FEDERAL MINISTRY OF HEALTH
NIGERIA

NATIONAL GUIDELINES FOR HIV TESTING SERVICES

National AIDS/STIs Control Programme

May 2017

National AIDS and STIs Control Programme (NASCP)
Federal Ministry of Health, Nigeria.

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Foreword

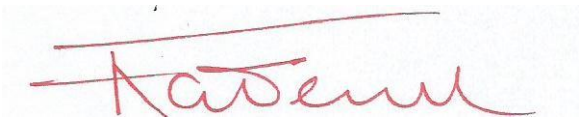
The Federal Ministry of Health (FMOH) is committed to achieving the UNAIDS 90-90-90 goals by 2020, which aims to ensure that 90% of people living with HIV and AIDS know their status, 90% of those who know their status are receiving treatment, and 90% of those on treatment are virally suppressed.

In order to break the chain of HIV transmission and reduce the impact of HIV in our country, substantial efforts must be made to reach people who are not currently accessing testing, especially women, men, children, partners of people living with HIV, and key populations.

The FMOH has adopted the new global initiative to accelerate access to and uptake of HIV Testing Services (HTS) for those who do not know their status and for persons at high risk of being infected. New concepts introduced in this document include Partner Notification Services (PNS) and HIV self-testing (HIVST), which have the approach to reach more people with HTS and linkage services. Additionally, strategy of recency testing which is an emerging approach to identify recent transmissions and help break the chain of transmission has been included in this edition of the guidelines.

It is expected that strict adherence to these new approaches, in addition to existing strategies and in line with FMOH policies and procedures, will encourage the attainment of the UNAIDS 90-90-90 goals in Nigeria.

I urge all HTS providers and stakeholders to endeavour to offer high quality HTS to all persons in this country in order to achieve our expected goals.



Professor Isaac F. Adewole, FAS, FSPSP, FRCOG, DSc. (Hons)
Honourable Minister of Health

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I would like to express our sincere gratitude to the members of the National Task Team on HIV Testing Services (HTS) and all stakeholders who participated in the review and update of the National Guidelines on HIV Testing Services. We would like to acknowledge all individuals and organizations who contributed their time, energy, and technical expertise to the production of this document. Their hard work and dedication has resulted in the timely conclusion of this process

In particular, we appreciate the Clinton Health Access Initiative (CHAI), Jhpiego/Maternal and Child Survival Program (MCSP), and Society for Family Health (SFH) for providing funding for the review, and printing of this guideline.

We sincerely appreciate the deep commitment and tireless efforts of the consultant, Ms. Kristina Grabbe, Senior HIV Technical Advisor from Jhpiego/MCSP, for her enthusiasm and commitment in editing the National Guidelines on HIV Testing Services.

We acknowledge the technical contribution of the representatives of our various partners on HIV programme. To the HTS providers who on a daily basis provide prevention, treatment, care and support to persons living with HIV, we appreciate your hard work and contributions to the control of HIV in Nigeria

The review of this document has been informed by new global evidence and experiences in programme implementation. It is our belief that this document will further support our collective resolve to bring high quality HTS to the people of Nigeria towards achieving the 90-90-90 global targets for HIV elimination.

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Acronyms

AGYW	Adolescent Girls and Young Women
AHF	AIDS Healthcare Foundation
AIDS	Acquired Immune Deficiency Syndrome
ANC	Ante-Natal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral Drugs
BBFSW	Brothel-Based Female Sex Workers
CBO	Community Based Organisation
CD4	Cluster of Differentiation 4
CDC	United States Center for Disease Control and Prevention
CHAI	Clinton Health Access Initiative
CHEW	Community Health Extension Workers
CIHP	Centre for Integrated Health Programs
CiSHAN	Civil Society for HIV/AIDS in Nigeria
CITC	Client-initiated HIV Testing and Counselling
CHCT	Couples HIV Counselling and Testing
DBS	Dried Blood Spot
DIC	Drop-in Centre
DHIS	District Health Information Management System
DNA	Deoxyribonucleic Acid
USDOD	United States Department of Defense Walter Reed Program
ECEWS	Excellence Community Educational Welfare Scheme
EID	Early Infant Diagnosis
ELISA	Enzyme-linked Immunosorbent Assay
EQA	External Quality Assurance
FBO	Faith-based Organisation
FGHiN	Friends for Global Health Initiative in Nigeria
FHI	Family Health International
FMOH	Federal Ministry of HealthF
FP	Family Planning
FSW	Female Sex Workers
GARPR	Global Aids Response Progress Report
GBV	Gender Based Violence
HAI	Heartland Alliance International
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HEI	HIV Exposed Infant
HIV	Human Immunodeficiency Virus
HIVST	HIV Self-Testing
HTS	HIV Testing Services
IDP	Internally Displaced Person
IEC	Information, Education, and Communication
IHVN	Institute for Human Virology, Nigeria
IPT	Isoniazid Preventive Therapy
IPV	Intimate Partner Violence
IQC	Internal Quality Control
KP	Key Population
LACA	Local Agency for the Control of AIDS
MLSCN	Medical Laboratory Science Council of Nigeria
MNCH	Maternal, Newborn, and Child Health
MCSP	Maternal and Child Survival Program

MSM	Men who have Sex with Men
MTCT	Mother-to-Child HIV Transmission
NACA	National Agency for the Control of AIDS
NAFDAC	National Agency for Food and Drug Administration and Control
NASCP	National AIDS and STIs Control Programme
NAT	Nucleic Acid Testing
NBBFSW	Non Brothel-based Female Sex Worker
NEPWHAN	Network of People Living with HIV and AIDS in Nigeria
NEQAL	National External Quality Assurance Laboratory
NGO	Non-Governmental Organisation
NHMIS	National Health Management Information System
OVC	Orphans and Vulnerable Children
PEP	Post-Exposure Prophylaxis
PEPFAR	United States President's Emergency Plan for AIDS Relief
PHDP	Positive Health, Dignity, and Prevention
PITC	Provider-initiated HIV Testing and Counselling
PLHIV	People Living with HIV and AIDS
PMTCT	Prevention of Mother-to-Child HIV Transmission
PMV	Patent Medicine Vendor
PrEP	Pre-Exposure Prophylaxis
PNS	Partner Notification Services
PT	Proficiency Testing
PWD	Persons with Disabilities
PWID	Persons who Inject Drugs
QA	Quality Assurance
QC	Quality Control
QIT	Quality Improvement Team
RDT	Rapid Diagnostic Test
RTCQI	Rapid Test Quality Improvement Initiative
SACA	State Agency for the Control of AIDS
SASCP	State AIDS and STIs Control Programme
SFH	Society for Family Health
SMOH	State Ministry of Health
SNT	Social Network Testing
SON	Standard Organization of Nigeria
SOP	Standard Operating Procedure
SPI-RT	Stepwise Process for Improving the quality of HIV Rapid Testing
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infections
TB	Tuberculosis
TG	Transgender (person)
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VMMC	Voluntary Medical Male Circumcision
WHO	World Health Organisation

Executive Summary

Despite great achievements in addressing the HIV/AIDS epidemic in recent years, HIV/AIDS remains a public health threat in Nigeria. Currently, it is estimated that about 3.4 million Nigerians are living with HIV, and only about 26% of those have been tested and know their HIV status. The Government of Nigeria is committed to achieving HIV/AIDS epidemic control through robust partnership with every stakeholder.

