311: WAS RESPONDENT ON ARVS AT TIME OF FIRST ANTENATAL CARE VISIT WHEN PREGNANT WITH [NAME]?	YES 1 NO 2	→ 325
322b	CHECK 316: DID RESPONDENT TAKE ARVS DURING PREGNANCY WITH [NAME]?	YES 1 NO 2	→ 325
322	During labor, were you offered ARVs to protect [NAME] against HIV?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	
323	During labor, did you take ARVs to protect [NAME] against HIV?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	]→ 325
324	Did you continue to take the ARVs after delivery?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	
325	When did you give birth to [NAME]? IF THE RESPONDENT DOES NOT KNOW, PROBE USING LOCAL EVENT CALENDAR	DAY	
		MONTH	
		YEAR	

NO.	QUESTIONS AND FILTER	RS		CODING CATEGORIE	ES SKIP
326	Is [NAME] still alive?	YES (SKIP TO 32	29) 🖵	YES 1 (SKIP TO 329)	YES 1 (SKIP TO 329)
		NO DON'T KNOW REFUSED (SKIP TO 32	8 9-	NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 329) ←	NO 2 DON'T KNOW 8 REFUSED 9- (SKIP TO 329) ←
327	How old was [NAME] in years when he/she died?	LESS THAN 1	YR 00	LESS THAN 1 YR 00	LESS THAN 1 YR 00
	ENTER '00' IF CHILD WAS LESS THAN ONE YEAR OLD.	AGE IN YEARS		AGE IN YEARS	AGE IN YEARS
		DON'T KNOW REFUSED (SKIP TO	. 99 -	DON'T KNOW 98 - REFUSED 99 - (SKIP TO 331) <del>-</del>	DON'T KNOW 98 - REFUSED 99 - (SKIP TO 331) ←
328	How old was [NAME] in months when he/she died?	LESS THAN 1	MO. 00	LESS THAN 1 MO. 00	LESS THAN 1 MO 00 7
	ENTER '00' IF CHILD WAS LESS THAN ONE MONTH OLD.	AGE IN MONTHS		AGE IN MONTHS	AGE IN MONTHS
		DON'T KNOW REFUSED (SKIP TO	. 99 -	DON'T KNOW 98 - REFUSED 99 - (SKIP TO 331) <del>-</del>	DON'T KNOW 98 - REFUSED 99 - (SKIP TO 331) -
329	Is [NAME] living with you?	YES NO DON'T KNOW REFUSED	2 8	YES	YES
330	ENTER THE LINE NUMBER AND NAME OF CHILD FROM THE HOUSEHOLD SCHEDULE	(NAME		(NAME)	(NAME)
		LINE NO		LINE NO	LINE NO
		NOT LISTED I HOUSEHOLD		NOT LISTED IN HOUSEHOLD 96	NOT LISTED IN HOUSEHOLD 96
331	Did you ever breastfeed [NAME]?	YES NO, NEVER BREASTFED NO, CHILD NOT ALIVE DON'T KNOW REFUSED (SKIP TO	) 2 3 - 9 -	YES 1 NO, NEVER BREASTFED2 NO, CHILD NOT ALIVE 3 - DON'T KNOW8 REFUSED9 (SKIP TO 334) ←	YES 1 NO, NEVER BREASTFED 2 NO, CHILD NOT ALIVE 3 DON'T KNOW 8 REFUSED 9 (SKIP TO 334)
332	For how long did you breastfeed [NAME]?	WEEKS1		WEEKS1	WEEKS 1
	RECORD ANSWER ONLY IN WEEKS OR IN MONTHS.	MONTHS2		MONTHS2	MONTHS 2
	CODE '00' IF LESS THAN 1 WEEK.	STILL BREASTFEEDIN DON'T KNOW REFUSED	998	STILL BREASTFEEDING 996 DON'T KNOW998 REFUSED	STILL BREASTFEEDING 996 DON'T KNOW 998 REFUSED
333	Thank you for the information regarding [NAME]. CHECK 305: DID THE LAST BIRTH HAVE MORE THAN ONE CHILD (I.E., TWINS, TRIPLETS)?	YES (SKIP TO NEXT NO	326) <b>~ _</b>	YES1 (SKIP TO NEXT 326) ◀ NO 2	YES 1 (SKIP TO NEXT 326)← NO 2

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES		SKIP
334a	Now, I will ask about your current pregnancies.			
334	Are you pregnant now?	YES NO DON'T KNOW/UNSURE REFUSED	1 2 8 9	→ END MODULE
335a	Now, I will ask you some questions about methods that are	used to avoid getting pregnant.		
335	Are you or your partner currently doing something or using any method to delay or avoid getting pregnant?	YES NO DON'T KNOW REFUSED	1 2 8 9	END MODULE
336	Which method are you or your partner using? SELECT ALL THAT APPLY.	FEMALE STERILIZATION         MALE STERILIZATION         PILL         IUD/COIL         INJECTIONS         IMPLANT         CONDOM         FEMALE CONDOM         RHYTHM/NATURAL METHODS         WITHDRAWAL         NOT HAVING SEX         OTHER         (SPECIFY)         DON'T KNOW         REFUSED	A B C D E F G H I J K X Z	

FOOTNOTE:

For Q.305, Q.326 to Q.333 - additional form(s) is/are required for multiple births.

#### MODULE 4: CHILDREN

### 400 THE HOUSEHOLD SCHEDULE NOTED THAT [NAME OF PARTICIPANT] WILL FILL OUT THE CHILDREN'S MODULE FOR [NUMBER OF CHILDREN].

I am going to ask you a number of questions about your child/children regarding their health and where they get their health services. We will ask you about these children:

	1			
NO.	QUESTIONS	CHILD 1	CHILD 2	CHILD 3
401A	ENTER THE NAME AND LINE NUMBER OF [CHILD].			
	Now, I am going to ask you about [CHILD NAME].	(NAME)	(NAME)	(NAME)
		LINE NO.	LINE NO.	LINE NO.
401	How old was [CHILD] in years at his/her last birthday?	LESS THAN 1 YR 00	LESS THAN 1 YR 00	LESS THAN 1 YR 00
	ENTER '00' IF CHILD IS LESS THAN ONE YEAR OLD.	AGE IN YEARS	AGE IN YEARS	AGE IN YEARS
		DON'T KNOW 98 - REFUSED 99 - (SKIP TO 403) -	DON'T KNOW 98 - REFUSED 99 - (SKIP TO 403) -	DON'T KNOW 98 - REFUSED 99 - (SKIP TO 403) -
402	How old is [CHILD] in months? ENTER '00' IF CHILD IS LESS THAN ONE MONTH OLD.	AGE IN MONTHS	AGE IN MONTHS	AGE IN MONTHS
		DON'T KNOW 98 REFUSED 99	DON'T KNOW 98 REFUSED 99	DON'T KNOW 98 REFUSED 99
403	Is [CHILD] a boy or girl?	BOY         1           GIRL         2           DON'T KNOW         8           REFUSED         9	BOY         1           GIRL         2           DON'T KNOW         8           REFUSED         9	BOY         1           GIRL         2           DON'T KNOW         8           REFUSED         9
404	Is [CHILD] enrolled in school?	YES 1 NO, NOT CURRENTLY IN SCHOOL 2 (SKIP TO 407) NO, TOO YOUNG TO BE IN SCHOOL 3 DON'T KNOW 8 REFUSED 9 (SKIP TO 408a)	YES 1 NO, NOT CURRENTLY IN SCHOOL 2 (SKIP TO 407) NO, TOO YOUNG TO BE IN SCHOOL 3 DON'T KNOW 8 REFUSED 9 (SKIP TO 408a)	YES 1 NO, NOT CURRENTLY IN SCHOOL 2 (SKIP TO 407) ✓ NO, TOO YOUNG TO BE IN SCHOOL 3 DON'T KNOW 8 REFUSED 9 (SKIP TO 408a) ✓
405	What is the highest level of school [CHILD] has attended: nursery, primary or secondary?	NURSERY 1 PRIMARY 2 JR. SECONDARY 3 SR. SECONDARY 4 DON'T KNOW 98 REFUSED 99 (SKIP TO 408a)	NURSERY 1 PRIMARY 2 JR. SECONDARY 3 SR. SECONDARY 4 DON'T KNOW 98 REFUSED 99 (SKIP TO 408a)	NURSERY 1 PRIMARY 2 JR. SECONDARY 3 SR. SECONDARY 4 DON'T KNOW 98 REFUSED 99 (SKIP TO 408a)
406	What grade/form/year is [CHILD] in now?	GRADE/FORM /YEAR	GRADE/FORM /YEAR	GRADE/FORM /YEAR
		DON'T KNOW 98 REFUSED 99 (SKIP TO 408a)	DON'T KNOW 98 REFUSED 99 (SKIP TO 408a)	DON'T KNOW 98 REFUSED 99 - (SKIP TO 408a)

NO.	QUESTIONS	CHILD 1	CHILD 2	CHILD 3
407	Was [CHILD] enrolled in school during the previous school year?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 408a)	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 408a)	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 408a)
407a	What level of school was [CHILD] attending during the previous school year: nursery, primary or secondary?	NURSERY 1 PRIMARY 2 JR. SECONDARY 3 SR. SECONDARY 4 DON'T KNOW	NURSERY 1 PRIMARY 2 JR. SECONDARY 3 SR. SECONDARY 4 DON'T KNOW	NURSERY 1 PRIMARY 2 JR. SECONDARY 3 SR. SECONDARY 4 DON'T KNOW
408	What grade/form/year was [CHILD] enrolled in during the previous school year?	GRADE/FORM /YEAR	GRADE/FORM /YEAR	GRADE/FORM /YEAR
		DON'T KNOW 98 REFUSED 99	DON'T KNOW 98 REFUSED 99	DON'T KNOW 98 REFUSED 99
408A	CHECK: IS [CHILD] A GIRL?	YES 1 (SKIP TO 411) ← NO 2	YES1 (SKIP TO 411) ← NO 2	YES1 (SKIP TO 411) ← NO 2
409	Is [CHILD] circumcised? Circumcision is the complete removal of the foreskin from the penis.	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 411)	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 - (SKIP TO 411)	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 - (SKIP TO 411)
410	Who circumcised [CHILD]?	DOCTOR/NURSE/ CLINICAL OFFICER 1 TRADITIONAL PRACTITIONER/ CIRCUMCIZER 2 MIDWIFE 3 OTHER 6 (SPECIFY) DON'T KNOW 8 REFUSED 9	DOCTOR/NURSE/ CLINICAL OFFICER 1 TRADITIONAL PRACTITIONER/ CIRCUMCIZER 2 MIDWIFE 3 OTHER 6 (SPECIFY) DON'T KNOW 8 REFUSED 9	DOCTOR/NURSE/ CLINICAL OFFICER 1 TRADITIONAL PRACTITIONER/ CIRCUMCIZER 2 MIDWIFE 3 OTHER 6 (SPECIFY) DON'T KNOW 8 REFUSED 9

NO.	QUESTIONS	CHILD 1	CHILD 2	CHILD 3
411	Has [CHILD] ever been tested for HIV?	YES 1 (SKIP TO 413) ← NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 430) ←	YES 1 (SKIP TO 413) ↓ NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 430) ↓	YES 1 (SKIP TO 413) ← NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 430) ←
412	Why has [CHILD] never been tested for HIV? SELECT ALL THAT APPLY.	DON'T KNOW WHERE TO TEST A TEST COSTS TOO MUCH B TRANSPORT COSTS TOO MUCH C TOO FAR AWAY D AFRAID OTHERS WILL KNOW ABOUT TEST RESULTS E DON'T NEED TEST/ LOW RISK F DID NOT RECEIVE PERMISSION FROM SPOUSE/ FAMILY G AFRAID SPOUSE/ FAMILY WILL KNOW RESULTS H DON'T WANT TO KNOW CHILD HAS HIV I CANNOT GET TREATMENT FOR HIV J TEST KITS NOT AVAILABLE K RELIGIOUS REASONS L OTHER X (SPECIFY) DON'T KNOW Y REFUSED Z (SKIP TO 430)	DON'T KNOW WHERE TO TEST A TEST COSTS TOO MUCH B TRANSPORT COSTS TOO MUCH C TOO FAR AWAY D AFRAID OTHERS WILL KNOW ABOUT TEST RESULTS E DON'T NEED TEST/ LOW RISK F DID NOT RECEIVE PERMISSION FROM SPOUSE/ FAMILY G AFRAID SPOUSE/ PARTNER/ FAMILY WILL KNOW RESULTS H DON'T WANT TO KNOW CHILD HAS HIV I CANNOT GET TREATMENT FOR HIV J TEST KITS NOT AVAILABLE K RELIGIOUS REASONS L OTHER X (SPECIFY) DON'T KNOW Y REFUSED Z (SKIP TO 430)	DON'T KNOW WHERE TO TEST A TEST COSTS TOO MUCH B TRANSPORT COSTS TOO MUCH C TOO FAR AWAY D AFRAID OTHERS WILL KNOW ABOUT TEST RESULTS E DON'T NEED TEST/ LOW RISK F DID NOT RECEIVE PERMISSION FROM SPOUSE/ FAMILY G AFRAID SPOUSE/ PARTNER/ FAMILY WILL KNOW RESULTS H DON'T WANT TO KNOW CHILD HAS HIV J TEST KITS NOT AVAILABLE K RELIGIOUS REASONS L OTHER X (SPECIFY) DON'T KNOW Y REFUSED Z
413	What month and year was [CHILD]'s last HIV test done?	MONTH 98 DON'T KNOW 98 REFUSED 99 YEAR  DON'T KNOW 9998	MONTH 98 DON'T KNOW 98 REFUSED 99 YEAR DON'T KNOW 9998	MONTH 98 DON'T KNOW 98 REFUSED 99 YEAR DON'T KNOW 9998
414	What was [CHILD]'s last HIV test result?	REFUSED9999 POSITIVE 1 NEGATIVE 2 UNKNOWN/ INDETERMINATE 3 DID NOT RECEIVE RESULTS 4 DON'T KNOW 8 REFUSED 9 (SKIP to 430)	REFUSED 9999 POSITIVE 1 NEGATIVE 2 UNKNOWN/ INDETERMINATE . 3 DID NOT RECEIVE RESULTS 4 DON'T KNOW 8 REFUSED 9 (SKIP to 430)	REFUSED       9999         POSITIVE       1         NEGATIVE       2         UNKNOWN/         INDETERMINATE       3         DID NOT RECEIVE         RESULTS       4         DON'T KNOW       8         REFUSED       9         (SKIP to 430)