HIV Testing Services (HTS) refers to the full range of services that should be provided together with HIV testing – counselling (pre-test information and post-test counselling); linkage to appropriate HIV prevention, treatment and care services and other clinical and support services; and coordination with laboratory services to support quality assurance and the delivery of correct results.

There is a need to improve HTS delivery, to reach people who don't know their HIV status, deliver accurate test results, and ensure effective linkages with prevention, treatment, care, and support services based on their test results. Despite the wide availability of HTS in Nigeria, many people still do not know their HIV status, particularly women, men, children, partners of people living with HIV, and key populations. Because we know that *what got us here won't get us there,* Innovative strategies are needed to help reach these populations. These include the continued expansion of Couples HIV Counselling and Testing (CHCT), which encourage partners to receive HTS and learn their test results together, and the introduction of new approaches such as Partner Notification Services (PNS), HIV Self-Testing (HIVST), and Recency Testing.

Through PNS, providers offer HIV-positive index clients assistance with notifying and offering testing to their sex partners and children who are at risk. HIV Self-Testing (HIVST) is an approach for persons to use specific HIV rapid tests approved by FMOH to perform and interpret their own HIV test results and access follow-up services based on their results. Recency testing may also be useful for identifying new (acute) infections, and for breaking the cycle of HIV transmission. All these new approaches will be tested and adapted for the Nigerian context, so as to support the achievement of the UNAIDS 90-90-90 targets.

The purpose of this document is to provide national standards for all organizations and individuals involved in establishing, providing, and supporting HTS in Nigeria. Therefore, this National HTS Guidelines should be the basis for all HTS activities in Nigeria.

Dr. Sunday Aboje
National Coordinator
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Key Points

1. These guidelines **update and replace any previous guidelines on HIV Testing Services (HTS) in Nigeria**, and provide the recommendations and standards that all persons involved in the provision of HTS in Nigeria should adhere to.

2. HTS should be delivered using a client-centred approach, guided by five core principles, known as the "5Cs": **Consent, Confidentiality, Counselling, Correct test results and Connection with prevention, treatment, care, and support services**.

3. HTS should be provided in a **non-judgmental, client-centred** manner.

4. There are multiple approaches for delivering HTS in Nigeria, including **health facility-based, community-based, and new or innovative strategies**.

5. Voluntary, **assisted partner notification services (PNS) should be offered to all people living with HIV (PLHIV)** as part of a comprehensive package of services. This includes both newly diagnosed HIV-positive clients, and PLHIV already in care or receiving antiretroviral therapy (ART).

6. **HIV Self-Testing (HIVST) can increase knowledge of HIV status** and access to HIV prevention, treatment, and care services, and can be offered as a new HTS approach. Persons who self-test should have access to information about how to perform the test, the meaning of the results, and where and how to access follow-up services.

7. All persons in Nigeria should have an opportunity to know their HIV status, to prevent HIV transmission and acquisition, and facilitate uptake of HIV prevention, treatment, care, and support services. However, special attention should be placed on reaching populations at highest risk and/or who do not currently utilize HTS, including **children, men, partners of PLHIV, and key populations**.

8. All clients should be given **brief pre-test information** through individual or group sessions. **Post-test counselling should be tailored** to the result of the client and their specific situation.

9. HIV testing providers must **adhere to the manufacturer's instructions** for rapid test kit use as indicated in the package insert, and must **follow the nationally approved testing algorithm**, using approved tests in the order specified by the algorithm.

10. Ensuring correct HIV test results is a priority and a crucial component of the 5Cs for HTS. **Misdiagnosis of HIV must be prevented**, and robust quality management systems should be established to deliver high-quality and accurate reporting of HIV status.

11. The logistics management process must be adhered to in order to ensure that **sufficient supply of HIV test kits and other testing commodities are available** and ready for use for all clients.

12. Sites must **collect and report on key HTS indicators** to inform progress toward achieving programme targets, tailoring service delivery approaches to maximize HTS coverage and uptake in order to achieve the UNAIDS 90-90-90 HIV goals.

13. **HTS coordination is multi-faceted and multi-level**, with responsibilities spanning national, state, and lower level structures.

Chapter 1: Introduction

1.1 Background

Nigeria has the second largest HIV burden in the world with an estimated 3.4 million people living with HIV (PLHIV) (GARPR, 2015). HIV incidence has declined in recent years, but still more than 220,000 new HIV infections occur each year with about 60,000 of new infections in young people aged 15-24 years. Approximately 983,980 people are currently receiving antiretroviral therapy (ART), and only 25% of children (less than 15 years) living with HIV are receiving antiretroviral drugs (ARVs).

National HIV prevalence is showing signs of stabilizing around 3%, but there is great variation in geographical spread (0.2–15.2%), age distribution (4.4% among those aged 35 to 39, 2.9% among those aged 15 to 19), sex (5.3% among men aged 35 to 39, 3.5% among women aged 35 to 39), and by population (19.4% among brothel-based female sex workers, 8.6% in non-brothel-based female sex workers, 22.9% among men who have sex with men, and 3.4% among persons who inject drugs) (IBBSS, 2014). According to the 2012 National HIV/AIDS and Reproductive Health Survey, knowledge about HIV is low: only 29.2% of females and 23.5% of males had ever been tested for HIV (NARHS Plus II, 2012). Out of this group, only 63% of females and 68% of males that tested for HIV received their results and know their status. Despite progress in recent years, coverage for prevention of mother-to-child transmission (PMTCT), ART, viral load, and early infant diagnosis (EID) are also low.

More than 50% of Nigeria's population is below the age of 20 years. Although HIV prevalence is reportedly higher in other age categories, HIV prevalence in adolescents has increased in recent years, from 1.7% in 2007 to 2.9% in 2012 for adolescents aged 15-19 years (NARHS Plus II, 2012). Adolescents and young people aged 10-19 years face particular vulnerabilities to HIV, especially adolescent girls and young women (AGYW). An estimated 16% of young women and 3% of young men aged 15-19 years had sexual intercourse before the age of 15 years, and 53% of young women and 21% of young men aged 18-19 years had sexual intercourse before the age of 18 years (NARHS Plus II, 2012). Adolescents may also be engaged in sex work, injecting drug use, or male-male relationships, which further increase their risk of HIV acquisition. Furthermore, adolescents face stigma and discrimination that can prevent them from seeking HTS (HIV Testing Services) and other prevention, treatment, care, and support services. Only 12.7% of adolescents aged 15-19 years reported ever testing for HIV (NARHS Plus II, 2012). In 2013, there were an estimated 17,000 new HIV infections and 11,000 AIDS deaths among adolescents and young adults (GARPR, 2013).

Nigeria accounts for an alarmingly disproportionate number of new paediatric infections worldwide (UNAIDS Prevention Gap Report, 2016), with 41,000 new infections among children reported in 2015, more than any other country. Mortality in the first year of life is very high among untreated infants infected with HIV, and more than 210,000 children were in need of ART in 2013 (GARPR, 2013). In 2015, 8,552 females and 9,123 males aged 0-14 years were tested for HIV (Nigerian Health Sector Data, 2015), and HIV prevalence was 1.7%.

The Government of Nigeria is committed to HIV epidemic control and is working towards achieving the UNAIDS 90-90-90 targets by 2020 (90% of PLHIV are diagnosed, 90% of persons diagnosed are on ART, and 90% of persons on ART are virally suppressed). HTS are the gateway to this continuum of HIV care, and in order to achieve these ambitious goals, substantial efforts must be made to increase diagnosis of HIV, link PLHIV with lifesaving treatment, and ensure adherence, retention, and ultimately, viral suppression. Additionally, HIV prevention remains an integral component of HTS, and uninfected persons should be linked with ongoing prevention services.

1.2 Rationale

The purpose of this document is to update and replace the *2011 National Guidelines on HIV Counselling and Testing*. The guideline provides a framework and standards for implementation of HTS in Nigeria, and is aligned with the *2016 National Guidelines for HIV Prevention Treatment and Care*. It acknowledges recent advances in HTS delivery approaches and testing technologies. This guideline shall be the basis for the

establishment and provision of HTS in Nigeria, and will inform the implementation of the UNAIDS global 90-90-90 HIV targets, which Nigeria has adopted.

1.3 Goal and Objectives

The goal of this guideline is to inform the establishment and delivery of HTS in Nigeria. The objectives are to:

- Provide comprehensive policy guidance for the delivery of high-quality HTS in all approaches and settings in Nigeria
- Offer practical instructions to inform implementation of HTS in Nigeria
- Provide guidance for strengthening linkage to care and treatment and other follow-up services
- Define various HTS strategies for different settings and population-groups
- Define key and target populations who may particularly benefit from HTS
- Ensure strengthened quality assurance and delivery of accurate results
- Outline data collection, reporting, and utilization mechanisms
- Describe responsibilities of various stakeholders in HTS policy formulation, review, and implementation
- Provide legal and ethical guidance in support of HTS in Nigeria

1.4 Target Audience

This document is intended to be used by a range of providers, including: health workers in facility, community, and private-sector settings; lay HTS providers; programme managers and policy-makers in national and local governments and non-governmental organizations (NGOs); and any other person involved in the delivery or support of HTS in Nigeria.

Chapter 2: Guiding Principles

HTS in Nigeria should be delivered with a public health and human rights-based approach, ensuring that the public health benefits outweigh the potential harm or risk, and incorporating the principles of accessibility, acceptability, availability, and quality of services. The primary purpose of providing HTS should be both to benefit the persons tested and to simultaneously improve health outcomes at the population-level. HTS should be expanded not just to achieve greater uptake of services, but also to provide access for all people in need, to high quality HTS that are linked with prevention, treatment, care, and support services. HIV testing is voluntary, and must not be coercive or mandatory, except in unique situations like court orders.

2.1 Core Principles: The 5Cs

HTS should be delivered using a client-centred approach, guided by five core principles, known as the "5Cs": Consent, Confidentiality, Counselling, Correct test results and Connection with prevention, treatment, care, and support services.

2.1.1 Consent

Persons receiving HTS must give informed consent for this service. Consent may be given verbally; written consent is not required. Persons receiving HTS should be informed of the process for HTS, and should understand their right to decline testing, even if they have already provided a sample for testing. For persons who are not able to give their own consent (i.e. mentally challenged and children), a capable representative of the client may give consent on their behalf.

2.1.2 Confidentiality

HTS must be confidential, which means that what is discussed by the HTS provider and the client shall not be disclosed to anyone else without the expressed consent of the person being tested. Confidentiality should be respected, but should not reinforce secrecy, stigma or shame. HTS providers should discuss with clients, among other issues, whom the person may wish to inform about their test results, and how they would like this to be done. Shared confidentiality with partners, family members, or other trusted persons—as well as with other healthcare providers—can be highly beneficial to ensure the accuracy of the result and for the health and well-being of the client.

Medical records, including those with HIV-related information, must be managed in accordance with appropriate standards of confidentiality. Only persons with a direct role in the management of the client should have access to these records. Clients should be assured that their records will be stored in a secure and confidential location, and should understand who will have access to them.

Confidentiality of the client must not be breached except in unique situations where benefits outweigh risks, such as when the provider has reason to believe the client will commit suicide or otherwise harm themselves or others.

2.1.3 Counselling

Pre-test information can be provided in a group setting, but all people should have the opportunity to ask questions in a private setting if they request it. Following the HIV test, all clients should have the opportunity to receive appropriate and high-quality post-test counselling based on their HIV test results and their situation. Quality assurance (QA) mechanisms including supportive supervision and mentoring systems should be in place to ensure the provision of high-quality counselling.

2.1.4 Correct Test Results

HTS providers should strive to provide high-quality testing services, and QA mechanisms should ensure that people receive a correct diagnosis. QA includes both internal and external measures, supported by the National Public Health Reference Laboratory (NPHRL). All persons who receive HIV-positive test

results should be retested to verify their diagnoses before, or at the time of, initiation on antiretroviral therapy (ART).

2.1.5 Connection with Prevention, Treatment, Care, and Support Services

All persons tested should be connected with appropriate prevention, treatment, care, and support services based on their situations and their test results. Providers should support clients to access follow-up services by actively linking them with these services. This includes identifying barriers to accessing follow-up services and identifying strategies with clients to overcome these barriers. Providing HTS without linkage to ART has limited benefit for persons living with HIV (PLHIV).

2.2 Ethical and Legal Considerations

All HTS providers should adhere to an ethical code of conduct developed by their sites or programmes, which protect client information and confidentiality, and support non-discriminatory and stigma-free HTS delivery. The code of conduct should also clarify that HTS providers should never use or be under the influence of alcohol or drugs while on duty; have sex with clients, exchange money with clients, or engage in other inappropriate behaviour with clients. Programmes and facilities should establish and enforce these boundaries to protect staff and clients alike.

2.2.1 HTS and Human Rights

HTS providers and programme managers shall recognize the fundamental rights, dignity and worth of their clients at all times. Every Nigerian has the right to know his or her HIV status and HTS providers and programme managers shall create appropriate conditions to carry this out. Essential principles of human rights should be recognized by all HTS providers and programme managers in their client interactions. These include the client's rights to:

- comprehensive and accurate information for making choices about one's health and well-being
- education
- privacy
- non-discrimination, equal protection, and equality before the law
- marry and establish a family
- the highest attainable standard of physical and mental health

In Nigeria, all healthcare workers (including HTS providers) are bound by ethical principles to do all that is necessary and available to provide the best possible care through the use of diagnostic tools and follow-up treatment. Providers must provide non-discriminatory services to all clients, regardless of their age, sex, sexual orientation, identity, race, culture, religion, values or belief system.