NO.	QUESTIONS	CHILD 1	CHILD 2	CHILD 3
415	What was the month and year of [CHILD]'s first HIV positive test result? Please give your best guess. This will be the very first HIV positive test result that you have received. PROBE TO VERIFY DATE.	MONTH DON'T KNOW 98 REFUSED 99 YEAR DON'T KNOW 9998 REFUSED9999	MONTH DON'T KNOW 98 REFUSED 99 YEAR DON'T KNOW 9998 REFUSED 9999	MONTH DON'T KNOW 98 REFUSED 99 YEAR DON'T KNOW 9998 REFUSED9999
416	Has [CHILD] ever received HIV medical care from a doctor, clinical officer, nurse or any health worker?	YES 1 (SKIP TO 418) 2 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 421)	YES 1 (SKIP TO 418) 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 421)	YES 1 (SKIP TO 418) 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 421)
417	What is the main reason why [CHILD] has never seen a doctor, clinical officer, or nurse for HIV medical care? READ RESPONSES ALOUD	FACILITY TOO FAR AWAY 01 - DON'T KNOW WHERE TO GET HIV MED. CARE FOR CHILD 02 - COST OF CARE 03 - COST OF TRANSPORT 04 - DON'T THINK CHILD NEEDS IT/CHILD IS NOT SICK 05 - FEAR THAT OTHERS WILL KNOW CHILD HAS HIV IF I TAKE HIM/HER TO CLINIC 06 - RELIGIOUS REASONS 07 - CHILD IS TAKING TRAD. MED. 08 - OTHER 96 - (SPECIFY) DON'T KNOW 98 - REFUSED 99 - (SKIP TO 421)	FACILITY TOO         FAR AWAY        01         DON'T KNOW       WHERE TO         GET HIV MED.       CARE FOR         CHILD        02         COST OF CARE       03         COST OF CARE       03         COST OF       TRANSPORT       04         DON'T THINK       CHILD NEEDS         IT/CHILD IS       NOT SICK       05         FEAR THAT       OTHERS WILL         KNOW CHILD       HAS HIV IF I         TAKE HIM/HER       TO CLINIC       06         RELIGIOUS       REASONS       07         CHILD IS TAKING       TRAD. MED.       08         OTHER       96	FACILITY TOO         FAR AWAY      01         DON'T KNOW         WHERE TO         GET HIV MED.         CARE FOR         CHILD      02         COST OF CARE       03         COST OF CARE       03         COST OF CARE       04         DON'T THINK       CHILD NEEDS         IT/CHILD IS       NOT SICK         NOT SICK      05         FEAR THAT       OTHERS WILL         KNOW CHILD       HAS HIV IF I         TAKE HIM/HER       TO CLINIC         TO CLINIC       .06         RELIGIOUS       REASONS         REASONS       .07         CHILD IS TAKING       TRAD. MED.         OTHER       .96         (SPECIFY)
418	What month and year did [CHILD] <u>first</u> see a doctor, clinical officer or nurse for HIV medical care? PROBE TO VERIFY DATE.	MONTH 98 DON'T KNOW 98 REFUSED 99 YEAR	MONTH 98 DON'T KNOW 98 REFUSED 99 YEAR	MONTH 98 DON'T KNOW 98 REFUSED 99 YEAR
		DON'T KNOW 9998 REFUSED 9999	DON'T KNOW 9998 REFUSED 9999	DON'T KNOW 9998 REFUSED 9999

			CHILD 2	CHILD 3
419	What month and year did [CHILD] <u>last</u> see a doctor, clinical officer or nurse for HIV medical care?	MONTH	MONTH	MONTH
		DON'T KNOW 98 REFUSED 99 (SKIP TO 421)	DON'T KNOW 98 REFUSED 99 (SKIP TO 421)	DON'T KNOW 98 REFUSED 99 (SKIP TO 421)
		YEAR DON'T KNOW 9998 REFUSED 9999 (SKIP TO 421)	YEAR DON'T KNOW 9998 REFUSED 9999 (SKIP TO 421)	YEAR 
419A	CHECK 419: WAS LAST VISIT LESS THAN 7 MONTHS AGO?	YES 1 (SKIP TO 421) ← NO 2	YES 1 (SKIP TO 421) NO 2	YES 1 (SKIP TO 421) ← NO 2
420	What is the main reason for [CHILD] not seeing a doctor, clinical officer or nurse for HIV medical care for more than 6 months? READ RESPONSES ALOUD	FACILITY TOO         FAR AWAY       01         DON'T KNOW         WHERE TO         GET HIV MED.         CARE FOR         CHILD       02         COST OF CARE       03         COST OF CARE       03         COST OF CARE       04         DON'T THINK       04         DON'T THINK       05         FEAR THAT       05         FEAR THAT       07         OTHERS WILL       KNOW CHILD         HAS HIV IF I       TAKE HIM/HER         TO CLINIC       06         RELIGIOUS       07         CHILD IS TAKING       78         NO APPT.       08         NOA APPT.       09         OTHER       96         (SPECIFY)       90         DON'T KNOW       98         REFUSED       99	FACILITY TOO       FAR AWAY       01         DON'T KNOW       WHERE TO       GET HIV MED.         CARE FOR       CHILD       02         COST OF CARE       03       COST OF         COST OF CARE       03       COST OF         TRANSPORT       04       DON'T THINK         CHILD NEEDS       IT/CHILD IS       NOT SICK         NOT SICK       05       FEAR THAT         OTHERS WILL       KNOW CHILD       HAS HIV IF I         TAKE HIM/HER       TO CLINIC       06         RELIGIOUS       REASONS       07         CHILD IS TAKING       TRAD. MED.       08         NO APPT.       SCHEDULED/       DID NOT MISS         MOST RECENT       APPT.       09         OTHER       96       (SPECIFY)         DON'T KNOW       98       REFUSED       99	FACILITY TOO         FAR AWAY        01         DON'T KNOW       WHERE TO         GET HIV MED.       CARE FOR         CHILD        02         COST OF CARE       03         COST OF CARE       03         COST OF CARE       04         DON'T THINK       04         DON'T THINK       05         FEAR THAT       05         FEAR THAT       05         FEAR THAT       06         RELIGIOUS       REASONS       07         CHILD IS TAKING       08         NO APPT.       SCHEDULED/         DID NOT MISS       MOST RECENT         APPT.       09         OTHER       96         (SPECIFY)       98         REFUSED       99
421	Has [CHILD] ever had a CD4 count test? The CD4 count tells you how sick you are with HIV and if you need to take ARVs or other HIV medications.	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 423)	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 423)	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 423)

NO.	QUESTIONS	CHILD 1	CHILD 2	CHILD 3
422	What month and year was [CHILD] last tested for his/her CD4 count?	MONTH 98 DON'T KNOW 98 REFUSED 99 YEAR DON'T KNOW 9998 REFUSED 9999	MONTH 98 DON'T KNOW 98 REFUSED 99 YEAR DON'T KNOW 9998 REFUSED 9999	MONTH DON'T KNOW 98 REFUSED 99 YEAR DON'T KNOW 9998 REFUSED 9999
423	Has [CHILD] ever taken ARVs, that is, antiretroviral medications to treat his/her HIV infection?	YES 1 (SKIP TO 425) NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 429)	YES 1 (SKIP TO 425) NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 429)	YES 1 (SKIP TO 425) NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 429)
424	What is the main reason [CHILD] has never taken ARVs?	CHILD NOT ELIGIBLE 01 PROVIDER DIDN'T PRESCRIBE 02 HIV MED. NOT AVAILABLE 03 DO NOT THINK HE/SHE NEEDS IT/NOT SICK 04 COST OF MED 05 COST OF TRANSPORT 06 RELIGIOUS REASONS 07 CHILD TAKING TRAD. MED 08 OTHER 96 (SPECIFY) DON'T KNOW 98 REFUSED 99 (SKIP TO 429)	CHILD NOT ELIGIBLE 01 PROVIDER DIDNT PRESCRIBE 02 - HIV MED. NOT AVAILABLE 03 - DO NOT THINK HE/SHE NEEDS IT/NOT SICK 04 - COST OF MED 05 - COST OF TRANSPORT 06 - RELIGIOUS REASONS 07 - CHILD TAKING TRAD. MED 08 - OTHER 96 - (SPECIFY) DON'T KNOW 98 - REFUSED 99 - (SKIP TO 429)	CHILD NOT ELIGIBLE 01 PROVIDER DIDNT PRESCRIBE 02 HIV MED. NOT AVAILABLE 03 DO NOT THINK HE/SHE NEEDS IT/NOT SICK 04 COST OF MED 05 COST OF TRANSPORT 06 RELIGIOUS REASONS 07 CHILD TAKING TRAD. MED 08 OTHER 96 (SPECIFY) DON'T KNOW 98 REFUSED 99 (SKIP TO 429)
425	What month and year did [CHILD] first start taking ARVs? PROBE TO VERIFY DATE.	MONTH 98 DON'T KNOW 98 REFUSED 99	MONTH 98 DON'T KNOW 98 REFUSED 99	MONTH 98 DON'T KNOW 98 REFUSED 99
		YEAR DON'T KNOW 9998 REFUSED 9999	YEAR DON'T KNOW 9998 REFUSED 9999	YEAR DON'T KNOW 9998 REFUSED 9999

NO.	QUESTIONS	CHILD 1	CHILD 2	CHILD 3
426	Is [CHILD] currently taking ARVs, that is, antiretroviral medications? By currently, I mean that [CHILD] may have missed some doses but [CHILD] is still taking ARVs.	YES 1 (SKIP TO 428) NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 429)	YES 1 (SKIP TO 428) NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 429)	YES 1 (SKIP TO 428) NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 429)
427	Can you tell me the main reason why [CHILD] is not currently taking ARVs?	HAVE TROUBLE GIVING CHILD TABLET EVERYDAY 01 - CHILD HAS SIDE EFFECTS/ RASH 02 - FACILITY/PHARM. TOO FAR TO GET MED. REG 03 - COST OF MED 04 - COST OF TRANSPORT 05 - CHILD IS HEALTH/NOT SICK 06 FACILITY/PHARM. OUT OF STOCK 07 - RELIGIOUS REASONS 08 - CHILD TAKING TRAD. MED 09 - OTHER 96 - (SPECIFY) DON'T KNOW 98 - REFUSED 99 - (SKIP TO 429)	HAVE TROUBLE GIVING CHILD TABLET EVERYDAY 01 - CHILD HAS SIDE EFFECTS/ RASH 02 - FACILITY/PHARM. TOO FAR TO GET MED. REG 03 - COST OF MED 04 - COST OF TRANSPORT 05 - CHILD IS HEALTH/NOT SICK 06 FACILITY/PHARM. OUT OF STOCK 07 - RELIGIOUS REASONS 08 - CHILD TAKING TRAD. MED 09 - OTHER 96 - (SPECIFY) DON'T KNOW 98 - REFUSED 99 - (SKIP TO 429)	HAVE TROUBLE GIVING CHILD TABLET EVERYDAY 01 - CHILD HAS SIDE EFFECTS/ RASH 02 - FACILITY/PHARM. TOO FAR TO GET MED. REG 03 - COST OF MED 04 - COST OF TRANSPORT 05 - CHILD IS HEALTH/NOT SICK 06 FACILITY/PHARM. OUT OF STOCK 07 - RELIGIOUS REASONS 08 - CHILD TAKING TRAD. MED 09 - OTHER 96 - (SPECIFY) DON'T KNOW 98 - REFUSED 99 - (SKIP TO 429)
428	People sometimes forget to take all their ARVs every day. In the last 30 days, how many days has [CHILD] missed taking any ARV pills? CODE '00' IF NONE.	DAYS MISSED DON'T KNOW 98 REFUSED 99	DAYS MISSED DON'T KNOW 98 REFUSED 99	DAYS MISSED DON'T KNOW 98 REFUSED 99
429	Is [CHILD] currently taking Septrin or Cotrimoxazole for his/her HIV treatment? Septrin or Cotrimoxazole is a medicine recommended for people with HIV, even if they have not started treatment for HIV. It helps prevent certain infections but it is not treatment for HIV. By currently, I mean that [CHILD] may have missed some doses but is still taking Septrin or Cotrimoxazole.	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	YES 1 NO 2 DON'T KNOW 8 REFUSED 9

NO.	QUESTIONS	CHILD 1	CHILD 2	CHILD 3
430	Has [CHILD] ever visited a clinic for tuberculosis for TB diagnosis or treatment?	YES	YES	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 435)
431	Have you ever been told by a doctor, clinical officer, nurse or health worker that [CHILD] had TB?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 435)	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 435)	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 435)
432	Was [CHILD] ever treated for TB?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 435)	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 435)	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 435)
433	Is [CHILD] currently on treatment for TB?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 435) ←	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 435)	YES 1 NO 2 DON'T KNOW 8 REFUSED 9 (SKIP TO 435) ←
434	The last time [CHILD] was treated for TB, did [CHILD] complete at least 6 months of treatment?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	YES 1 NO 2 DON'T KNOW 8 REFUSED 9
435	Thank you for the information about [CHILD]. DOES THE RESPONDENT HAVE ANOTHER CHILD AGED 0-14 YEARS?	YES 1 GO TO THE ← NEXT CHILD NO 2 (END MODULE) ←	YES 1 GO TO THE ← NEXT CHILD NO 2 – (END MODULE)←	YES 1 GO TO THE ← NEXT CHILD NO 2 – (END MODULE)←

## MODULE 5: MALE CIRCUMCISION

500 I will be asking a few questions about circumcision. Circumcision is the complete removal of the foreskin from the penis.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
500A	CHECK: IS RESPONDENT MALE OR FEMALE?	MALE         1           FEMALE         2	END →MODULE
501	Some men are uncomfortable talking about circumcision but it is important for us to have this information. Some men are circumcised. Are you circumcised?	YES	→ 503 END MODULE
502	Are you planning to get circumcised?	YES	END ► MODULE
503	How old were you when you were circumcised? Please give your best guess. IF LESS THAN ONE YEAR, CODE '00'	LESS THAN ONE YEAR    00      AGE IN YEARS    00      DON'T KNOW    98      REFUSED    99	
504	Who did the circumcision?	DOCTOR, CLINICAL OFFICER, NURSE       1         TRADITIONAL PRACTITIONER/       2         CIRCUMCISER       2         MIDWIFE.       3         OTHER       6         (SPECIFY)         DON'T KNOW       8         REFUSED       9	

## **MODULE 6: SEXUAL ACTIVITY**

600 In this part of the interview, I will be asking questions about your sexual relationships and practices. These questions will help us have a better understanding of how they may affect your life and risk for HIV.

Let me assure you again that your answers are completely confidential and will not be shared with anyone. If there are questions that you do not want to answer, we can go to the next question.

NO.	QUESTIONS AND FILTER	S		CODING CATEGORIE	S	SKIP
601	Have you ever had vaginal sex before? Vaginal sex is when a penis enters a vagi	na.	NO DON'T	KNOW		
602	How old were you when you had vaginal s first time?	ex for the very	DON'T	NYEARS		
603	People often have sex with different peopl lifetime. In total, with how many different p you had sex in the last 12 months? IF NONE, ENTER '000'. IF NUMBER OF PARTNERS IS GREATE ENTER '100'.	eople have	NUMB PARTN 12 MO DON'T	RTNERS IN LAST 12 MON ER OF SEXUAL NERS IN LAST NTHS		END →MODULE
604a	Now I would like to ask you some question Let me assure you again that your answer first ask you about the most recent persor ASK ONLY ABOUT THE LAST 3 PERSO	s are completely you had sex with	confidentia 1.	al and will not be told to anyo		
		LAST SEX PARTNE	-	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO SEXUAL P	
604	Does the person you had sex with live in this household?	YES NO (SKIP TO	2 ]	YES1 NO2 (SKIP TO 606) ←	YES NO (SKIP T	
605	Please identify the person you had sex with. SELECT THE NAME FROM THE HOUSEHOLD SCHEDULE.	(NAME IF LISTED IN HOUSEHOLD (SKIP TO NOT LISTED HOUSEHOLD	THE 607) -	(NAME) IF LISTED IN THE HOUSEHOLD (SKIP TO 607) ← NOT LISTED IN THE HOUSEHOLD 96	(NAM IF LISTED II HOUSEHOL (SKIP T NOT LISTEI HOUSEHOL	Ý N THE D ↓ O 607) ← J D IN THE

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
606	I would like to ask you for the initials of this person so I can keep track. They do not have to be the actual initials of this person.	[INITIALS]	[INITIALS]	[INITIALS]
607	What is your relationship with [INITIALS]?	HUSBAND/ WIFE 01 LIVE-IN PARTNER 02 PARTNER, NOT LIVING WITH RESPONDENT. 03 EX-SPOUSE/ EX-PARTNER 04 FRIEND / ACQUAINTANCI05 SEX WORKER06 SEX WORKER06 SEX WORKER06 SEX WORKER07 STRANGER08 OTHER 96 (SPECIFY) DON'T KNOW98 REFUSED99	HUSBAND/ WIFE01 LIVE-IN PARTNER02 PARTNER, NOT LIVING WITH RESPONDENT. 03 EX-SPOUSE/ EX-PARTNER04 FRIEND / ACQUAINTANCI05 SEX WORKER06 SEX WORKER06 SEX WORKER06 SEX WORKER07 STRANGER08 OTHER96 (SPECIFY) DON'T KNOW98 REFUSED99	HUSBAND/ WIFE 01 LIVE-IN PARTNER 02 PARTNER, NOT LIVING WITH RESPONDENT. 03 EX-SPOUSE/ EX-PARTNER04 FRIEND / ACQUAINTANCE05 SEX WORKER06 SEX WORKER06 SEX WORKER06 SEX WORKER08 OTHER 96 (SPECIFY) DON'T KNOW 98 REFUSED 99
608	Is [INITIALS] male or female?	MALE 1 FEMALE 2 DON'T KNOW . 8 REFUSED 9	MALE 1 FEMALE 2 DON'T KNOW . 8 REFUSED 9	MALE         1           FEMALE         2           DON'T KNOW         8           REFUSED         9
609	How old is [INITIALS]? Please give your best guess.	AGE IN YEARS DON'T KNOW 98 REFUSED 99	AGE IN YEARS DON'T KNOW 98 REFUSED 99	AGE IN YEARS DON'T KNOW 98 REFUSED 99
610	The last time you had sex with [INITIALS] was a condom used?	YES 1 NO 2 DON'T KNOW . 8 REFUSED 9	YES	YES
611a	CHECK 607: WAS [INITIALS] A SEX WORKER OR SEX WORKER CLIENT?	YES 1 NO 2 (SKIP TO 613) ←	YES 1 NO 2 (SKIP TO 613)	YES 1 NO 2 (SKIP TO 613) ◄
611	Did you enter into a sexual relationship with [INITIALS] because [INITIALS] provided you with or you expected that [INITIALS] would provide you gifts, help you to pay for things, or help you in other ways?	YES 1 NO 2 DON'T KNOW . 8 - REFUSED 9 - (SKIP TO 613) ←	YES 1 NO 2 7 DON'T KNOW . 8 - REFUSED 9 - (SKIP TO 613) ←	YES 1 NO 2 DON'T KNOW
612a	CHECK 607: WAS [INITIALS] THE RESPONDENT'S SPOUSE OR LIVE- IN PARTNER?	YES 1 NO 2 (SKIP TO 613) ←	YES 1 NO 2 (SKIP TO 613) ←	YES 1 NO 2 (SKIP TO 613) ←

		LAST SEXUAL PARTNER	SECOND-TO-LAST SEXUAL PARTNER	THIRD-TO-LAST SEXUAL PARTNER
612	In the last 12 months, what have you received from (INITIALS)? Did you receive Money? Food? School fees? Employment? Gifts or favors? Transport? Shelter or rent? Protection? SELECT ALL THAT APPLY.	DID NOT RECEIVE ANYTHING A MONEY B FOOD C SCHOOL FEESD EMPLOYMENT E GIFTS/FAVORS F TRANSPORT G SHELTER/RENT H PROTECTION I OTHER X (SPECIFY)	DID NOT RECEIVE ANYTHING A MONEY B FOOD C SCHOOL FEES D EMPLOYMENT E GIFTS/FAVORS F TRANSPORT G SHELTER/RENT H PROTECTION I OTHER X (SPECIFY)	DID NOT RECEIVE ANYTHING A MONEY B FOOD C SCHOOL FEESD EMPLOYMENT E GIFTS/FAVORS F TRANSPORT G SHELTER/RENT H PROTECTION I OTHER X (SPECIFY)
613	Do you expect to have sex with (INITIALS) again?	REFUSED         Z           YES         1           NO         2           DON'T KNOW         8           REFUSED         9	REFUSED         Z           YES         1           NO         2           DON'T KNOW         8           REFUSED         9	REFUSED         Z           YES         1           NO         2           DON'T KNOW         8           REFUSED         9
614	Does (INITIALS) know your HIV status? HIV status could mean you are HIV negative or HIV positive.	YES 1 NO 2 DON'T KNOW . 8 REFUSED 9	YES 1 NO 2 DON'T KNOW . 8 REFUSED 9	YES 1 NO 2 DON'T KNOW . 8 REFUSED 9
615	What is the HIV status of (INITIALS)? READ THE RESPONSES ALOUD.	I THINK [INITIALS] IS POSITIVE . 1 [INITIALS] TOLD ME HE/SHE IS POSITIVE . 2 [INITIALS] IS POSITIVE, TESTED TOGETHER . 3 I THINK [INITIALS] IS NEGATIVE . 4 [INITIALS] TOLD ME HE/SHE IS NEGATIVE 5 [INITIALS] IS NEGATIVE, TESTED TOGETHER . 6 DON'T KNOW STATUS 8 REFUSED 9	I THINK [INITIALS] IS POSITIVE 1 [INITIALS] TOLD ME HE/SHE IS POSITIVE 2 [INITIALS] IS POSITIVE, TESTED TOGETHER 3 I THINK [INITIALS] IS NEGATIVE 4 [INITIALS] TOLD ME HE/SHE IS NEGATIVE 5 [INITIALS] IS NEGATIVE, TESTED TOGETHER 6 DON'T KNOW STATUS 8 REFUSED 9	I THINK [INITIALS] IS POSITIVE 1 [INITIALS] TOLD ME HE/SHE IS POSITIVE 2 [INITIALS] IS POSITIVE, TESTED TOGETHER 3 I THINK [INITIALS] IS NEGATIVE 4 [INITIALS] TOLD ME HE/SHE IS NEGATIVE 5 [INITIALS] IS NEGATIVE, TESTED TOGETHER 6 DON'T KNOW STATUS 8 REFUSED 9
616	CHECK 603: HAS RESPONDENT HAD ANOTHER PARTNER IN THE LAST 12 MONTHS? I will now ask you about the person you have had sex with prior to (INITIALS).	YES 1 (GO BACK TO 604 IN NEXT COLUMN) NO 2 (END MODULE)	YES 1 (GO BACK TO 604 IN NEXT COLUMN) NO 2 (END MODULE)	

## MODULE 7: HIV TESTING

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701	Have you <u>ever</u> been tested for HIV?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	→ 703
702	Why have you never been tested for HIV? SELECT ALL THAT APPLY.	DON'T KNOW WHERE TO TEST       A         TEST COSTS TOO MUCH       B         TRANSPORT COSTS TOO MUCH       C         TOO FAR AWAY       D         AFRAID OTHERS WILL KNOW       ABOUT TEST RESULTS         ABOUT TEST RESULTS       E         DON'T NEED TEST/LOW RISK.       F         DID NOT RECEIVE PERMISSION       FROM SPOUSE/FAMILY         FRAMID SPOUSE/FAMILY       G         AFRAID SPOUSE/FAMILY       G         AFRAID SPOUSE/FAMILY       G         AFRAID SPOUSE/FAMILY       G         AFRAID SPOUSE/FAMILY       J         CANNOT GET TREATMENT FOR HIV       J         TEST KITS NOT AVAILABLE       K         RELIGIOUS REASONS       L         OTHER      X         (SPECIFY)       DON'T KNOW         DON'T KNOW       Y	901
703	What month and year was your last HIV test?	MONTH       98         DON'T KNOW       98         REFUSED       99         YEAR       99         OON'T KNOW       9998         REFUSED       9999	
704	Where was the last test done?	VCT FACILITY         01           MOBILE VCT         02           AT HOME         03           HEALTH CLINIC / FACILITY         04           HOSPITAL OUTPATIENT CLINIC         05           TB CLINIC         06           STI CLINIC         07           HOSPITAL INPATIENT WARDS         08           BLOOD DONATING CENTER         09           ANC CLINIC         10           OTHER         96           (SPECIFY)         98           REFUSED         99	

<sup>700</sup> Now I would like to ask you some questions about HIV testing.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
705	What was the result of that HIV test?	POSITIVE1NEGATIVE2UNKNOWN/INDETERMINANTE3DID NOT RECEIVE THE RESULT4DON'T KNOW8REFUSED9	END OF MODULE
706	What was the month and year of your first HIV positive test result? Please give your best guess. This will be the very first HIV positive test result that you have received. PROBE TO VERIFY DATE.	MONTH	
707	Of the following people, who have you told that you are HIV positive? CHECK ALL THAT APPLY.	NO ONE       A         SPOUSE/SEX PARTNER       B         DOCTOR       C         FRIEND       D         FAMILY MEMBER       E         OTHER       X         (SPECIFY)       D         DON'T KNOW       Y         REFUSED       Z	
708a	Now I would like to ask you questions about your experience	t es with health care providers.	
708	In the last 12 months, when you sought health care in a facility where your HIV status is not known, did you feel you needed to hide your HIV status?	YES       1         NO, NO NEED TO HIDE       2         NO, NO NEED TO ATTEND HEALTH       5         FACILITY IN LAST 12 MONTHS       3         DON'T KNOW       8         REFUSED       9	
709	In the last 12 months, have you been denied health services including dental care, because of your HIV status?	YES       1         NO       2         NO ONE KNOWS MY STATUS       3         DON'T KNOW       8         REFUSED       9	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
800a	CHECK 705: IS THE RESPONDENT HIV POSITIVE?	YES 1 NO 2	
800	Now I am going to ask you more about your experience with	HIV support, care and treatment.	<u> </u>
801	After learning you had HIV, have you ever received HIV medical care from a doctor, clinical officer or nurse?	YES	→ 803
		REFUSED	→ 806
802	What is the main reason why you have never received HIV medical care from a doctor, clinical officer, or nurse?	FACILITY IS TOO FAR AWAY       01         I DON'T KNOW WHERE TO GET       01         HIV MEDICAL CARE       02         COST OF CARE       03         COST OF TRANSPORT       04         I DO NOT NEED IT / I FEEL HEALTHY /       04         NOT SICK       05         I FEAR PEOPLE WILL KNOW THAT       1         I HAVE HIV IF I GO TO A CLINIC       06         RELIGIOUS REASONS       07         I'M TAKING TRADITIONAL MEDICINE       08         DO NOT TRUST THE STAFF /       09         OTHER       96         (SPECIFY)       00N'T KNOW         DON'T KNOW       98         REFUSED       99	→ 806
803	What month and year did you first see a doctor, clinical officer or nurse for HIV medical care? PROBE TO VERIFY DATE.	MONTH	
804	What month and year did you last see a doctor, clinical	YEAR	
004	officer or nurse for HIV medical care?	MONTH	
		YEAR	
805A	CHECK 804: WAS MONTH AND YEAR LESS THAN 7 MONTHS FROM DATE OF INTERVIEW OR DID RESPONDENT ANSWER DON'T KNOW?	YES 1 NO 2	→ 806
805	What is the main reason for not seeing a doctor, clinical officer or nurse for HIV medical care for more than 6 months?	FACILITY IS TOO FAR AWAY       01         DON'T KNOW WHERE TO GET       02         HIV MEDICAL CARE       02         COST OF CARE       03         COST OF TRANSPORT       04         DO NOT NEED IT / I FEEL HEALTHY /       05         FEAR PEOPLE WILL KNOW THAT       1         I HAVE HIV IF I GO TO A CLINIC       06         RELIGIOUS REASONS       07         TAKING TRADITIONAL MEDICINE       08         DO NOT TRUST THE STAFF /       09         OTHER       96         (SPECIFY)       DON'T KNOW	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
806	Have you ever had a CD4 count test? The CD4 count tells you how sick you are with HIV and if you need to take ARVs or other HIV medications.	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	808₽
807	What month and year were you last tested for your CD4 count?	MONTH	
		YEAR	
808	Have you ever taken ARVs, that is, antiretroviral medications to treat HIV infection?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	→ 810
809	What is the main reason you have never taken ARVs?	NOT ELIGIBLE FOR TREATMENT       01         HEALTH CARE PROVIDER DID NOT       PRESCRIBE       02         HIV MEDICINES NOT AVAILABLE       03         FEEL HEALTHY/NOT SICK       04         COST OF MEDICATIONS       05         COST OF TRANSPORT       06         RELIGIOUS REASONS       07         TAKING TRADITIONAL MEDICATIONS       08	END MODU
		OTHER 96 (SPECIFY) DON'T KNOW	
810	What month and year did you first start taking ARVs? PROBE TO VERIFY DATE.	MONTH	
		YEAR	
811	Are you currently taking ARVs, that is, antiretroviral medications?		
	By currently, I mean that you may have missed some doses but you are still taking ARVs.	YES	→ 813
812	Can you tell me the main reason why you are not currently taking ARVs?	TROUBLE TAKING IT EVERYDAY01SIDE EFFECTS02FACILITY TOO FAR03COST OF MEDICATIONS04COST OF TRANSPORT05FEEL HEALTHY/NOT SICK06FACILITY WAS OUT OF STOCK07	→ END MODU
		RELIGIOUS REASONS       08         TAKING TRADITIONAL MEDICINES       09         OTHER       96         (SPECIFY)       96	
		DON'T KNOW         98           REFUSED         99	ļ
813	People sometimes forget to take all of their ARVs every day. In the last 30 days, how many days have you missed taking any of your ARV pills?		
	CODE '00' IF NONE.	NUMBER OF DAYS	

900	Now I will ask you about tuberculosis, or TB.		
NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901	Have you ever visited clinic for TB diagnosis or treatment?	YES       1         NO       2         DON'T KNOW       8         REFUSED       9	→ END MODULE
902	Have you ever been told by a doctor, clinical officer or nurse that you had TB?	YES	→ END MODULE
903	Were you ever treated for TB?	YES       1         NO       2         DON'T KNOW       8         REFUSED       9	END MODULE
904	Are you currently on treatment for TB?	YES	END MODULE END MODULE
905	The last time you were treated for TB, did you complete at least 6 months of treatment?	YES       1         NO       2         DON'T KNOW       8         REFUSED       9	

## MODULE 9: TUBERCULOSIS AND OTHER HEALTH ISSUES

## **MODULE 10: GENDER NORMS**

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1001A	CHECK 203: IS THE RESPONDENT MARRIED OR LIVING TOGETHER WITH A [MAN/WOMAN] AS IF MARRIED?	YES 1 NO 2	
1001	Who usually makes decisions about health care for yourself: you, your (spouse/partner), you and your (spouse/partner) together, or someone else?	SELF1SPOUSE/PARTNER2JOINTLY3SOMEONE ELSE4DON'T KNOW8REFUSED9	
1002	Who generally decides about how the money you receive/make is spent: you, your (spouse/partner), you and your (spouse/partner) together, or someone else?	SELF         1           SPOUSE/PARTNER         2           JOINTLY         3           SOMEONE ELSE         4           DON'T KNOW         8           REFUSED         9	
1003A	CHECK Q.607: DID RESPONDENT EVER SELL SEX, ANSWER CODED '7'?	YES 1 NO 2	
1003B	CHECK Q.7 FROM HOUSEHOLD ROSTER: IS RESPONDENT 18 YEARS OR OLDER?	YES 1 NO 2	→ END MODULE
1003	You mentioned earlier that you have sold sex for money. T with me. If you want to talk further about these experience with help. FILL OUT REFERRAL FORM FOR CHILDREN IDENTIFIE SUMMARY OF REFERRED TRAFFICKED MINORS. PRO ORGANIZATIONS, IF NOT ALREADY GIVEN.	s, I can refer you to a place that can provide you D AS TRAFFICKED MINORS. FILL OUT	

1000 Now I would like to ask you some questions on attitudes and decision-making in your home.

# APPENDIX G ADOLESCENT QUESTIONNAIRE

## EARLY ADOLESCENT QUESTIONNAIRE (10-14 YEARS)

THIS QUESTIONNAIRE IS ADMINISTERED TO ELIGIBLE CHILDREN AGED BETWEEN 10-14 YEARS AFTER INFORMED PARENTAL/GUARDIAN CONSENT AND MINOR ASSENT.