2.2.2 Age of Consent

In Nigeria, anyone aged 18 years or above can give their informed consent for HTS. Young people under the age of 18 who are married, pregnant, or sexually active may be considered "mature minors" and can also give their own informed consent for HTS. HTS providers must determine if young people under 18 years are "mature minors" by providing judgment-free counselling that respects the young person's rights, health, and well-being.

Young people under the age of 18 years who are not deemed "mature minors" should be tested with the informed consent of their parent or legal guardian. Depending on the age and maturity of the young person, the HTS provider should discuss the reason for testing with the parent/guardian, and possibly also with the young person. If, through these discussions, it becomes clear that HTS is also indicated for the parent/guardian, then it should also be offered to them.

The HTS provider should work with the parent/guardian to identify the best strategy for disclosing the young person's HIV test result at an age and time that is appropriate, and for ensuring the young person

has access to ART and other follow-up services, as needed. When testing children for HIV, the health and well-being of the child must take priority.

2.2.3 Consent for Mentally Challenged Persons

Mentally challenged persons have a right to receive HTS, and if they cannot give their own informed consent, a capable representative may give consent on their behalf. However, HTS providers should prioritize the welfare of mentally challenged clients and may refuse testing if they feel it is not in the best interest of the client. HTS providers should work with the client's representative to identify the best strategy for disclosing the HIV status, and for ensuring the client has access to ART and other follow-up services, as needed.

2.2.4 Consent for Persons under the Influence of Alcohol or Drugs

People who are under the influence of alcohol or drugs should not be tested as they are not able to give informed consent. If an HTS provider has reason to believe that a client is intoxicated or not of sound mind, they should ask the client to come back at another time when they are sober. Providers may need to ask a supervisor or other colleague for assistance.

2.2.5 Mandatory HIV Testing

Mandatory HIV testing is not permitted except in special circumstances where there is a court order (i.e. for the perpetrators of rape, child abuse, where they have refused the offer of voluntary testing). In such cases, it may be necessary to know the HIV status of the perpetrator, in order to provide appropriate healthcare and treatment services for the person who was raped or abused. Thus, HIV testing should be provided as quickly as possible, as indicated by the court order. The person being tested should receive counselling to understand their results and have access to appropriate prevention, treatment, and care services. Results should be given to the person being tested, as well as to the person indicated on the court order (i.e. magistrate or judge handling the case), and may need to be shared with a healthcare provider or the person who has been raped or abused, so that they can receive appropriate healthcare, treatment, or HIV prevention services.

2.2.6 Required HIV Testing

HIV testing required for the purpose of employment, insurance, marriage, education or travel should be carried out at appropriate institutions (such as government laboratories) by trained medical laboratory scientists, not at nonclinical HTS sites.

2.3 Operational Requirements

HIV testing services should be conducted in a place where client's privacy and confidentiality can be ensured and where a specimen can be collected safely and without risk of contamination. The following recommendations should be considered for establishing an ideal HTS environment in all HTS settings and approaches. Although some mobile and outreach settings in the community may not allow for the optimal conditions to be met, every effort should be made to provide high-quality HTS that is safe and comfortable for both the client and the provider.

- Standard Operating Procedures (SOPs): SOPs outlining the steps of HTS delivery should be available at all HTS delivery points, whether in community, facility, or private sector settings. Staff should be trained on the SOPs and should understand their content and application. SOPs should be updated as necessary.
- Communication: HTS should be well marked with signs or posters, to inform clients about the availability and location of the service. HTS delivery points should have relevant information, education, and communication (IEC) materials available for clients, to provide key information about HTS, and follow-up prevention, treatment, care, and support services. IEC materials should be available in languages used by the target population, and, where necessary, in braille.
- Accessibility: HTS must be accessible and welcoming to all segments of the population. This includes people of all genders and ages; general population and key populations; urban and rural populations;

citizens and foreigners; persons with disabilities; and other vulnerable populations. Services should be provided without judgment or discrimination.

- Reception and/or waiting area: A clearly marked reception desk or area should be visible upon entry to the HTS site or facility. A member of staff should be available to welcome clients to the site, make them feel comfortable, and direct them through the HTS process. The reception or waiting area should have an adequate number of chairs or seats for clients to be comfortable and confident as they wait to receive HTS or wait for their results. It should be friendly and welcoming, brightly lit, and have information, education, and communication (IEC) materials, audio visual resources, or other resources to educate and keep clients engaged as they wait to be seen by an HTS provider.
- HTS/Counselling room: HTS should be provided in a clean and private room or area, ideally with at least three chairs and a table, and a washable work surface for conducting the HIV rapid test. There should be a sink with running water or a wash hand basin and water, and adequate storage space for HIV rapid tests and other necessary equipment.
- Testing area: Rapid HIV tests must be performed on a clean and level surface. HIV testing supplies and controls should be well organized, and no food or drink should be consumed near the testing area. Areas for conducting rapid HIV testing must be equipped according to standardised national laboratory guidelines for HIV rapid testing, which include a desk and chair, acid-resistant surface work bench, storage space for medical consumables, and sink with elbow taps and running water (hot and cold).
- Supplies: Staff should have all the supplies, materials, and reference information necessary to provide HIV testing and linkage to follow-up services, including: data forms and testing logs; HIV test kits; lancets, needles, and syringes; cotton wool, Band-Aids or plasters; gloves and other items for following universal safety precautions; sharps containers and non-sharps disposal containers; soap and disinfectants; condoms; prevention and educational materials; referral and resource information; and client satisfaction or feedback questionnaires. The quantity of supplies needed will depend on volume of work, number of clients expected and the testing protocols followed.
- Lighting: There should be enough light to allow providers to perform the test and read results accurately, and for clients to feel welcome and comfortable.
- Temperature: Rapid HIV tests should be stored, transported, and conducted within specific temperature ranges specified by the manufacturer. HIV testing providers should check the package inserts to ensure they are adhering to these temperature specifications.
- Storage: Most rapid HIV tests can be stored at room temperature below 30°C/86°F. However, most controls used for quality assurance and quality control procedures must be stored in a refrigerator with temperature controls. HIV testing providers should maintain an inventory of testing supplies, including lot numbers, date of receipt, storage temperatures, expiration dates, and dates of use.
- Disposal: Disposal containers for sharps and non-sharp items should be clearly marked. Opened reagents should be discarded after the manufacturer's expiration date, and reagents from kits with different lot numbers should not be used interchangeably.
- Equipment: Laboratory-based tests may require refrigeration of specimens. Refrigerators should have temperature controls, should only be used for the storage of samples and/or testing supplies, and should be labelled as such.
- Prevention Materials: Condoms, lubricants, and IEC materials should be made available to clients in the HIV testing room as well as in the waiting area (or on display if at an outreach or community venue).
- Toilets: Facilities should have clean, accessible, and well-marked toilets for clients and staff, with running water.
- Safety: Programmes must make every effort to ensure the safety of their HTS staff and clients. During mobile and outreach HTS events and surveys, this may include allowing staff to travel or work in groups or pairs, to stay nearby one another in small groups, and having a security guard available or nearby. Providers and staff should always aim to *do no harm* to HTS clients, and should have the client's best interests at heart. This means acting ethically and appropriately during the HTS session, and screening and referring for Intimate Partner Violence (IPV), Gender Based Violence (GBV), or self-harm (including suicidal tendencies) indicated by clients during the HTS session.