100A	ENTER LINE NUMBER OF THE CHILD FROM THE HOUSEHOLD SCHEDULE:		
100B	ENTER NAME OF CHILD:	(CHILD'S NAME)	

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#### MODULE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS 100C Now I will be asking you some general questions about yourself and education.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
101	CHECK THE HOUSEHOLD SCHEDULE: IS THE RESPONDENT MALE OR FEMALE?	MALE 1 FEMALE 2	
102	How old were you at your last birthday?	AGE IN COMPLETED YEARS	
103	Are you enrolled in school?	YES	→ 109
104	During the last school week, did you miss any school days for any reason?	YES	→ 106
105	Why did you miss school?	HAVE BEEN SICK       01         DON'T FEEL SAFE TRAVELING       02         TO SCHOOL       02         DON'T FEEL SAFE WHILE IN SCHOOL       03         HAVE TO LOOK AFTER MY FAMILY       04         THERE'S NOT ENOUGH MONEY TO       SEND ME TO SCHOOL       05         SCHOOL IS TOO FAR AWAY       06         HAVE TO WORK       07         HAVE A CHILD OR I AM       PREGNANT (GIRLS ONLY)       08         MISSED TOO MUCH SCHOOL       05         MISSED TOO MUCH SCHOOL       09         OTHER	
106	What is the highest level of school you have attended?	PRIMARY01JUNIOR SECONDARY02SENIOR SECONDARY03A-LEVEL04KORANIC/RELIGIOUS ONLY (NOFORMAL EDUCATION)05DON'T KNOW98REFUSED99	
107	What grade/form/year are you in now, at that level?	NONE         00           YEARS	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
108	What grade/form/year were you in last year?	NONE         00           YEARS	
109	Why are you not enrolled in school?	I HAVE BEEN SICK       01         I DON'T FEEL SAFE TRAVELING       02         I DON'T FEEL SAFE TRAVELING       02         I DON'T FEEL SAFE WHILE IN SCHOOL       03         I DON'T FEEL SAFE WHILE IN SCHOOL       03         I DON'T LIKE SCHOOL       04         I HAVE TO LOOK AFTER MY FAMILY       05         THERE'S NOT ENOUGH MONEY TO       SEND ME TO SCHOOL       06         SCHOOL IS TOO FAR AWAY       07         I HAVE TO WORK       08         I HAVE A CHILD OR IS       PREGNANT (GIRLS ONLY)       09         MISSED TOO MUCH SCHOOL       BECAUSE OF MY PERIOD       (MENSTRUATION) (GIRLS ONLY)       10         OTHER      96	
110	Have you ever attended school?	YES	
111	When was the last time you regularly attended school? Would you say it was less than a year ago or more than a year ago?	LESS THAN 1 YEAR AGO11 YEAR OR LONGER2DON'T KNOW8REFUSED9	
112a	What is the highest level of school you have attended?	PRIMARY01JUNIOR SECONDARY02SENIOR SECONDARY03A-LEVEL04KORANIC/RELIGIOUS ONLY (NOFORMAL EDUCTION)05DON'T KNOW98REFUSED99	
112	What is the highest [CLASS/YEAR] you completed at that level?	NONE         00           CLASS/YEAR	

## MODULE 2: PARENTAL SUPPORT

Now I will ask you about your parents. For each question, you can answer 'Always', 'Most of the time', 'Sometimes', 'Rarely', 'Never' or 'Don't know', or you can refuse to answer.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
201	Do your parents/guardians understand your problems and worries?	ALWAYS       1         MOST OF THE TIME       2         SOMETIMES       3         RARELY       4         NEVER       5         DON'T KNOW       8         REFUSED       9	
202	Do your parents/guardians really know what you were doing with your free time when you were not at school or work?	ALWAYS       1         MOST OF THE TIME       2         SOMETIMES       3         RARELY       4         NEVER       5         DON'T KNOW       8         REFUSED       9	

## MODULE 3: ALCOHOL AND DRUGS

300 Now I will ask you some questions about alcohol and drugs or substances that you may have taken that were not given to you by doctor. Your answers will not be told to anyone, even your parents. For each question, you can always tell me you 'Don't know' or you can refuse to answer any question.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
301	Have you ever had alcohol? For example, wine, beer or liquor? SHOW GRAPHIC OF COMMON ALCOHOLIC BEVERAGES.	YES	303
302	During the past 1 month, on how many days did you have at least one drink containing alcohol?	NUMBER OF DAYS	
303	Have you ever tried drugs such as Marijuana, also known as weed, or Benylene with Codeine, or Tramadol, or similar drugs?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	END MODULE
304	What drugs have you ever tried? ASK: Anything else?	MARIJUANA (WEED)       A         BENYLENE WITH CODEINE       B         TRAMADOI       C         COCAINE       D         HEROINE (CHARLY)       E         SOLUTION       F         CRACK       G         INJECTABLE       H         ROCHI       I         OTHER       X         (SPECIFY)       Z	

## MODULE 4: CONDOMS

400 Now I would like to ask you some questions about condoms. Your answers will not be told to anyone, even your parents. For each of the questions, you can tell me you 'don't know' or you can refuse to answer any question.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
401	Do you know what a condom is?	YES	
402	Do you know where to get a condom?	YES	→ 406
403	Where can a person go to get a condom? SELECT ALL THAT APPLY	CLINIC/HOSPITAL       A         KIOSK/SHOP       B         PHARMACY       C         LOCAL FREE DISPENSERY       D         FRIENDS/PEERS       E         BOYFRIEND/GIRLFRIEND       F         OTHER	
404	If you wanted to, could you yourself get a condom?	YES	→ 406
405	Why is it not easy for you to get a condom? SELECT ALL THAT APPLY	TOO FAR       A         COSTS TOO MUCH       B         DO NOT WANT OTHERS TO KNOW       C         OTHER      X         (SPECIFY)       DON'T KNOW         DON'T KNOW       Y         REFUSED       Z	
406	Have you ever seen a male condom demonstration? By a condom demonstration, I mean someone like a nurse, peer educator, or another trained adult showed how a male condom is correctly used.	YES	

## **MODULE 5: SEXUAL BEHAVIOR**

500 The next questions ask about sexual behavior. There is no right or wrong answer. Your responses will not be linked to you in any way or shared with anyone, including your parents. For each question, you can always tell me you 'don't know' or you can refuse to answer any question.

PLEASE LOOK OUT FOR SIGNS OF DISTRESS IN CHILD WHEN ASKING THE FOLLOWING SEXUAL BEHAVIOR QUESTIONS. IF THE CHILD SEEMS DISTRESSED, ASK CHILD IF HE/SHE WANTS TO STOP THE INTERVIEW.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
501	Do you know what sex is?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	600
501A	Have you ever had sex?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	→ 600
502	Have you ever had vaginal, anal or oral sex?		
	Vaginal sex is when a penis enters a vagina. Anal sex is when a penis enters an anus. Oral sex is when a person puts his/her mouth on the penis or vagina of another person. SELECT ALL THAT APPLY.	VAGINAL A ANAL B ORAL C DON'T KNOW Y REFUSED Z	]→ 600
503	How old were you when you had sex for the first time?	AGE IN YEARS	
		AGE IN TEAKS         98           DON'T KNOW         98           REFUSED         99	
504	The first time you had sex, was it because you wanted to or because you were forced?	WANTED TO         1           FORCED         2           DON'T KNOW         8           REFUSED         9	→ 506 ]→ 506
505	The first time you had sex, were you physically forced or were you pressured into having sex through harassment, threats or tricks?	PHYSICALLY FORCED1PRESSURED2DON'T KNOW8REFUSED9	<b>507</b>
506	What was the <b>main</b> reason that you had sex for the first time?	JUST HAPPENED       01         FRIENDS PRESSURED ME       02         TO HAVE SEX       02         TO SHOW MY LOVE/FEEL LOVED       03         WANTED TO HAVE SEX       04         BOYFRIEND/GIRLFRIEND       04         WANTED TO HAVE SEX       05         FOR MONEY/GIFTS       06         WANTED TO HAVE A BABY       07         OTHER       96         (SPECIFY)       98         REFUSED       99	
507	How old was the person you first had sex with? Please give your best guess.	AGE IN YEARS	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
508A	CHECK Qs. 401 AND 504: DOES RESPONDENT KNOW WHAT A CONDOM IS, IF THE CODED ANSWER IS '2'	YES 1 NO 2	→ 509
508B	CHECK 504: WAS THE RESPONDENT FORCED TO HAVE SEX?	YES 1 NO 2	→ 509
508	The first time you had sex, was a condom used?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	
509	In total, how many different people have you had sex with? Please give your best guess.	NUMBER OF PARTNERS	
510A	CHECK 401: DOES RESPONDENT KNOW WHAT A CONDOM IS?	YES 1 NO 2	→ 512A
510B	CHECK 504: WAS THE RESPONDENT FORCED TO HAVE SEX (CODE '2')?	YES 1 NO 2	→ 510
510C	CHECK 509: DID THE RESPONDENT ANSWER '001', ONLY ONE PARTNER?	YES 1 NO 2	→ 512A
510	The last time you had sex was a condom used?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	
511	How often do you use a condom during sex? Would you say, Always? Sometimes? or, Never?	ALWAYS       1         SOMETIMES       2         NEVER       3         DON'T KNOW       8         REFUSED       9	
512A	CHECK 504: WAS THE RESPONDENT FORCED TO HAVE SEX (CODE '2')?	YES 1 NO 2	→ 512
512B	CHECK 509: DID THE RESPONDENT ANSWER '001', ONLY ONE PARTNER?	YES 1 NO 2	→ 513A
512	Have you ever had sex with someone because he/she provided you with, or you expected that he/she would provide you with gifts, help you to pay for thing or help you in other ways such as giving you food or paying for school fees?	YES	
513A	CHECK: IS RESPONDENT A GIRL?	YES 1 NO 2	→ 514
513	Have you ever been pregnant?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	
514	Have you ever talked with a parent or guardian about sex?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	

## MODULE 6: HIV KNOWLEDGE

Now I would like to ask you some questions about what you know about some things related to HIV. For each question, you can answer 'Yes', 'No', or 'Don't know' or you can refuse to answer.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
601	Have you <b>ever</b> heard of HIV?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	]→ 700
602	From where have you heard about HIV? PROBE: Anywhere else? RECORD ALL MENTIONED	SCHOOLS/TEACHERS       A         PARENTS/GUARDIANS/FAMILY       B         FRIENDS       C         RELIGIOUS LEADERS       D         INTERNET       E         MOBILE PHONE       F         HEALTH PROVIDERS/DOCTORS/       NURSES/CLINICAL OFFICIERS         NURSES/CLINICAL OFFICIERS       G         TELEVISION/FILM       H         RADIO       I         COMMUNITY HEALTH WORKERS       J         OTHER       X         (SPECIFY)       DON'T KNOW         Q       Z	
603	Have you ever discussed HIV with your parents or guardian?	YES	
604	Have you taken part in any of the HIV prevention programs? For example: a) Family, life, and health education (FLHE)? b) Sex and sexuality training (a part of the FHLE, but sometimes offered on its own? c) In-school youth program? d) Out of school youth program? e) HIV awareness training or peer education sessions? f) Training on abstinence and being faithful? g) HIV testing services (HTS)? SELECT ALL THAT APPLY PROBE: Any other prevention programs? SHOW CHILD THE LOGO FOR EACH PROGRAM	FAMILY, LIFE, & HEALTH EDUCATION       A         SEX AND SEXUALITY TRAINING       B         IN-SCHOOL YOUTH PROGRAM       C         OUT OF SCHOOL YOUTH PROGRAM       D         HIV AWARENESS TRAINING OR PEER       EDUCATION SESSIONS         ETRAINING ON ABSTINENCE AND BEING       F         HIV TESTING SERVICES (HTS)       G         NO, NOT TAKEN PART       W         OTHER	
605	Can a person reduce their chance of getting HIV by not having sex?	YES	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
605A	CHECK 401: DOES RESPONDENT KNOW WHAT A CONDOM IS?	YES 1 NO 2	→ 607
605B	CHECK 501: DOES RESPONDENT KNOW WHAT SEX IS?	YES 1 NO	→ 607
606	Can a person reduce their chance of getting HIV by using condoms when having sex?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	
607	Can a healthy-looking person have HIV or AIDS?	YES	
608	Can a mother with HIV or AIDS pass HIV to her unborn baby?	YES       1         NO       2         DON'T KNOW       8         REFUSED       9	
609	Are there medicines that people with HIV or AIDS can take to help them live longer?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	
610	Can male circumcision help prevent HIV infection? Circumcision is the removal of the foreskin from a penis.	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	
611	Can ARVs make people with HIV less likely to spread the virus?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	
612	Can ARVs rid HIV from an HIV-positive person's body?	YES       1         NO       2         DON'T KNOW       8         REFUSED       9	

	getting HIV.	1	1
NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
701A	CHECK 601: HAS THE RESPODNENT EVER HEARD OF HIV?	YES 1 NO 2	→ 800
701	How likely do you think it is for you to get HIV?		
	Would you say, it is Very likely? Somewhat likely? Not likely? Or, You already know you have HIV?	VERY LIKELY1SOMEWHAT LIKELY2NOT LIKELY3ALREADY HAVE HIV4DON'T KNOW8REFUSED9	→ 703 → 800 → END MODULE
702	What is the main reason you think you are likely to get HIV?	HAD SEX WITHOUT A CONDOM       01         HAVE OR HAD MANY BOY/GIRL       FRIENDS       02         HAVE HAD BLOOD TRANSFUSIONS       03         MY MOTHER/FATHER/CLOSE       RELATIVE HAS HIV       04         DON'T TRUST MY BOY/GIRLFRIEND       05       SELF SICK       06         BOY/GIRLFRIEND IS SICK       07       DESERVE IT/I AM A BAD PERSON       08         OTHER      96	→ END MODULE
703	What is the <b>main</b> reason you think you are not likely to get HIV?	ABSTINENT       01         WILL WAIT UNTIL MARRIAGE       02         TO HAVE SEX       02         ALWAYS USE CONDOMS       03         TRUST MY PARTNER       04         HAVE ONLY ONE PARTNER       05         GO TO CHURCH/RELIGIOUS HOUSE       06         AM A GOOD PERSON       07         OTHER       96         (SPECIFY)       98         REFUSED       99	

## MODULE 7: HIV RISK PERCEPTION

## **MODULE 8: HIV TESTING**

800 HIV testing is the best way to confirm that someone has HIV. I will like to ask you some questions about HIV testing. Your answers will not be told to anyone, even your parents. For each question, you can tell me you 'don't know' or you can refuse to answer any question.

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
801a	CHECK 601: HAS THE RESPONDENT EVER HEARD OF HIV?	YES 1 NO 2	→ 900
801	To what extent do you agree with the following statement: Everyone should get tested for HIV. Do you strongly agree, agree, disagree, or strongly disagree?	STRONGLY AGREE1AGREE2DISAGREE3STRONGLY DISAGREE4DON'T KNOW8REFUSED9	
802	To what extent do you agree with the following statement: Only persons who think they might have HIV should get an HIV test. Do you strongly agree, agree, disagree, or strongly disagree?	STRONGLY AGREE1AGREE2DISAGREE3STRONGLY DISAGREE4DON'T KNOW8REFUSED9	
803	Have you ever been tested for HIV?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	
804	Did you receive the results of any of your HIV tests?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	
805	What was the result of that HIV test? SOME PARTICIPANTS MAY REPORT BEING TESTED MORE THAN ONCE. IF THEY REPORT GETTING A POSITIVE RESULT AND ANOTHER RESULT (I.E. A PREVIOUS NEGATIVE RESULT), SELECT POSITIVE.	HIV POSITIVE       1         HIV NEGATIVE       2         UNKNOWN/DON'T KNOW       8         REFUSED       9	
806	Are you currently on treatment for HIV?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	

## **MODULE 9: HIV STIGMA**

900	Now I would like to ask you some more questions about your autitude towards people living with hiv.		
NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
901a	CHECK 601: HAS THE RESPONDENT EVER HEARD OF HIV?	YES 1 NO 2	END →MODULE
901b	CHECK 701: DOES RESPONDENT ALREADY HAVE HIV (CODE 4)?	YES 1 NO 2	→ END MODULE
901c	CHECK 805: IS RESPONDENT HIV POSITIVE?	YES 1 NO 2	→ END MODULE
901	Would you be willing to share food with someone who has HIV?	YES	
902	Would you be friends with someone who has HIV?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	
903	Would you be comfortable to have a teacher who has HIV?	YES	

900 Now I would like to ask you some more questions about your attitude towards people living with HIV.

## MODULE 10: SOCIAL NORMS, INTENTION TO ABSTAIN, SELF-EFFICACY AND ASSERTIVENESS

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
1000a	CHECK 501: DOES RESPONDENT KNOW WHAT SEX	YES 1 NO 2	→ 1005
1001	Do you think all, many, some, a few or none of your friends are having sex?	ALL       1         MOST       2         SOME       3         A FEW       4         NONE       5         DON'T KNOW       8         REFUSED       9	
1002	Do you feel pressured by your boyfriend/girlfriend to have sex?	YES         1           NO         2           DON'T HAVE BOYFRIEND/GIRLFRIEND         3           DON'T KNOW         8           REFUSED         9	
1003	Do you feel pressured by your friends to have sex?	YES         1           NO         2           DON'T KNOW         8           REFUSED         9	
1004	If you did not want to have sex with someone, could you tell them that you do not want to have sex with them?	YES 1 NO 2 DON'T KNOW 8 REFUSED 9	
1005	This is the end of survey. Thank you very much for your tin useful to HIV programming and services among adolescen	, , , , , , , , , , , , , , , , , , ,	

1000 Now I would like to ask you some questions about social norms, your belief and your confidence. This is to get a better understanding of you and your peers attitudes towards sex.

# APPENDIX H SURVEY CONSENT FORMS

## Appendix H1: Survey Consent for Household Interview

Interviewer reads: What language do you prefer for our discussion today?

English

Hausa

🗌 Igbo

□ Yoruba

Nigeria AIDS Indicator and Impact Survey

Hello. My name is\_\_\_\_\_\_. I would like to invite you to take part in this survey about HIV in Nigeria. The Federal Ministry of Health and the National Agency for the Control of AIDS (NACA) are leading this survey. They are carrying out the survey with the United States Centers for Disease Control and Prevention (CDC).

## Purpose of survey

This survey will help us know how many people in Nigeria have HIV and need health services. It will also tell us about people's risk for getting HIV.

We plan to invite about 98,207 households to take part in this survey. If you take part, you will help the Government of Nigeria make health services better in the country.

## **Survey Procedures**

If you agree to take part in this survey, you will be invited to take part in two interviews: a household interview and a single person interview. In the household interview, we will ask you questions about persons living in your household and the things you have. This interview will last for about 30 minutes.

After the household interview, we will invite you and persons living in your household to take part in single person interviews. The single person interview will take about 40 minutes. We will also offer HIV testing after the interview. We may also offer Hepatitis B and Hepatitis C testing. We will ask each person to give permission to take part before joining the survey.

## Potential Risks/Discomfort

Some of the questions may make you feel uncomfortable. You are free to skip a question and continue. The information you provided will be protected in a secure place. Access to the information will be minimized and limited to persons carrying out this survey.

## **Potential Benefits**

You may or may not benefit by taking part in this study. If you take part, you and your household members will get free testing for HIV in your home. In addition, some people may also get free Hepatitis B or Hepatitis C testing. The answers you give will help Government to improve the health services of Nigerians and to develop more effective programs to fight HIV and other diseases.

## Alternative to Taking Part

Your alternative is not to take part. If you choose not to take part, the services you or any member of your household receive will not be affected.

## **Costs to Person Taking Part in the Survey**

It will not cost you anything to take part in this study other than your time.

## Payment to Person Taking Part in the Survey

You will not receive any payment for taking part in this survey

## **Confidentiality and Access to Records**

Efforts will be made to protect your household information and your answers to the interview questions. A number will be used instead of your name to identify the answers you give. Any answers included in the final report will not have your name or household on it. The information we collect from you will not be released outside of the study partners listed below unless there is an issue of safety.

## {DO NOT READ ALOUD]

The following individuals and/or agencies may look at your household records to make sure that we are protecting your rights as someone who takes part in research:

- Staff members from the Nigerian National Health Research Ethics Committees (NHREC) and the Institutional Review Boards at the Centers for Disease Control and Prevention (CDC; Atlanta, USA)
- The United States Office of Human Research Protections and other government agencies that look at the safety
  of persons taking part in research to ensure we are protecting your child's rights as a person who takes part in
  this survey
- Study staff and study monitors

## [READ FROM HERE]

Everyone using the survey information will work to keep your personal information secret. Your personal information will not be given out. If you have any questions or concerns about your household rights, or if you believe those rights were violated due to our negligence, you can contact the National Health Research Ethics Committee (NHREC) at

## [INDICATE ADDRESS OF POC]

Address: Federal Ministry of Health, Federal Secretariat Complex Shehu Shagari Way, Garki, Abuja P.M.B. 083 Garki Abuja Tel: +234-803-586-8293 E-mail: info@nhrec.net

## Refusal to Take Part and Right to Withdraw

Your taking part in this survey is voluntary. You do not have to take part in this survey. You are free to change your mind at any time and stop taking part. Refusal to take part or stopping to take part will not affect the health services you or any member of your household receive. If you decide not to take part or stop taking part, we will ask your permission to give us the reasons and the information you gave will not be included in analysis. If you have any questions about the survey, or feel that you have been harmed by taking part, you should contact the responsible investigator:

[INDICATE ADDRESS OF POC] Dr. Evelyn Ngige Address: Federal Ministry of Health Phone: +234-803-303-8090 Email: nkadingige@yahoo.com

Dr. Ibrahim Dalhatu Address: USCDC Nigeria Country Office Phone: +234-806-051-0525 Email: idalhatu@cdc.gov

## **Removal from Survey**

The person in charge of the survey can remove your household from the survey without your consent. We will notify you if this happens. You will have a chance to ask questions.

## Do you want to ask me anything about the survey?

. .

#### **Consent Statement**

I have read this form and/or someone has read it to me. I was encouraged to ask questions and given time to ask questions. Any questions that I had have been answered satisfactorily. I agree to take part in the household interview. I know that after choosing to be in the interview, I may withdraw at any time. My taking part is voluntary. I have been offered a copy of this consent form.

Do you agree to do the household interview? 'YES' means that you agree to do the interview. 'NO' means that you will NOT do the interview.

YesNo	
Head of household signature or mark	Date://
Printed name of head of household	
Household ID number	
[For illiterate participants]	
Signature of witness	Date://
Printed name of witness	
Signature of person obtaining consent	Date://
Printed name of person obtaining consent	
Survey staff ID number	

## Appendix H2: Survey Consent for Individual Adult Interview and Blood Draw (Age 18 – 64 years)

Nigeria AIDS Indicator and Impact Survey (NAIIS)

## [IF PARTICIPANT HAS NOT BEEN THROUGH HOUSEHOLD CONSENT]

#### Interviewer reads: What language do you prefer for our discussion today?

- English
- 🗆 Hausa
- □ Igbo
- □ Yoruba

Hello. My name is \_\_\_\_\_\_\_. I would like to invite you to take part in this survey about HIV in Nigeria. The Federal Ministry of Health and the National Agency for the Control of AIDS (NACA) are leading this survey. They are doing it with the United States Centers for Disease Control and Prevention (CDC). You are invited to take part in this survey because you are a member of a household. Taking part in this survey is voluntary.

## Purpose of survey

This survey will help us know how many people in Nigeria have HIV and need health services. It will also tell us about people's risk for getting HIV.

We plan to invite about 137,289 members of households like you to take part in this survey. If you take part, you will help the Government of Nigeria make health services better in the country.

## $\rightarrow$ GO TO SURVEY PROCEDURES

## [IF PARTICIPANT HAS BEEN THROUGH HOUSEHOLD CONSENT]

Hello, my name is\_\_\_\_\_\_.

## Survey Procedures

If you take part in this survey, you will be invited to take part in a single person interview. We will ask you questions about yourself, your sexual and social life, and your awareness of HIV services. We will also ask for your permission to do a free HIV test on you. The interview will take about 40 minutes.

The information is collected on this tablet. The information is stored securely and can only be accessed by selected survey staff. The interview will take place in private here in your house or an area around your house.

After the interview, we will offer you HIV testing and may also offer Hepatitis B and Hepatitis C testing. We will also ask your permission to use your leftover blood later in the laboratory for future testing.

## Blood draw and HIV testing procedures

If you agree to take the HIV, test trained laboratory personnel will take a small amount, about 14 mL or about one tablespoon of blood from your arm. If it is not possible to take blood from your arm, then we will try to take a few drops of blood from your finger. We will give you the HIV results today and offer you conselling services . The testing and counselling session will take about 40 minutes.

If we find HIV in your blood, you will get a Hepatitis B and C test here at home. If we dont find HIV in your blood, you may or may not be selected for Hepatitis B and C testing. We will also test your blood for CD4 cells here at home. The

number of CD4 cells shows how well your body can fight HIV infection and other diseases. We will also test the CD4 cells of some people who do not have HIV in their blood. We will also send your blood to a laboratory to find out your viral load, which is the amount of HIV in your blood. We will send your viral load results to a health facility in about 8-10 weeks from now. We will give you a referral form and information so that you can consult a nurse or doctor to learn more about your HIV, CD4 cells, viral load test results, and your health.

## We will also do other additional tests related to HIV.

If we have test results that might help your care or treatment, we will contact you to tell you how you and your doctor or nurse may get these results.

## Storage of specimens

We would also like your permission to keep your leftover blood sample for future research tests. These tests may be about HIV or other health issues important for the health of the Nigerian people, such as nutrition or immunization. This will help the Federal Ministry of Health improve the health of the people of Nigeria. This sample will be kept for at least five years and your information will be linked to the stored sample for the 5-year period and delinked afterward. We will attempt to tell you about any test results that are important to your health during the five-year period. Your leftover blood will not be sold or used for profit making. If you do not agree for us to keep your blood sample, we will destroy your blood sample after all tests for this survey are completed.

## Potential Risks/Discomfort

Some of the questions may make you feel uncomfortable. You are free to skip a question and continue. The information you provided will be protected in a secure place.

The risks in drawing blood are very small. They include brief pain from the needle stick, bruising, lightheadedness, bleeding, and rarely, infection where the needle enters the skin. If you have any discomfort, bleeding or swelling at the site, please let us know.

You may learn that you are infected with HIV. Learning that you have HIV may cause some emotional discomfort. You will receive advice on how to cope with learning that you have HIV.

If you are selected for Hepatitis B and C testing, you will learn your Hepatitis B and C status. This may cause some emotional discomfort. You will receive advice on how to cope and where to go for treatment.

We will do everything we can to keep the information on your HIV status a secret. Access to the information will be minimized and limited to persons carrying out this survey.

## **Potential Benefits**

You may or may not benefit by taking part in this study. The answers you give will help Government to improve the health services of Nigerians and to develop more effective programs to fight HIV and reduce its spread in the community. The main benefit for you to take part in this survey is the chance to learn more about your health today. If we do not find HIV in your blood, you will learn about what you can do to prevent becoming infected by HIV. If we find HIV in your blood, the benefit is that you will know your HIV status and where to go for life-saving treatment that is provided by the Federal Ministry of Health and the National Agency for the Control of AIDS (NACA) at no cost to you. If you already know that you are HIV positive and are on HIV treatment, the CD4 and viral load tests will help your nurse or doctor know how well your treatment is working.

## Alternative to Taking Part in the Survey

Your alternative is not to take part. If you choose not to take part, the services you or any member of your household receive will not be affected.

## Costs to Person Taking Part in the Survey

It will not cost you anything to take part in this study other than your time.

## Payment to Person Taking Part in the Survey

You will not receive any payment for taking part in this survey

## Confidentiality and Access to your Health Information

Efforts will be made to protect your personal information and your answers to the interview questions. A number will be used instead of your name to identify the answers you give. Any answers included in the final report will not have your name on it. The information we collect during the survey will not be released outside of the survey groups unless there is an issue of safety. Everyone using the survey information will work to keep your personal information confidential.

## [INTERVIEWER: DO NOT READ ALOUD]

The following individuals and/or agencies may look at your research records to make sure that we are protecting your rights as someone taking part in research:

- Staff members from the Nigerian National Health Research Ethics Committees (NHREC) and the Institutional Review Boards at the Centers for Disease Control and Prevention (CDC; Atlanta, USA).
- The United States Office of Human Research Protections and other government agencies that look at the safety
  of persons taking part in research to ensure we are protecting your child's rights as a person who takes part in
  this survey.
- Study staff and study monitors.

## [INTERVIEWER: READ FROM HERE]

Your permission to allow us to use and share your name and contact information with the groups above will expire two years after the end of the survey. If you want to leave the study, have any questions about the survey, or feel that you have been harmed by taking part, you should contact NHREC at: [INDICATE ADDRESS OF POC]

Address: Federal Ministry of Health, Federal Secretariat Complex Shehu Shagari Way, Garki, Abuja P.M.B. 083 Garki Abuja Tel: +234-803-586-8293 E-mail: info@nhrec.net

[READ FROM HERE]

## Refusal to Take Part and Right to Withdraw

Your taking part in this survey is voluntary. You are free to withdraw the permission to use your information and leftover blood at any time. Refusal to take part or withdrawal from the survey will not affect the health services you or any member of your household receive. You do not have to take part in giving your blood samples. Even after you agree to give the blood samples you are free to change your mind and stop taking part. You may agree to let us test your blood for HIV and CD4 counts and other HIV tests. If you do not want to give blood, please tell us. If you decide to stop taking part, there will be no adverse physical, social, economic, legal or psychological consequences for your decision to withdraw from the survey. If you have questions or concerns or complaints or if you need to report a medical injury related to the survey, please contact the responsible investigator:

[INDICATE ADDRESS OF POC] Dr. Evelyn Ngige Address: Federal Ministry of Health Phone: +234-803-303-8090 Email: nkadingige@yahoo.com Dr. Ibrahim Dalhatu Address: US CDC Nigeria Office Phone: +234-806-051-0525 Email: idalhatu@cdc.gov

## Do you want to ask me anything about the survey?

## **Consent Statement**

I have read this form and/or someone has read it to me. I was encouraged to ask questions and given time to ask questions. Any questions that I had, have been answered satisfactorily. I agree to take part. I know that after choosing to take part, I may withdraw at any time. My taking part is voluntary. I have been offered a copy of this consent form.

1. Do you agree to do the individual interview? 'YES' means that you agree to do the interview. 'NO' means that you will NOT do the interview.

\_\_\_\_Yes \_\_\_\_No

 Do you agree to give blood for HIV, Hepatitis B and C testing and related testing? 'YES' means that you agree to give blood for HIV testing and related testing. 'NO' means that you will NOT give blood for HIV testing, Hepatitis B, and related testing.

\_\_\_\_Yes \_\_\_\_No

 Do you agree to have your leftover blood stored for future research? 'YES' means that you agree to have these blood samples stored for future testing. 'NO' means that these blood samples will NOT be stored for future research.

\_\_\_\_\_Yes \_\_\_\_\_No

4. Do you agree to be contacted should these future studies have clinically actionable results that are related to your health? 'YES' means that you agree to be contacted. 'NO' means that you don't agree to be contacted.

\_\_\_\_Yes \_\_\_\_No

Participant signature or mark	Date:	_/	_/
Printed name of participant			
Participant ID number			
[For illiterate participants]			
Signature of witness	Date:	_/	_/
Printed name of witness			
Signature of person obtaining consent	Date:	_/	_/
Printed name of person obtaining consent			
Survey staff ID number			

## Appendix H3: Parent/Guardian Permission for Children, ages 0-9 years

Nigeria AIDS Indicator and Impact Survey (NAIIS)

Now I would like to ask permission for your son/daughter to take part in the survey. Your child's taking part will help the Federal Ministry of Health and National Agency for the Control of AIDS (NACA) to plan well to fight HIV.