Chapter 3: Service Delivery Approaches

There are multiple approaches for delivering HTS in Nigeria. These are generally categorized into health facility-based approaches, community-based approaches, and new or innovative strategies, as outlined in Figure 1.

Figure 1: HTS Delivery Approaches in Nigeria

3.1 Health Facility

HIV testing services are provided in public health and private facilities by providers. In health facilities, HTS is generally initiated by the healthcare provider, and is commonly referred to as provider-initiated HIV testing and counselling (PITC). There are four main approaches to delivering HTS in health facilities:

1. **Integrated provider-initiated HIV counselling and testing (PICT)** as a routine service into multiple delivery points within a public health facility;
2. Through referral to a **central HTS site** or room at a public health facility, after initiation by a healthcare provider in a medical ward or other department;
3. At a **co-located HTS** on the grounds of the public health facility;
4. By private health facilities and providers.

In settings where HIV testing is initiated by a healthcare provider, that provider should carefully explain how the client(s) can decline testing and ensure that each person has a private opportunity to opt-out of testing if they prefer.

3.1.1 Integrated PICTTC

HIV testing services should be integrated as part of routine health care at multiple service delivery points within a health facility. In high prevalence geographic areas or settings, healthcare providers should integrate HTS for all patients at these multiple service delivery points, not just to

persons with signs or symptoms of HIV infection. Testing all patients within a health facility can lead to early identification of HIV before a patient becomes ill. When providers initiate or offer the test to all patients, this can result in high uptake of testing services, and often results in high HIV prevalence among those tested. Offering services at all service delivery points within a health facility increases opportunities for patients to be tested, and can help identify patients with undiagnosed HIV infection and link them with HIV care and treatment services. To date, HTS has been well integrated within antenatal clinic (ANC) and tuberculosis (TB) clinics, but additional focus is needed on expanding integrated HTS at other testing points and streams within facilities. In geographic areas or settings with low HIV-prevalence, it may be necessary to prioritize HTS for persons at high risk. At a minimum, HTS should be routinely offered to the following persons:

- All persons (including children) who have signs or symptoms of HIV
- All sexual partners and family members of people living with HIV (PLHIV)
- Persons with diagnosed or confirmed TB, and/or with presumptive TB
- Pregnant women and their male partners attending ANC
- Infants born to HIV-positive mothers (Early Infant Diagnosis(EID))
- Persons being tested for other sexually transmitted infections (STIs)
- Key populations
- Priority and vulnerable populations
- Children of HIV-positive mothers who have never been tested for HIV
- All children admitted to a malnutrition ward
- All patients (including children) admitted to an inpatient ward for medical reasons

3.1.2 Referral to a Central HTS Point

Many health facilities have a central HTS point where patients are referred from other wards within the health facility, or where clients may also walk in voluntarily. This is a temporary solution for making HTS available when there is no space or sufficient staffing to provide truly integrated HTS within the wards. However, when HTS is not integrated and offered at the point of care, patients can get "lost" within the health facility and may not actually get tested for HIV. Their HIV test results may not make it back to the clinician in the ward, which means they may not be used to inform the patient's care. Furthermore, if data collection is poor at the central HTS point, it may be hard to know where patients are being referred from, and so hard to assess HTS coverage and improve efficiencies. Sites with a central HTS point should identify strategies to overcoming these barriers, so that clients who are tested in these settings get linked with appropriate follow-up services.

3.1.3 Co-located voluntary HTS

Some health facilities also have co-located HTS on the grounds of the health facility, where clients may walk in voluntarily and request an HIV test. At times, patients may also be referred to the co-located HTS from the other wards within the health facility, but this is generally not their primary function. Programmes that do community-based testing may refer clients from the community to these co-located voluntary HTS sites.

3.1.4 Private Facilities and Providers

The private sector plays a key role in HTS provision, as many people seek healthcare through private sector healthcare services. Private sector healthcare providers should adhere to the policies and guidelines outlined in this document to ensure high quality service delivery, although implementation may vary depending upon the type of service being delivered and the structure and resources available. Just as with all HTS, linkage to HIV prevention, treatment, care, and support services should be ensured.

The private sector also supports HTS through policy formation, public-private partnerships, institutional capacity building, and research.

3.2 Community based HTS

Testing in communities is a complement to health facility testing, and should be **targeted to persons at high risk for HIV infection** who are not likely to access healthcare services. This includes key populations (KPs) such as female sex workers (FSW), men who have sex with men (MSM), persons who inject drugs (PWID), transgender persons (TG), and their social and sexual networks; priority populations such as men, adolescent girls and young women, and prisoners; partners of PLHIV; and orphans and vulnerable children (OVC) who have not previously been tested.

In order to reach the hard-to-reach populations, community-based HTS may benefit from providing services outside of normal business hours (i.e. in the **evenings and/or on weekends**). This approach has been shown to reach persons who do not normally come for services because of work or other daytime conflicts.

For many years, community-based testing approaches were untargeted and included door-to-door testing for the general population, large mass testing campaigns, stand-alone HTS in areas with low HIV prevalence, and a focus on re-testing all HIV-negative clients in 3-months, regardless of their specific risk of acute HIV infection. These approaches are no longer supported as they were generally not cost effective for case finding. Even the approach of targeting hot spots should focus specifically on reaching **key populations and their social and sexual networks, and/or partners of people living with HIV**.

The primary approaches supported for community-based testing are:

1. **Stand-alone HTS**
2. **Targeted mobile and outreach** testing, including campaigns, moonlight, schools, and workplaces
3. **Targeted home-based** testing (for partners and family members of PLHIV)
4. **Drop in-centres** or "one stop shops" (to reach key populations)

3.2.1 Stand-Alone HTS

Stand-alone sites may provide only HTS or may also provide other healthcare services, such as STI screening and treatment and/or other HIV prevention, treatment, care, and support services. Stand-alone sites are often operated by non-governmental (NGO), faith-based (FBO), and/or community-based organizations (CBOs), and should have strong linkages with health facilities to ensure persons who test HIV-positive are linked with antiretroviral therapy (ART). Anyone from the community may voluntarily walk into a stand-alone HTS site and request HTS, but sites should aim to target persons at highest risk.

3.2.2 Targeted Mobile, Outreach, and Workplace

Mobile and outreach HTS can be offered in a mobile van, tent, school, church, mosque, community building, or other location in the community that does not typically offer HTS. Programmes offering outreach HTS should aim to test hard-to-reach populations, such as persons living in remote areas, migrants, refugees, prisoners, and other high-risk populations.

Outreach HTS may be integrated with other healthcare services such as blood pressure screening or STI screening and treatment. Such *multi-disease campaigns* can be useful for reaching persons who may be interested in more than just HIV testing.

Mobile or outreach services may be offered at night to reach hardest-to-reach populations such as Key Populations (KP). This approach is referred to as *moonlight HTS*. Programmes offering moonlight HTS should ensure there are systems in place to ensure their staff's safety and adherence to ethical policies and procedures.

Testing in *schools* or *institutions of higher learning* can be good opportunities to reach adolescents and young people who have a difficult time seeking HTS at a health facility during school hours and in a school uniform. School-based testing increases access to HTS for young people by bringing services to the students, but students should not be coerced or forced to disclose their status, and age of consent policies do apply.

3.2.3 Targeted Workplace

Targeted Workplace testing can be a good strategy for reaching men, who are less likely than women to access healthcare services or other HTS delivery points. Testing may be offered in formal or informal workplaces, and may be organized by the employer or by an outside organization. It may also be beneficial to offer testing for workers' spouses or other family members.

Workplace HTS should not be mandatory, and workers shall not be hired or fired based on their willingness to test or based on their HIV status. However, workers shall be supported to access HIV prevention, treatment, care, and support services, as necessary.

3.2.4 Targeted Home-Based

Targeted home-based HTS may be provided using a door-to-door approach within a specific high-prevalence geographic area or community, or by targeting the homes of sex partners and family members of PLHIV with their consent. Under this approach, the HTS provider goes to the home of potential clients and offers HTS in that setting. This can remove structural and logistical barriers to HTS, and make clients feel more comfortable by receiving HTS in a familiar, non-clinical setting. A primary benefit of home-based HTS is the ability to reach partners and children of PLHIV, and to promote family testing. Efforts must still be made to link clients with appropriate prevention, treatment, care, and support services, as indicated.

3.2.5 Drop-In Centres

A drop-in centre is a comprehensive site that offers HIV testing, prevention, treatment, care, and support services to KPs and persons in their social and sexual networks. These sites are typically located in communities around where KPs live or work, and are established to be KP-friendly sites. In addition to HIV testing, KPs may also receive STI screening and treatment, FP services, cervical cancer screening (for FSW), peer education, condom and lubricant promotion and distribution, and support groups for KPs living with HIV. KP peers can be trained to deliver these services in order to make the sites peer-led and attract other KPs.

3.3 Innovative Strategies

HIV testing services will have the most impact when persons with undiagnosed HIV infection are identified and linked with HIV prevention, treatment, care, and support services. In order to increase case finding, novel approaches such as couples HIV counselling and testing, partner notification services, social network testing, and HIV self-testing have been introduced.

Testing partners of PLHIV is a *standard of care* for HTS programmes in both health facility and community-based settings. Partners of PLHIV who are also HIV-positive need to know so they can benefit from life-saving treatment and prevent transmission to any other partners they may have. Partners of PLHIV who are HIV-negative need to know so they can make informed decision about protecting themselves from HIV infection, including condom use. Partner and couples testing has been recommended since as early as 2008, and multiple approaches have been used. However, previous approaches did not result in high numbers of partners testing and many partners of PLHIV are still undiagnosed. Partner notification services and social network testing take a more *active* approach, and if they are done with quality, they can result in a high proportion of partners testing HIV-positive. HIV self-tests can be distributed to PLHIV to share with their partners to facilitate initial screening and referral to additional services, as indicated.

3.3.1 Couples HIV Counselling and Testing

Couples HIV Counselling and Testing (CHCT) has been provided in Nigeria since 2008 but is highlighted here for the opportunities it presents in case finding and providing alternatives for supporting disclosure and partner testing. With CHCT, **two or more persons who are in a relationship come together for HTS and learn their results together**. This includes same-sex and heterosexual couples, and long or short-term couples. CHCT is voluntary, and both partners must agree to receive their results together. The provider should ease tension and diffuse any blame that arises as a result of the couple learning their HIV status together. Particular care must be taken for HIV-discordant couples, where one partner is HIV-positive and the other partner is HIV-negative. The provider should also help the couple stay

focused on their future instead of dwelling on how HIV got into their relationship. The couple should be linked with HIV prevention, treatment, care, and support services as indicated, including support groups for discordant couples, as available.

3.3.2 Partner Notification Services

Partner Notification Services (PNS) is sometimes referred to as index client testing, index case testing, or contact tracing. It is a voluntary process where trained health workers, including lay providers, ask PLHIV about their sexual partners (or injecting drug use partners). This process can be initiated in HTS settings for clients who are newly diagnosed, or in HIV care and treatment settings for clients who are already on ART. Then, with the consent of the HIV-positive index client, providers notify these partners of their potential HIV exposure and offer voluntary HTS. PNS is provided using passive or assisted approaches as outlined below:

1. Passive Partner Notification: **the HIV-positive index client discloses their status to the partner, and encourages the partner to seek HTS**. Providers should support HIV-positive index clients by discussing the benefits and challenges of notifying their partner(s) with this approach, identifying appropriate strategies for notifying their partner(s) with this approach, and following up to confirm whether disclosure has happened and the partner(s) has been tested.
2. Assisted Partner Notification: t**he provider offers to assist the HIV-positive index client with partner notification**, which can increase uptake of HIV testing among partners of HIV-positive index clients, and lead to high proportions of HIV-positive people diagnosed and linked to follow-up services. Assisted partner notification services include provider, contract, and dual referral approaches:
    - Provider referral: using this approach, **a trained PNS provider contacts the listed partners** of HIV-positive index clients with their consent. They inform the partners that they may have been exposed to HIV and offer them voluntary HTS. This is done with the consent of the HIV-positive index client. The identity of the HIV-positive index client is not disclosed to the partner(s), and the partner(s) HIV test results are not shared with the HIV-positive index client, unless both partners consent to share their results together.
    - Contract referral: using this approach, **the HIV-positive index client enters into a contract with a trained PNS provider**, whereby he or she agrees to disclose their HIV status to their partner(s) within a certain time frame (i.e. 2-4 weeks) and refer their partners to HTS. If the partner(s) do not access HTS or contact the healthcare provider within that time period, then the provider gets the consent of the HIV-positive index client to reach out to the partner(s) directly and offer voluntary HTS.
    - Dual referral: using this approach, **a trained provider accompanies and provides support to HIV-positive index clients when they disclose their status** and the potential exposure to HIV infection to their partner(s). The provider also offers voluntary HTS to the partner(s). This can be done at the health facility or in the client's home.

Some HIV-positive index clients may not be comfortable with any of the approaches listed above, and so providers may also offer to bring HTS to the community or neighbourhood around where the partner(s) live. In this way, HTS can be offered to multiple households with the aim of also reaching the partner(s) and helping them know their HIV status.