## [IF PARENT/GUARDIAN HAS BEEN THROUGH CONSENT PROCESS FOR INTERVIEW/BLOOD DRAW]

## **Survey Procedures**

If you give permission for your child to take part, we will go ahead as mentioned in your consent as follows:

- [IF CHILD IS 2-9 YEARS OLD] To do the HIV test in your home, a trained laboratory personnel will take about 6 mL or about 1 teaspoon of blood from your child's arm or a few drops of blood from your child's finger.
- [IF CHILD IS <2 YEARS OLD] A trained laboratory person will take a few drops (about 1 mL) from your child's finger or heel for the HIV test.</li>
- We will discuss the results with you and your child, if you want to discuss them with him/her
- If your child has HIV, he/she will get a CD4 test and receive the results today.
- If your child is HIV positive, his/her blood will be sent to a laboratory to determine the viral load. The results
  will be returned to the clinic or hospital you would like in 8-10 weeks.
- We will give you a referral form so you and your child can consult with a doctor regarding his/her HIV test, and viral load results.
- We will ask for your permission to store your child's leftover blood for future research tests

## [FOR CHILDREN ≤18 months ONLY]

The body makes antibodies to fight HIV. Antibodies from a mother with HIV can enter the baby's blood during pregnancy. The test we perform on your child today will let us know if your child has the antibodies that fight HIV. If we find the antibodies, it does not mean your child has the virus in his/her blood. It just shows that he/she has the antibodies to HIV and that the mother is positive. We will need to send your child's blood to a lab for a special test to know if he/she has the HIV virus. If you give us the name of a clinic or hospital, we can send the result there in about 8 to 10 weeks from now. If you give us your contact information, we will also contact you to tell you that the results have been sent to the clinic or hospital you chose. You will be able to talk to a doctor or nurse at the clininc or hospital about the test result. With your permission, the Federal Ministry of Health will use your child's leftover blood sample for future unspecified test results that may be important towards improving the health of Nigerian children

## $\rightarrow$ GO TO POTENTIAL STORAGE OF SPECIMENS [IF PARENT/GUARDIAN HAS NOT BEEN THROUGH CONSENT PROCESS FOR INTERVIEW/BLOOD DRAW]

## Interviewer reads: What language do you prefer for our discussion today?

- English
- Hausa
- 🗆 Igbo
- □ Yoruba

## **Purpose of survey**

This survey will help us know how many people in Nigeria have HIV and need health services. It will also tell us about people's risk for getting HIV.

We plan to invite about 31,000 children to take part in this survey. If you give permission for your child to take part, you will help the Government of Nigeria make health services better in the country.

## **Survey Procedures**

**[FOR CHILDREN 2-9 YEARS OLD]** If you agree to allow your child to take part in the survey, a trained laboratory person will take a small amount or about 6 mL of blood or about 1 teaspoon from your child's arm to perform an HIV test here in your home. If it is not possible to take blood from your child's arm, then we will try to take a few drops of blood from your child's finger.

[FOR CHILDREN <2 YEAR OLD] If your child is less than 2 years, we will take a few drops (about 1 mL) from your child's finger or heel for the HIV test.

We will give you the results today and counsel you about the results and how to share the results with your child if you decide to share them with him/her. If you would like, we can discuss the test results together with your child. The entire testing and counselling session will take about 40 minutes.

If your child tests positive for HIV, We will test his/her blood for C4 cells here and also send his/her blood to a laboratory to test the amount viral load in his/her blood. CD4 cells are the part of your immune system that fights HIV infection and other diseases while viral load is the amount of HIV in the blood. We will also test the CD4 level of some children without HIV. If you provide us with the name of a health facility, we can send your child's viral load results there about 8 to 10 weeks from now.

We will give you a referral form and information so that you and your child can consult with a doctor or nurse to learn more about his/her HIV test, CD4 count, and viral load. If we have test results that might guide your child's care or treatment, we will contact you to tell you how you and your child's doctor or nurse may get these results.

## [For children ages 0-<18 months only]

The body makes antibodies to fight HIV. Antibodies from a mother with HIV can enter the baby's blood during pregnancy. The test we perform on your child today will let us know if your child has antibodies to HIV and if the mother is HIV positive. If we find the antibodies, it does not mean your child has the HIV virus in his/her blood. It just tells us that he/she has antibodies to HIV. We will need to send your child's blood sample to a lab for a special test to know if he/she truly has the HIV virus. If you give us the name of a clinic or hospital you would like to send the result to, we can send the result there in about 8 - 10 weeks from now. If you give us your contact information, we will also contact you to tell you that the results have been sent to the clinic or hospital. You will be able to talk to a doctor or nurse at the clinic or hospital about the test result.

## Storage of specimens

We would like to ask for your permission to store your child's leftover blood sample for future research tests. These tests may be about HIV or other health issues important for the health of about 170 million Nigerians, such as nutrition or immunization. This sample will be stored for at least five years, but your child's name will be linked to the sample for only five years. We will attempt to tell you about any test results during the five-year period that are important for your child's health. Your child's leftover blood sample will not be sold or used for profit making. If you do not agree to long-term storage of your child's blood samples, we will destroy your child's blood samples after all tests for this survey are completed.

## **Potential Risks**

The risks to being in the survey and drawing blood are small. They include brief pain from the needle stick, bruising, lightheadedness, bleeding, and rarely, infection where the needle enters the skin. We will do everything we can to minimize these risks and keep your child's information private.

## **Potential Benefits**

The main benefit for your child to be in the survey is the chance to learn more about his/her health today. Some children who take part will have HIV virus found in their blood. If this happens to your child, the benefit is that you will learn his/her HIV and will learn where to take your child for life-saving treatment for HIV that is provided by the Federal Ministry of Health at no cost to you. If you already know that your child has HIV and he/she is taking treatment, the CD4 and viral load tests can help your child's doctor or nurse to find out how well the treatment is working. Your child's taking part in this research could help us learn more about children and HIV in Nigeria and how HIV prevention and treatment programs are working.

## Alternative to Taking Part in the Survey

Your alternative is not to let your child take part in the survey. If you choose not to let him/her takes part, the services you and your child receive will not be affected in any way.

## Costs to Person Taking Part in the Survey

There is no cost to you for your child being in the survey. All the tests are given at no cost to you.

## Payment to Person Taking Part in the Survey

You should also know that you and your child will not be paid for taking part in the survey.

## Confidentiality and Access to Your Health Information

We will do everything we can to keep your child's taking part in the survey private. The information we collect from your child will be identified by a number and not by your name or your child's name. Your name and your child's name will not appear when we share survey results. The information we collect from your child will not be released outside of the survey groups listed below unless there is an issue of safety.

[INTERVIEWER: DO NOT READ ALOUD]

The following individuals and/or agencies will be able to look at your child's research records to help oversee the conduct of this survey:

- Staff members from the Institutional Review Boards or Ethics Committees overseeing the conduct of this survey to ensure that we are protecting your child's rights as he/she takes part in the survey. These include the National Health Research Ethics Committee (NHREC) and the Institutional Review Boards at the Centers for Disease Control and Prevention (CDC; Atlanta, USA),
- The United States Office of Human Research Protections and other government agencies that oversee the safety of human subjects to ensure we are protecting your child's rights as he/she takes part in this survey
- Study staff and study monitors

## [INTERVIEWER: READ FROM HERE]

Your permission to allow us to use and share your child's name and contact information with the groups above will expire two years after the end of the survey. If you want your child to leave the study, have any questions about the survey, or feel that your child has been harmed by taking part, you should contact NHREC at: [INDICATE ADDRESS OF POC]

Address: Federal Ministry of Health, Federal Secretariat Complex Shehu Shagari Way, Garki, Abuja P.M.B. 083 Garki Abuja Tel: +234-803-586-8293 E-mail: info@nhrec.net

## Refusal to Take Part and Right to Withdraw

It is your decision whether you will allow your child to join the survey. Your child may stop taking part at any time. If your child does not take part, it will not affect your child's health care in any way. Even after you agree to give your child's blood samples, you are free to change your mind and stop taking part. You may agree to let us test your child's blood for HIV and CD4 counts and other HIV testing and not agree to have his/her blood be kept for future research tests. If you do not want to give your child's blood, please tell us. If you decide to stop taking part, we will request you to complete a refusal/withdrawal form and the samples you gave will not be included in analysis. Your permission to allow us to use and share your child's information with the groups above will expire two years after the end of the survey. If you want to leave the survey, or have the leftover specimen destroyed, have any questions about the survey, or feel that you have been harmed by taking part, you should contact the responsible investigator: ... [INDICATE ADDRESS OF POC] Dr. Evelyn Ngige

DI. Everyn ngige

Address: Federal Ministry of Health Phone: +234-803-303-8090 Email: nkadingige@yahoo.com Dr. Ibrahim Dalhatu Address: US CDC Nigeria Office Phone: +234-806-051-0525 Email: idalhatu@cdc.gov

## Do you want to ask me anything about your child's taking part in the survey?

## **Consent Statement**

I have read this form, and/or someone has read it to me. I was encouraged to ask questions and given time to ask questions. Any questions I had have been answered satisfactorily. I agree for my child to take part in this survey. I know that after allowing my child to take part, I may change my mind and withdraw him/her from taking part in this survey at any time. I have been offered a copy of this consent form.

1. Do you agree that your child give blood for HIV testing and related testing? 'YES' means that you give your permission to have the nurse collect a sample of your child's blood for HIV testing and related testing. 'NO' means that your child will NOT give blood for HIV testing and related testing.

\_\_\_\_\_Yes \_\_\_\_No (if "Yes" proceed to the next question)

2. Do you agree to have your child's leftover blood stored for future research? 'YES' means that you give permission for your child's leftover blood samples to be stored for future research. 'NO' means that your child's blood samples will NOT be stored for future research.

\_\_\_\_Yes \_\_\_\_No

3. Do you agree to be contacted should these future studies have clinically actionable results that are related to your child's health? 'YES' means that you agree to be contacted. 'NO' means that you don't agree to be contacted.

Yes No

Parent/guardian signature or mark	Date://
Printed name of parent/guardian	
Parent/guardian ID number	(If applicable. If not applicable check here)
[For illiterate participants]	
Signature of witness	Date://
Printed name of witness	
Signature of person obtaining consent	Date://
Printed name of person obtaining consent	
Survey staff ID number	
Child's name (print)	
Child's participant ID number	

## Appendix H4: Parent/Guardian Permission for Child Interview and Blood Draw [ages 10-17 years]

## Nigeria AIDS Indicator and Impact Survey (NAIIS)

Now I would like to ask you to give us permission to invite your son/daughter to take part in the survey. Your child's taking part will help the Federal Ministry of Health and the National Agency for the Control of AIDS make HIV services better.

## [IF PARENT/GUARDIAN HAS BEEN THROUGH CONSENT PROCESS FOR INTERVIEW/BLOOD DRAW]

## **Survey Procedures**

If you and your child agree, the following will happen, as described in your own consent:

- We will ask questions on HIV and your child's behaviors (about 40 minutes) in private. Your child's answers will not be shared with you.
- To do the HIV test in your home.

## [IF 10-14 YEARS]:

- A trained lab technician will take about 6 mL (about 1 teaspoon) of blood from your child's arm or a few drops of blood from your child's finger.
- We will discuss the results with you. We can discuss the results with you and your child together, if you so choose.
- If your child is HIV positive, we will test his/her blood for CD4 cells count here at home. We will send his/her blood to a laboratory to determine the viral load. The results will be returned to the clinic or hospital you would like in 8 10 weeks. We will give you a referral form so you and your child can consult with a doctor regarding his/her HIV test, CD4 count and viral load results
- With your permission, the Federal Ministry of Health will use your child's leftover blood sample for future unspecified test results that may be important towards improving health of Nigerian children.

## [IF 15-17 YEARS]:

- A trained lab technician will take about 14 mL (about one tablespoon) of blood from your child's arm or a few drops of blood from your child's finger.
- We will discuss the results with you. We can discuss the results with you and your child together, if you so choose.
- If your child is HIV positive, we will test his/her blood for CD4 cells count here at home. We will send his/her blood to a laboratory to determine the viral load. The results will be returned to the clinic or hospital you would like in 10-12 weeks. We will give you a referral form so you and your child can consult with a doctor regarding his/her HIV test, CD4 count and viral load results
- If your child is HIV positive, he/she will also get a Hepatitis B and C test. If you child tests positive for Hepatitis B or C, we will give you a referral form so you and your child can consult with a doctor regarding his/her test results.
- If your child is HIV negative, he/she may be randomly selected for CD4 testing and for Hepatitis B and C testing. If we have test results that might guide your child's care or treatment, we will give you a referral form so you and your child can consult with a doctor regarding his/her test results.
- With your permission, the Federal Ministry of Health will use your child's leftover blood sample for future unspecified test results that may be important towards improving health of Nigerian children.

## $\rightarrow$ GO TO STORAGE OF SPECIMENS

## [IF PARENT/GUARDIAN HAS NOT BEEN THROUGH CONSENT PROCESS FOR INTERVIEW/BLOOD DRAW]

Interviewer reads: What language do you prefer for our discussion today?

- English
- Hausa
- 🗆 Igbo
- □ Yoruba

## **Purpose of survey**

This survey will help us know how many people in Nigeria have HIV and need health services. It will also tell us about people's risk for getting HIV.

We plan to invite about 31,000 children to take part in this survey. If you give permission for your child to take part, you will help the Government of Nigeria make health services better in the country.

## **Survey Procedures**

If you agree to allow us to invite your child to take part in the survey, we will ask your child to do an interview with us in private to learn what your child knows about HIV and about your child's behaviors that may put him or her at risk for HIV. The interview will take about 40 minutes. We will not share your child's answers to the interview questions with you. The interview will take place in private here in your house or an area around your house.

**[IF 10-14 YEARS]:** If you and your child agree, a trained laboratory person will take a small amount or about 6 mL (about 1 teaspoon) of blood from your child's arm to perform an HIV test here in your home. If it is not possible to take blood from your child's arm, then we will try to take a few drops of blood from your child's finger. We will give you the results today and discuss with you how to share the results with your child if you decide to share them with him/her. If you would like, we can discuss the test results together with your child. The entire testing and advice session will take about 40 minutes.

If your child tests positive for HIV, we will test his/her blood for CD4 cells count here at home and send his/her blood to a laboratory to test the viral load in his/her blood. CD4 cells are the part of your immune system that fights HIV infection and other diseases while viral load is the amount of HIV in the blood. We will also test the CD4 level of some children without HIV. If you provide us with the name of a health facility, we can send your child's viral load results there about 8 to 10 weeks from now. We will give you a referral form and information so that you and your child can consult with a doctor or nurse to learn more about his/her HIV test, CD4 count, viral load, and health.

We will also do other additional tests related to HIV. If we have test results that might help your child's care or treatment, we will contact you to tell you how you and your child's doctor or nurse may get these results.

With your permission, the Federal Ministry of Health will use your child's leftover blood sample for future unspecified test results that may be important towards improving health of Nigerian children.

**[IF 15-17 YEARS]:** If you and your child agree, a trained laboratory personnel will take a small amount or about 14 mL (about one tablespoon) of blood from your child's arm to perform an HIV test here in your home. If it is not possible to take blood from your child's arm, then we will try to take a few drops of blood from your child's finger. We will give you the results today and discuss with you how to share the results with your child if you decide to share them with him/her. If you would like, we can discuss the test results together with your child. The entire testing and advice session will take about 40 minutes.

If your child tests positive for HIV, we will test his/her blood for CD4 cells count here at home and send his/her blood to a laboratory to test the viral load in his/her blood. CD4 cells are the part of your immune system that fights HIV infection and other diseases while viral load is the amount of HIV in the blood. We will also test the CD4 level of some children without HIV. If you provide us with the name of a health facility, we can send your child's viral load results there about 8 to 10 weeks from now. We will give you a referral form and information so that you and your child can consult with a doctor or nurse to learn more about his/her HIV test, CD4 count, viral load, and health.

If your child tests positive for HIV, we will test his/her blood for Hepatitis B and C. If your child test positive for Hepatitis B and/or C, we will give you a referral form and information so that you and your child can consult with a

doctor or nurse to learn more about his/her Hepatitis and health.

If your child is HIV negative, he/she may be randomly selected for CD4 testing and for Hepatitis B and C testing. If we have test results that might guide your child's care or treatment, we will give you a referral form so you and your child can consult with a doctor regarding his/her test results.

We will also do other additional tests related to HIV. If we have test results that might help your child's care or treatment, we will contact you to tell you how you and your child's doctor or nurse may get these results.

With your permission, the Federal Ministry of Health will use your child's leftover blood sample for future unspecified test results that may be important towards improving health of Nigerian children.

#### Storage of specimens

We would like to ask for your permission to store your child's leftover blood for future tests. These tests may be about HIV or other health issues important for the health of Nigerian people such as nutrition or immunization. This sample can be stored for at least five years, but your child's name will be linked to the sample for five years. We will attempt to tell you about any test results during the five-year period that are important for your child's health. Your child's leftover blood will not be sold or used for profit making. If you do not agree to long-term storage of your child's blood samples, we will destroy your child's blood samples after all tests for this survey are completed.