Additionally, HIV self-tests can be demonstrated and distributed to PLHIV to use with their partners at home or in a private environment that they are comfortable with, as an alternative way of notifying and testing the partner. Self-tests are not diagnostic tests, and anyone with an HIV-positive self-test result should be tested following the nationally approved algorithm to confirm their results.

Partner Notification Services should be provided for any partner of an HIV-positive index client who may have been exposed to HIV and who may be at risk. This includes both married and casual partners, and may include multiple partners for each index client. Providers should work with HIV-positive index clients in a non-judgmental manner to identify all partners who may be at risk, and to determine the method of notification that will work best for each partner.

Partner notification services is not a one-time event. PNS should be offered:

- Immediately after HIV diagnosis;
- At least annually as part of HIV treatment services; and,
- Any time the HIV-positive index client has a change in their relationship status.

If a partner tests HIV-positive, then they also become an index client, and PNS should be offered for all their partners at risk.

Reports of social harm or other adverse events following voluntary PNS are rare, but programmes should monitor PNS delivery to ensure services are offered respectfully and safely by trained providers. Providers should screen each partner for the risk of intimate partner violence (IPV), and together with the index client determine if PNS can be delivered safely to each partner. Providers should report any incidents of violence or other harms to a supervisor for follow-up, and refer clients reporting harm to counselling or other IPV support services, as indicated. Index clients should always be counselled about the benefits and risks of PNS so that they can make safe and informed choices together with the provider.

HIV-positive clients should be offered multiple options for PNS, and the approach selected should be based on client preferences. Clients should also be given the opportunity to decline. Index clients may wish to notify their partners using different approaches; for example, an index client may wish to contact one partner using the client referral approach, and another partner using the provider referral approach.

Partner notification services should always be voluntary; mandatory or coercive approaches to PNS are not justified. Criminal justice, law enforcement, or other non-health-related service providers should not be involved in PNS, especially in instances where the behaviours of KPs are criminalized.

Both the confidentiality of the index client and all named partners and children should be maintained at all times. The identity of the index client should not be revealed and no information about partners should be conveyed back to the index client (unless explicit consent from all parties is obtained).

Voluntary, assisted PNS should be offered to all PLHIV as part of a comprehensive package of services. This includes both newly diagnosed HIV-positive clients, and PLHIV already in care or receiving ART.

3.3.3 Social Network Testing

Social Network Testing (SNT) is when **HIV-positive and/or high-risk HIV-negative persons—particularly from key populations—are enlisted as *recruiters* to identify individuals from their social, sexual, and drug using networks (*network associates*) for HTS**. PLHIV can be engaged as recruiters immediately after diagnosis, or any time after they become engaged in HIV care and are on treatment. KPs can be engaged as recruiters during HTS, or by programmes providing other prevention services for these populations. Once a network associate tests HIV-positive (or if he/she is identified as KP), then he/she can be engaged to recruit their network associates.

Recruiters may be given vouchers, coupons or invitation letters to distribute to their network associates. They may be given a concrete number of coupons (i.e. 3-5) or they may be engaged to continue distributing coupons as long as they are able to refer high-risk persons for testing that results in new HIV diagnosis. Recruiters may be given a modest incentive for each coupon they distribute that results in a network associate getting tested for HIV, or they may be given a stipend for the period of their engagement as a recruiter. Additionally, the network associates may also be incentivized to come in for HIV testing. Formative work should be done with the target populations to determine appropriate incentive levels. In some settings financial incentives may be preferred over non-financial incentives. There is some risk of network associates repeatedly testing in order to get incentives, but programmes should monitor this outcome and make every attempt to discourage unnecessary repeat testing.

Programmes implementing social network testing should ensure that the right people are being engaged as recruiters – all PLHIV and key populations will not make good recruiters. Programmes should look for

someone with a vast social/sexual/drug using network who is willing to talk with their peers about HTS and refer them for testing. Recruiters should be knowledgeable about HTS and where testing is available. HIV self-testing may also be integrated with social network testing—rather than distributing coupons for testing, recruiters may distribute HIV self-test kits, and may be given a modest incentive for each network associate who tests positive and comes into the site for linkage to HIV treatment and care services, or for each HIV-negative network associate who comes in for linkage to HIV prevention services.

3.3.4 HIV Self-testing

HIV self-testing (HIVST) refers to a process in which **a person collects his or her own specimen (oral fluid or blood) and then performs an HIV test and interprets the result**, often in a private setting, either alone or with someone he or she trusts. As with all approaches to HTS, HIVST should always be voluntary, not coercive or mandatory. Although reported misuse and social harm are rare, efforts to prevent, monitor, and further mitigate related risks are essential.

A reactive (HIV-positive) HIVST result always requires further testing and confirmation from a trained tester starting from the beginning of the validated national testing algorithm. Clear messages are essential to ensure that HIVST users understand how to perform the test, the meaning of the test results, and where and how to access follow-up services following a test, including retesting, care, and treatment for persons who test HIV-positive.

Interpretation of a non-reactive (negative) self-test result will depend on the ongoing risk of HIV exposure. Individuals at high ongoing risk, or who test within six weeks of possible HIV exposure, should be encouraged to retest. **HIVST is not recommended for users with a known HIV status who are taking antiretroviral drugs, as this may lead to an incorrect self-test result (false non-reactive).**

HIV self-testing is acceptable to many users across different contexts and can, therefore, increase uptake and frequency of HIV testing, particularly among populations at high ongoing risk of HIV, who are less likely to access testing or test less frequently than recommended. HIV self-testing can be used by partners of PLHIV as a strategy for PNS, or for periodic re-testing in known discordant couples.

HIV rapid diagnostic tests (RDTs) used by self-testers can perform as accurately as when used by a trained tester, provided the HIVST products meet quality, safety and performance standards. In-person demonstrations and other support tools, such as videos, may also enhance the performance of HIVST.

HIV self-testing can be delivered through various approaches in the public and private sectors, including community-based, facility-based, and internet-based channels. HIVST may be done by an individual alone (unassisted) or with the assistance of a trained provider (assisted). Approaches may also offer the option of using an oral fluid or blood-based HIV RDT for self-testing. As such, different populations can benefit from a range of choices when self-testing for HIV.

HIV self-testing offers opportunities to increase knowledge of HIV status and access to HIV prevention, treatment, care, and support services, and so can be offered as an additional approach to HTS.

3.3.5 Pharmacies and Patent Medicine Vendors

Increasingly, pharmacies, and patent medicine vendors (PMVs) are being engaged to provide HTS, as many people seek healthcare through these outlets. This may be done either by training pharmacists, and PMVs as HTS providers, or by having an outside organization provide mobile or outreach HTS on-site. As HIVST expands in Nigeria, pharmacists and PMVs will have an important role to play in the distribution of self-test kits, explaining and/or demonstrating how to use them, and ensuring consumers have accurate information about the meaning of results and where to access follow-up services including additional testing, if needed.