#### **Potential Risks**

Your child may feel uncomfortable answering some of the questions. Your child does not need to answer any question(s) if they feel the question(s) makes them feel uncomfortable.

The risks to being in the survey and drawing blood are small. They include brief pain from the needle stick, bruising, lightheadedness, bleeding, and rarely, infection where the needle enters the skin. We will do everything we can to minimize these risks and keep your child's information private.

## **Potential Benefits**

There may be no direct benefit to your child for taking part in the interview. The main benefit for your child is the chance to learn more about his/her health today. Some children who take part will be found to have HIV. If this happens to your child, the benefit is that you will learn his/her HIV, status and will learn where to take your child for free HIV treatment that is given by the Federal Ministry of Health. If you already know that your child has HIV and he/she is taking drugs for HIV, the CD4 and viral load tests can help your child's doctor or nurse to know how well the drugs are working. Your child's taking part in this research could help us learn more about children and HIV in Nigeria and how HIV prevention and treatment programs are working.

#### Alternative to Taking Part in the Survey

Your alternative is not to let your child take part in this survey. If you choose not to let him/her take part, the services you all receive will not be affected in any way.

## Costs to Person Taking Part in the Survey

There is no cost to you for your child being in the survey.

#### Payment to Person Taking Part in the Survey

You should also know that you and your child will not be paid for your child to be in the survey.

#### Confidentiality and Access to Your Child's Health Information

We will do everything we can to keep information about your child's secret. The information we collect from your child will be identified by a number and not by your name or your child's name. Your name and your child's name will not appear when we share survey results. The information we collect from your child will not be released outside of the study partners listed below unless there is an issue of safety.

## [INTERVIEWER: DO NOT READ ALOUD]

The following individuals and/or agencies may look at your child's research records to make sure that we are protecting your child's rights as he/she takes part in the survey:

- Staff members from the Nigerian National Health Research Ethics Committees (NHREC) and the Institutional Review Boards at the Centers for Disease Control and Prevention (CDC; Atlanta, USA)
- The United States Office of Human Research Protections and other government agencies that look at the safety
  of persons taking part in research to ensure we are protecting your child's rights as a person who takes part in
  this survey
- Study staff and study monitors

## [INTERVIEWER: READ FROM HERE]

Your permission to allow us to use and share your child's name and contact information with the groups above will expire two years after the end of the survey. If you want your child to leave the study, have any questions about the survey, or feel that your child has been harmed by taking part, you should contact NHREC at: [INDICATE ADDRESS OF POC]

## Address:

Federal Ministry of Health, Federal Secretariat Complex Shehu Shagari Way, Garki, Abuja P.M.B. 083 Garki Abuja Tel: +234-803-586-8293 E-mail: info@nhrec.net

## Refusal to Take Part and Right to Withdraw

It is your decision about whether you will allow us to invite your child to take part in the survey. Your child may stop taking part at any time. [ONLY IF CONDUCTING ADOLESCENT QUESTIONNAIRE] If your child does not want to answer some of the questions, she/he may skip them and move to the next question. If you agree to allow us to invite your child to take part, you will have the option for your child to test for HIV and CD4 counts and the option to have his/her blood stored for future research. If your child does not take part, it will not affect your child's health care in any way. If you decide to take your child out of the survey, we will request you to complete a refusal/withdrawal form and the samples you gave will not be included in analysis. If you have any questions about the survey, or feel that your child has been harmed by taking part, you should contact the responsible investigator:

## [INDICATE ADDRESS OF POC] Dr. Evelyn Ngige Address: Federal Ministry of Health Phone: +234-803-303-8090 Email: nkadingige@yahoo.com

Dr. Ibrahim Dalhatu Address: US CDC Nigeria Office Phone: +234-806-051-0525 Email: idalhatu@cdc.gov

## Do you want to ask me anything about your child's participation in the survey?

## **Permission Statement**

I have read this form, and/or someone has read it to me. I was encouraged to ask questions and given time to ask

questions. Any questions I had have been answered satisfactorily. I agree for my child to take part in this survey. I know that after allowing my child to take part, I may change my mind and withdraw him/her from taking part in this survey at any time.

I agree to allow you to ask my child to be in this survey. I know that after allowing my child to decide whether he/she wants to be in this survey, he/she may withdraw at any time. His/her taking part is voluntary. I have been offered a copy of this permission form.

1. Do you agree for us to ask your child to do the interview? YES' means that you give your permission to have the survey staff ask your child to do the interview. 'NO' means that you do NOT give permission for us to ask your child to be interviewed.

\_\_\_\_Yes \_\_\_\_No

2. Do you agree for us to ask your child to give blood for HIV testing, Hepatitis B and C and related testing? 'YES' means that you give your permission for us to ask your child to have the laboratorian collect a sample of your child's blood for HIV testing and related testing. 'NO' means that we will NOT ask your child to give blood for HIV testing and related testing.

\_\_\_\_\_Yes \_\_\_\_No (if "Yes" proceed to the next question)

3. Do you agree for us to ask your child to have your child's leftover blood stored for future research? 'YES' means that you give permission for us to ask your child to store your child's blood samples for future research. 'NO' means that you do NOT give us permission to ask your child to store his/her blood samples for future research.

\_\_\_\_Yes \_\_\_\_\_No

4. Do you agree to be contacted should these future studies have clinically actionable results that are related to your child's health? 'YES' means that you agree to be contacted. 'NO' means that you don't agree to be contacted.

\_\_\_\_Yes \_\_\_\_No

[For illitorate participants]

Parent/guardian signature or mark	Date://
Printed name of parent/guardian _	
Parent/guardian ID number	(If applicable. If not applicable check here)

Signature of witness	Date://
Printed name of witness	
Signature of person obtaining permission	Date://
Printed name of person obtaining permission	
Survey staff ID number	

Child's name (print)	 
Child's participant ID number	 

## Appendix H5: Survey Assent for Interview and Blood Draw [Ages 15-17 years]

## Interviewer reads: What language do you prefer for our discussion today?

EnglishHausaIgboYoruba

Nigeria AIDS Indicator and Impact Survey (NAIIS)

Hello. My name is \_\_\_\_\_\_. I would like to invite you to take part in a survey of Nigerians to learn more about HIV in the country. The Federal Ministry of Health and the National Agency for the Control of AIDS (NACA) are leading this survey. They are doing it with the United States Centers for Disease Control and Prevention (CDC). You are invited to take part in this survey because you are a member of a household. Taking part in this survey is voluntary.

## Purpose of the survey

This survey will help us know how many people in Nigeria have HIV and need health services. It will also tell us about people's risk for getting HIV.

We plan to ask over 31,000 young persons some of them aged 15-17 years like you and live in a household to join this survey. A survey is a way to learn new information about something by asking questions and testing many people.

We would like to invite you to join this survey. Your parent/guardian said it was okay for us to ask you to join the survey. This form might have some words in it that are not familiar to you. Please ask us to explain anything that you do not understand.

## **Survey Procedures**

If you take part in this survey, you will be invited to take part in a single person interview. We will ask you questions about yourself, your sexual and social life and your awareness of HIV services. We will also ask for your permission to do a free HIV test on you. The interview will take about 40 minutes.

The information is collected on this tablet. The information is stored securely and can only be accessed by selected survey staff. The interview will take place in private here in your house or an area around your house.

After the interview, we will offer you HIV testing and may also offer Hepatitis B and Hepatitis C testing. We will also ask your permission to use you blood later in the laboratory for future testing.

## Blood draw and HIV testing procedures

If you agree to take the HIV test, trained laboratory personnel will take a small amount, about 14 mL or one tablespoon of blood from your arm. If it is not possible to take blood from your arm, then we will try to take a few drops of blood from your finger. We will give your parent or guardian the HIV results today and offer counselling services. The testing and counselling session will take about 40 minutes.

If we find HIV in your blood, you will get a Hepatitis B and C test here at home. We will also test your blood for CD4 cells t here at home. CD4 cells shows how well your body can fight HIV infection and other diseases. We will also test the CD4 cells of some people who do not have HIV in their blood. We will also send your blood to a laboratory to find out your viral load which is the amount of HIV in your blood. We will send your viral load results to a health facility in about 8-10 weeks from now. We will give your parent or guardian a referral form and information so that you and

your parent or guardian can consult a nurse or doctor to learn more about your HIV, CD4 cells, viral load test results, and your health.

We will also do other additional tests related to HIV. Some HIV-negative people may also be randomly selected for Hepatitis B and Hepatitis C testing.

If we have test results that might help your care or treatment, we will contact your parent or guardian to tell you how you and your doctor or nurse may get these results.

## Storage of specimens

We would also like your permission to keep your leftover blood sample for future research tests. These tests may be about HIV or other health issues important for the health of Nigerian people, such as nutrition or immunization. This will help the Federal Ministry of Health improve the health of the people of Nigeria. This sample can be kept for at least five years and your name will be linked to the sample for the five years. We will attempt to tell you about any test results during the five-year period that are important to your health. Your leftover blood will not be sold or used for profit making. If you do not agree for us to keep your blood sample, we will destroy your blood sample after all tests for this survey are completed.

## **Potential Risks/Discomfort**

Some of the questions may make you feel uncomfortable. You are free to skip a question and continue. The information you provided will be protected in a secure place.

The risks in drawing blood are very small. They include brief pain from the needle stick, bruising, lightheadedness, bleeding, and rarely, infection where the needle enters the skin. If you have any discomfort, bleeding or swelling at the site, please let us know.

You may learn that you are infected with HIV. Learning that you have HIV may cause some emotional discomfort. You will receive advice on how to cope with learning that you have HIV.

If you are selected for Hepatitis B and C testing, you will learn your Hepatitis B and C status. This may cause some emotional discomfort. You will receive advice on how to cope and where to go for treatment.

We will do everything we can to keep the information on your HIV status a secret. Access to the information will be minimized and limited to persons carrying out this survey.

## **Potential Benefits**

You may or may not benefit by taking part in this study. The answers you give will help Government to improve the health services of Nigerians and to develop more effective programs to fight HIV and reduce its spread in the community. The main benefit for you to take part in this survey is the chance to learn more about your health today. If we do not find HIV in your blood, you will learn about what you can do to stay away from HIV. If we find HIV in your blood the benefit is that you will know your HIV status and where to go for free life-saving treatment that is provided by the Federal Ministry of Health and the National Agency for the Control of AIDS (NACA). If you already know that you are HIV-positive and are on HIV treatment, the CD4 and viral load tests will help your nurse or doctor know how well your treatment is working.

## Alternative to Taking Part in the Survey

Your alternative is to not take part. If you choose not to take part, the services you or any member of your household receive will not be affected.

## Costs to Person Taking Part in the Survey

There is no cost to you or to your parent/guardian if you take part in this survey.

## Payment to Person Taking Part in the Survey

You should also know that you and your parent/guardian will not be paid to be in the survey.

## Confidentiality and Access to Your Health Information

What we talk about will be kept secret and will not be shown to anyone outside of the survey team. Your answers to the questions will be identified only by a number. Your name will not appear when we share survey results. You can choose to tell your parent/guardian about the interview. However, we will not tell your answers to your parent or guardian. The information we collect during the survey will not be released outside of the survey groups listed below unless there is an issue of safety.

## [INTERVIEWER: DO NOT READ ALOUD]

The following persons and/or agencies may look at your research records to make sure that we are protecting your rights as he/she takes part in the survey:

- Staff members from the Nigerian National Health Research Ethics Committees (NHREC) and the Institutional Review Boards at the Centers for Disease Control and Prevention (CDC; Atlanta, USA).
- The United States Office of Human Research Protections and other government agencies that look at the safety
  of persons taking part in research to ensure we are protecting your rights as a person who takes part in this
  survey.
- Study staff and study monitors.

## [INTERVIEWER: READ FROM HERE]

If you want to leave the study, have any questions about the survey, or feel that you have been harmed by taking part, you should contact the NHREC at:

## [INDICATE ADDRESS OF POC]

Address: Federal Ministry of Health, Federal Secretariat Complex Shehu Shagari Way, Garki, Abuja P.M.B. 083 Garki Abuja Tel: +234-803-586-8293 E-mail: info@nhrec.net

[READ FROM HERE]

## **Refusal to Take Part and Right to Withdraw**

You do not have to take part in the survey. Even If you choose to join the survey, you may change your mind at any time and stop taking part. If you decide not to take part, it will not affect your health care in any way. Your permission to allow us to use and share your information with the groups above will expire two years after the end of the survey. If you want to leave the survey, have any questions about the survey, or feel that you have been harmed by taking part, you should contact the responsible investigator:

[INDICATE ADDRESS OF POC] Dr. Evelyn Ngige Address: Federal Ministry of Health Phone: +234-803-303-8090 Email: nkadingige@yahoo.com

Dr. Ibrahim Dalhatu Address: US CDC Nigeria Office Phone: +234-806-051-0525 Email: idalhatu@cdc.gov

## Do you want to ask me anything about the survey? Assent statement

I have read this form, and/or someone has read it to me. I was encouraged to ask questions and given time to ask questions. Any questions that I had were answered satisfactorily. I agree to be in this survey. I know that after choosing to be in this survey, I may withdraw at any time. My taking part is voluntary. I have been offered a copy of this assent form.

1. Do you agree to do the interview? 'YES' means that you agree to do the interview. 'NO' means that you will NOT do the interview.

\_\_\_\_Yes \_\_\_\_No

2. u agree to have your blood tested for HIV Testing, Hepatitis B and C, and other related testing during this survey? 'YES' means that you agree to give blood for Hepatitis B and Hepatitis C testing. 'NO' means that you will NOT give blood for HIV and other related testing

Yes No

3. Do you agree to have your leftover blood stored for future research? 'YES' means that you agree to have these blood samples stored for future testing. 'NO' means that these blood samples will NOT be stored for future research.

\_\_\_\_Yes \_\_\_\_No

4. Do you agree to be contacted should these future studies have clinically actionable results that are related to your health? 'YES' means that you agree to be contacted. 'NO' means that you don't agree to be contacted.

\_\_\_\_Yes \_\_\_\_No

Participant signature or mark	Date://
Printed name of participant	
Participant ID number	
Printed name of parent/guardian	
[For illiterate child]	
Signature of witness	Date://
Printed name of witness	
Signature of person obtaining assent	Date://
Printed name of person obtaining assent	
Survey staff ID number	

## Appendix H6: Survey Assent for Adolescent Interview and Blood Draw [Ages 10-14 years]

#### Interviewer reads: What language do you prefer for our discussion today?

EnglishHausaIgboYoruba

Nigeria AIDS Indicator and Impact Survey (NAIIS)

Hello. My name is \_\_\_\_\_\_\_. I would like to invite you to take part in a survey of Nigerians to learn more about HIV in the country. The Federal Ministry of Health and the National Agency for the Control of AIDS (NACA) are leading this survey. They are doing it with the United States Centers for Disease Control and Prevention (CDC). You are invited to take part in this survey because you are a member of a household. Taking part in this survey is voluntary.

#### Purpose of the survey

This survey will help us know how many people in Nigeria have HIV and need health services. It will also tell us about people's risk for getting HIV.

We plan to ask over 31,000 young persons, some of them aged 10-14 years like you and live in a household, to join this survey. A survey is a way to learn new information about something by asking questions and testing many people.

We would like to invite you to join this survey. Your parent/guardian said it was okay for us to ask you to join the survey. This form might have some words in it that are not familiar to you. Please ask us to explain anything that you do not understand.

## **Survey Procedures**

If you take part in this survey, you will be invited to take part in a single person interview. We will ask you questions about yourself, your sexual and social life and your awareness of HIV. We will also ask for your permission to do free HIV test on you. The interview will take about 40 minutes.

The information is collected on this tablet. The information is stored securely and can only be accessed by selected survey staff. The interview will take place in private here in your house or an area around your house.

## Blood draw and HIV testing procedures

If you agree to take the HIV test, trained laboratory personnel will take a small amount, about 6 mL or 1 teaspoons of blood from your arm. If it is not possible to take blood from your arm, then we will try to take a few drops of blood from your finger. We will give your parent or guardian the HIV results today and offer counselling services. The testing and counselling session will take about 40 minutes.

If we find HIV in your blood, will also test your blood for CD4 cells count here at home. CD4 cells shows how well your body can fight HIV infection and other diseases. We will also test the CD4 of some people who do not have HIV in their blood. We will also send your blood to a laboratory to find out your viral load which is the amount of HIV in your blood. We will send your viral load results to a health facility in about 10-12 weeks from now. We will give your parent or guradian a referral form and information so that they can consult a nurse or doctor to learn more about your HIV, CD4 cells, viral load test results, and your health.

If we have test results that might help your care or treatment, we will contact your parent or guardian to tell them how to get the results.

## Storage of specimens

We would also like your permission to keep your leftover blood sample for future research tests. These tests may be about HIV or other health issues important for the health of Nigerian people, such as nutrition or immunization. This will help the Ministry of Health improve the health of the people of Nigeria. This sample can be kept for at least five years and your name will be linked to the sample for the five years. We will attempt to tell you about any test results during the five-year period that are important to your health. Your leftover blood will not be sold or used for profit making. If you do not agree for us to keep your blood sample, we will destroy your blood sample after all tests for this survey are completed.

## **Potential Risks and benefits**

Some of the questions may make you feel uncomfortable. You are free to skip a question and continue. The information you provided will be protected in a secure place.

The risks in drawing blood are very small. They include brief pain from the needle stick, bruising, lightheadedness, bleeding, and rarely, infection where the needle enters the skin. If you have any discomfort, bleeding or swelling at the site, please let us know.

We will do everything we can to keep the information on your HIV status a secret. Access to the information will be minimized and limited to persons carrying out this survey.

## Alternative to Taking Part in the Survey

Your alternative is to not take part. If you choose not to take part, the services you or any member of your household receive will not be affected.

## **Costs to Person Taking Part in the Survey**

There is no cost to you or to your parent/guardian if you take part in this survey.

## Payment to Person Taking Part in the Survey

You should also know that you and your parent/guardian would not be paid to be in the survey.

## Confidentiality and Access to Your Health Information

What we talk about will be kept secret and will not be shown to anyone outside of the survey team. Your answers to the questions will be identified only by a number. Your name will not appear when we share survey results. You can choose to tell your parent/guardian about the interview. However, we will not tell your answers to your parent or guardian. The information we collect during the survey will not be released outside of the survey groups listed below unless there is an issue of safety.

## [INTERVIEWER: DO NOT READ ALOUD]

The following persons and/or agencies may look at your research records to make sure that we are protecting your rights as he/she takes part in the survey:

- Staff members from the Nigerian National Health Research Ethics Committees (NHREC) and the Institutional Review Boards at the Centers for Disease Control and Prevention (CDC; Atlanta, USA).
- The U.S. Office of Human Research Protections and other government agencies that look at the safety of persons taking part in research to ensure we are protecting your rights as a person who takes part in this survey.
- Study staff and study monitors.

## [INTERVIEWER: READ FROM HERE]

If you want to leave the study, have any questions about the survey, or feel that you have been harmed by taking part, you should contact the NHREC at:

## [INDICATE ADDRESS OF POC]

Address: Federal Ministry of Health, Federal Secretariat Complex Shehu Shagari Way, Garki, Abuja P.M.B. 083 Garki Abuja Tel: +234-803-586-8293 E-mail: info@nhrec.net

[READ FROM HERE]

## Refusal to Take Part and Right to Withdraw

You do not have to take part in the survey. Even If you choose to join the survey, you may change your mind at any time and stop taking part. If you decide not to take part, it will not affect your healthcare in any way. Your permission to allow us to use and share your information with the groups above will expire two years after the end of the survey. If you want to leave the survey, have any questions about the survey, or feel that you have been harmed by taking part, you should contact the responsible investigator:

[INDICATE ADDRESS OF POC] Dr. Evelyn Ngige Address: Federal Ministry of Health Phone: +234-803-303-8090 Email: nkadingige@yahoo.com

Dr. Ibrahim Dalhatu Address: US CDC Nigeria Office Phone: +234-806-051-0525 Email: idalhatu@cdc.gov

## Do you want to ask me anything about the survey?

## Assent statement

I have read this form, and/or someone has read it to me. I was encouraged to ask questions and given time to ask questions. Any questions that I had were answered satisfactorily. I agree to be in this survey. I know that after choosing to be in this survey, I may withdraw at any time. My participation is voluntary. I have been offered a copy of this assent form.

1. Do you agree to do the interview? 'YES' means that you agree to do the interview. 'NO' means that you will NOT do the interview.

\_\_\_Yes \_\_\_\_No

2. Do you agree to have your blood tested for HIV Testing and other related testing during this survey? 'YES' means that you agree to give blood for HIV testing. 'NO' means that you will NOT give blood for HIV testing

Yes No

3. Do you agree to have your leftover blood stored for future research? 'YES' means that you agree to have these blood samples stored for future testing. 'NO' means that these blood samples will NOT be stored for future research.

\_\_\_\_Yes \_\_\_\_No

4. Do you agree to be contacted should these future studies have clinically actionable results that are related to your health? 'YES' means that you agree to be contacted. 'NO' means that you don't agree to be contacted.

YesNo	
Participant signature or mark	Date://
Printed name of participant	
Participant ID number	
Printed name of parent/guardian	
[For illiterate child]	
Signature of witness	Date://
Printed name of witness	
Signature of person obtaining assent	Date://
Printed name of person obtaining assent	
Survey staff ID number	

## Appendix H7: Consent to Share Contact Information for Active Linkage to Care of Participants and Parents of Minors 0-14 years

Interviewer reads: What language do you prefer for our discussion today?

□ English

- 🗆 Hausa
- 🗆 Igbo
- □ Yoruba

Nigeria AIDS Indicator and Impact Survey (NAIIS)

## **Purpose of consent**

Your child had a positive HIV test today. We have provided you with a referral form that you and your child can take to a health clinic to seek HIV treatment and care. We would like to help you and your child in accessing the health care that your child needs. If you agree, we will provide your contact information and your child's HIV results to health workers or counselors from a trained social service organization. This counselor will contact you to talk to you and your child about HIV and help you and your child go for HIV care. Anyone who is provided with you and your child's details will be experienced in providing support to people living with HIV and will be trained in maintaining confidentiality.

## What do you have to do if you agree to take part?

If you agree for your child's information to be shared, and to be contacted, we will provide your name, phone number (if you provided it to us) and your address to those counselors to provide you with support. The counselor can contact you by short message service (SMS), by phone, or in person.

## What are the potential risks?

As with all surveys, there is a chance that confidentiality could be compromised. We are doing everything we can to minimize this risk.

## What are the potential benefits?

A counselor will assist you in accessing the health care needed by your child.

## What about confidentiality?

Your child's HIV test results and your child's contact information will not be shared with any other parties aside from what was specified in the other consent forms, and with this support organization. They will also do their utmost to maintain your child's confidentiality. However, we cannot guarantee complete confidentiality.

## Who should you contact if you have questions?

If you change your mind or have any questions or feel that your child has been harmed by taking part, you should contact the Investigator listed below:

Dr. Evelyn Ngige Address: Federal Ministry of Health Phone: +234-803-303-8090 Email: nkadingige@yahoo.com

Dr. Ibrahim Dalhatu Address: US CDC Nigeria Office Phone: +234-806-051-0525 Email: idalhatu@cdc.gov

If you decide your child should leave the study, no more information will be collected from you. However, we will not be able to take back the information that has already been collected and shared.

If you have any questions about your child's rights as a person in this survey, you can contact:

National Health Research Ethics Committee of Nigeria Address: Federal Ministry of Health, Federal Secretariat Complex, Abuja Tel: +234-803-586-8293

## Do you want to ask me anything about the survey?

## **Consent Statement**

Any questions that I had were answered satisfactorily. I have been offered a copy of this consent form.

1. Do you agree to allow us to share your contact information with the State Ministry of Health or a partner that Ministry of Health works with, who may contact you to assist and support you and your child in seeking HIV care? 'YES' means that you agree for your information to be shared. 'NO' means that you do not agree for your information to be shared.

\_\_\_\_Yes \_\_\_\_No

2. If yes, do you agree to be contacted by?

SMS	_Yes	No	
Phone call _	Yes		_No

In person \_\_\_\_\_Yes \_\_\_\_\_No

Parent/guardian signature or mark	Date://
Printed name of parent/guardian	
Participant ID number	
Signature of person obtaining consent	Date: / /

Signature of person obtaining consent	Date://
Printed name of person obtaining consent	
Survey staff ID number	

## Appendix H8: Consent to Share Contact Information for Active Linkage to Care (Participants 18-64 Years)

Interviewer reads: What language do you prefer for our discussion today?

English

□ Hausa

🗆 Igbo

□ Yoruba

Nigeria AIDS Indicator and Impact Survey (NAIIS)

## **Purpose of consent**

You had a positive HIV and/or Hepatitis B or Hepatitis C test today. We have provided you with a referral form to bring to a health clinic and seek HIV treatment and/or Hepatitis B or Hepatitis C care. We would like to help you in accessing the health care that you need. If you agree, we may be able to provide your contact information and HIV and or Hepatitis B or C test results to healthcare workers from the State Ministry of Health (SMOH) or to a partner that the SMOH work with. This healthcare worker will contact you to talk to you about HIV and or Hepatitis B or C and help you go for appropriate treatment and care. Anyone who is provided with your details will be experienced in providing support to people living with HIV and or Hepatitis B or Hepatitis C infection and will be trained in maintaining confidentiality.

## What do you have to do if you agree to take part?

If you agree for your information to be shared and to be contacted, we will provide your name, phone number (if you provided it to us) and your address to those health care providers to provide you with support. The health care worker can contact you by short message service (SMS), by phone or in person based on your preference.

## What about confidentiality?

Your HIV and or Hepatitis B or C test results and your contact information will not be shared with any other parties aside from what was specified in the other consent forms, and with this support organization. They will also do their utmost to maintain your confidentiality. However, we cannot guarantee complete confidentiality.

## What are the potential risks?

As with all surveys, there is a chance that confidentiality could be compromised. We are doing everything we can to minimize this risk.

#### What are the potential benefits?

A healthcare worker will assist you in accessing the health care that you need.

## Who should you contact if you have questions?

If you change your mind or have any questions or feel that you have been harmed by taking part, you should contact any of the Principal Investigators listed below:

Dr. Evelyn Ngige Address: Federal Ministry of Health Phone: +234-803-303-8090 Email: nkadingige@yahoo.com

Dr. Ibrahim Dalhatu Address: US CDC Nigeria Office Phone: +234-806-051-0525 Email: idalhatu@cdc.gov You may also wish to contact the Nigerian National Health Research Ethics Committee (NHREC) if you feel your rights have been violated in this study:

Address: Federal Ministry of Health, Federal Secretariat Complex Shehu Shagari Way, Garki, Abuja P.M.B. 083 Garki Abuja Tel: +234-803-586-8293 E-mail: info@nhrec.net

## **Consent Statement**

Any questions that I had were answered satisfactorily. I have been offered a copy of this consent form.

If you agree to allow us to share your contact information with the SMOH or a partner that the SMOH works with who can help you go to a clinic to receive HIV treatment, care and support, please state the following:

"I agree to allow my contact information to be shared with the SMOH or a partner that the SMOH/ works with, to help me go to a clinic to receive HIV treatment and/or HBV, HCV, care and support"

\_\_\_\_\_Check this box if participant AGREES to have their contact information shared with SMOH

or their partner

If you DO NOT agree to allow us to share your contact information with SMOH or a partner that SMOH works with who can help you go to a clinic to receive treatment, care and support, please state the following:

"I DO NOT agree to allow my contact information to be shared with the SMOH or a partner that the SMOH works with, to help me go to a clinic to receive HIV treatment, and/or Hepatitis B or Hepatitis C infection care and support"

\_\_\_\_Check this box if participant <u>DOES NOT AGREE to have their contact information shared with SMOH</u> <u>or their partner</u>

1. If yes, do you agree to be contacted by?

SMS \_\_\_\_Yes \_\_\_\_No
Phone call Yes No

In person Yes No

Participant ID number\_\_\_\_\_

Signature of person obtaining consent \_\_\_\_\_ Date: \_\_/\_\_/\_\_\_ Date: \_\_/\_\_/\_\_\_

Survey staff ID number \_\_\_\_\_\_

## Appendix H9: Parent/Guardian Consent to Share Contact Information for Active Linkage (Children 15-17 years)

Interviewer reads: What language do you prefer for our discussion today?

English

🗆 Hausa

- 🗆 Igbo
- □ Yoruba

Nigeria AIDS Indicator and Impact Survey (NAIIS)

## **Purpose of consent**

Your child had a positive HIV and/or Hepatitis B or Hepatitis C test today. We have provided you with a referral form so that you and your child can take to a health clinic and seek HIV treatment and care or Hepatitis B or C care. We would like to help you and your child in accessing the health care that your child needs. If you agree, we might be able to provide your contact information and your child's HIV results and/or Hepatitis B or C to healthcare workers from the State Ministry of Health (SMOH) or a partner that the SMOH works with. This counselor will contact you to talk to you and your child about HIV and help you and your child go for HIV care. Anyone who is provided with you and your child's details will be experienced in providing support to people living with HIV and or Hepatitis B or Hepatitis C infection and will be trained in maintaining confidentiality.

## What do you have to do if you agree to take part?

If you agree for your child's information to be shared, and to be contacted, we will provide your name, phone number (if you provided it to us) and your address to those health care workers to provide you with support. The health care worker can contact you by short message service (SMS), by phone or in person based on your preference.

## What about confidentiality?

Your HIV, Hepatitis B, or Hepatitis C test results and your contact information will not be shared with any other parties aside from what was specified in the other consent forms, and with this support organization. They will also do their utmost to maintain your confidentiality. However, we cannot guarantee complete confidentiality.

## What are the potential risks?

As with all surveys, there is a chance that confidentiality could be compromised. We are doing everything we can to minimize this risk.

## What are the potential benefits?

A healthcare worker will assist you in accessing the health care needed by your child.

## Who should you contact if you have questions?

If you change your mind or have any questions or feel that you have been harmed by taking part, you should contact any of the Principal Investigators listed below:

Dr. Evelyn Ngige Address: Federal Ministry of Health Phone: +234-803-303-8090 Email: nkadingige@yahoo.com

Dr. Ibrahim Dalhatu Address: US CDC Nigeria Office Phone: +234-806-051-0525 Email: idalhatu@cdc.gov

You may also wish to contact the Nigerian National Health Research Ethics Committee (NHREC) if you feel your rights have been violated in this study:

Address: Federal Ministry of Health, Federal Secretariat Complex Shehu Shagari Way, Garki, Abuja P.M.B. 083 Garki Abuja Tel: +234-803-586-8293 E-mail: info@nhrec.net

## **Consent Statement**

Any questions that I had were answered satisfactorily. I have been offered a copy of this consent form.

If you agree to allow us to share your child's contact information with SMOH or a partner that SMOH work with who can help you and your child go to a clinic to receive HIV treatment, and or Hepatitis B or Hepatitis C infection care and support, please state the following:

"I agree to allow my child's contact information to be shared with the staff of SMOH or a partner that the SMOH work with, to help me and my child go to a clinic to receive HIV treatment, and/or Hepatitis B or C care and support"

\_\_\_\_Check this box if participant AGREES to have their child's contact information shared with SMOH

or their partner

*If you DO NOT agree to allow us to share your child's contact information with SMOH a partner that the SMOH works with who can help you and your child go to a clinic to receive treatment, care and support, please state the following:* 

"I DO NOT agree to allow my child's contact information to be shared with the SMOH or a partner that the SMOH works with, to help me and my child go to a clinic to receive HIV treatment, and/or Hepatitis B or Hepatitis C infection care and support"

\_\_\_\_\_Check this box if participant <u>DOES NOT AGREE to have their child's contact information shared</u> with MOH/ the MOHCGEC or their partner

1. If yes, do you agree to be contacted by?

SMS	Yes	No
Phone call	Yes	No

In person \_\_\_\_\_Yes \_\_\_\_\_No

Parent/guardian's Participant ID number	
Child's Participant ID number	

Signature of person obtaining consent	Date:	_/	/
Printed name of person obtaining consent			

Survey staff ID number	r	