3.3.6 Recency Testing

Recency testing refers primarily to the type of test kit that is being used to perform HTS, which may indicate whether a person's HIV infection was recently acquired (i.e. in the last 6 months). While these

test kits may be used in various HTS delivery approaches including both health facility and community-based approaches, careful consideration should be given to the messaging around the use of these kits, how information about recent HIV acquisition is delivered to clients, counselling messages for clients, and the use of these kits to inform partner notification and/or testing services. SOPs for Recency testing are still being developed, which will be informed by the results of pilot testing (see section 10.2).

Chapter 4: Priority Populations

All persons in Nigeria should have an opportunity to know their HIV status, to prevent HIV transmission and acquisition, and facilitate uptake of HIV prevention, treatment, care, and support services. However, in order to control the epidemic and achieve the UNAIDS 90-90-90 goals by 2020, **special attention should be placed on reaching adolescents and children, men, partners of people living with HIV (PLHIV), and key populations (KPs).**

4.1 Adolescents

Adolescents (10-19 years) and young people (15-24 years) may need to access HTS because they were either (1) perinatally HIV-infected, but not diagnosed in infancy; or (2) exposed to HIV through early sex or injecting drug use, particularly adolescents from key populations. Adolescents might be reluctant to access HTS or face challenges in settings where adults are also being tested. Thus, **adolescents/youth-friendly services should be offered in all settings where HTS is offered,** to address the realistic needs of adolescents, and to test and link this underserved population. HTS should be convenient and available, through flexible opening hours and walk-in or same-day appointments, and provided by specially trained youth counsellors, when possible. Separate hours and special events just for adolescents may help overcome their concerns that older relatives, neighbours, or family friends will see them attending HIV services, including HTS.

Adolescents who are infected with tuberculosis (TB), admitted in hospital ward, with symptoms and signs of HIV infection, malnourished, considered exposed to risky behaviours, among key populations, sexually abused/exploited or whose parent/sibling (immediate family member) is HIV positive should be prioritized for HTS.

HIV testing services for adolescents should offer protection from stigma and discrimination related to HIV-positive status or risk behaviours. It should be confidential, respectful, inclusive, and non-judgemental. Linkages should be made with other HIV prevention, treatment, care, and support services that are also adolescent-friendly.

Adolescents may need support particularly with issues of disclosure—when and whom to disclose their HIV-positive status. When appropriate, and only with the adolescent's expressed permission, healthcare providers should also engage the support of adults—family members, teachers, community members—as adolescents learn to manage living with HIV.

Special considerations are needed for adolescents from key populations and vulnerable adolescents, including those living on the streets, orphans, adolescents in child-headed households, girls engaged in sex with older men or in multiple or concurrent sexual partnerships, and adolescents who are sexually abused or exploited. Adolescent girls and young women (AGYW) may be particularly vulnerable.

4.2 Infants and Children

HIV infection in infants and children is largely as a result of mother-to-child HIV transmission. All HIV exposed infants (HEIs) regardless of whether their mothers have received prevention of mother-to-child transmission of HIV (PMTCT) services or not, should be offered early infant diagnosis (EID) of HIV and receive antiretroviral (ARV) prophylaxis. A child less than 18 months tested with rapid HIV antibody tests may test HIV-positive due to the child's and/or mother's HIV antibodies, which can remain in the child's blood until 18 months of age. Therefore, a positive rapid HIV test result in a child less than 18 months does not confirm true HIV infection—infection should be confirmed using polymerase chain reaction (PCR) tests, which are generally done in a laboratory.

Some infants are lost to follow-up after delivery, and some mothers may not have received PMTCT or became infected after their routine HIV test as part of antenatal care (ANC). **Prioritizing paediatric case finding is imperative and every effort should be made to reach untested infants and children**. This can be achieved through the routine offer of provider-initiated HIV counselling and testing (PITC) in health facilities and also through testing the family members of index clients. As

mortality is very high in the first year of life among infants infected with HIV who are not treated, prompt return of results and rapid initiation of treatment must be prioritized.

HIV testing should be routinely offered to:

- HIV-exposed infants (through EID).
- All children and adolescents who have signs or symptoms that suggest HIV infection (including oral candidiasis, failure to thrive, chronic cough, and skin conditions).
- All children and adolescents of unknown HIV status attending TB clinics and malnutrition services, and/or admitted to a paediatric ward for medical reasons.
- All children of HIV-positive parents.
- All orphans and vulnerable children (OVC), where one or both parents may have died from HIV.
- Mothers or infants in immunization or under-5 clinics.
- All children with parents or siblings receiving HIV services (PMTCT, ART) through home-based or facility-based services.

Providers should explain to parents and/or guardians the lifesaving benefits of infant/child testing, and seek parent/guardian consent for testing infants and young children. Providers should work with parents and guardians to disclose the child's HIV status to him/her at an appropriate age and manner, so that they understand their health status and the need for treatment and adherence. Children should also be offered counselling and other psychosocial support as needed.

4.3 Pregnant Women

HIV testing services should be offered to pregnant women as early as possible during their pregnancy so that they are able to obtain the most benefit from HIV prevention, treatment, and care services, and to reduce the risk of HIV transmission to their infants. HIV testing should be initiated by the healthcare provider as a routine service with other screening tests. It is a standard of care for all pregnant women as part of PMTCT efforts. Still, measures should be taken to ensure pregnant women are not coerced into testing, and women have the right to decline to be tested if they so choose.

HIV testing services for pregnant women is an entry point into couples or partner HTS. Providers should support HIV-positive pregnant women to notify their partners and offer them voluntary HTS. Additionally, providers should discuss and support HIV-negative women with partner testing, to prevent HIV transmission to women and their infants. HTS for pregnant women should also include linkage to appropriate follow-up services, including screening for TB symptoms and referral and treatment as necessary, and ART initiation as soon as possible for women who are HIV-positive.

Pregnant women should be re-tested in the third trimester or during labour or shortly after delivery, due to the high risk of acquiring HIV during pregnancy. Initially tested HIV-negative women should also be retested during breastfeeding because of the risk of acquiring HIV and passing it on to the child during this time.

4.4 Men

Fewer men have been tested for HIV than women, and as a result, men are more likely to start ART later in their HIV infection. Men may not utilize HTS for reasons such as fear, stigma, the perception that health facilities are for women, and because services are not often available at times convenient to men. HTS should strive to reach men and encourage early diagnosis using current approaches, by **making services "male-friendly", by offering HTS in the evenings and on weekends, by reaching men in workplaces and through their partners, and in other spaces where men are likely to congregate**. Invitation letters can be issued inviting men to come for HTS and/or for other health services that might also be beneficial for men.

4.5 Couples and Partners

Couples and partner HTS is recognized as an important and effective intervention in which two (or more) partners are counselled and learn their HIV test results together. This approach supports couples to make plans for their future and adopt prevention and treatment strategies, including condom use, ART, and pre-exposure prophylaxis (PrEP). It may also help couples make decisions about safer conception, and can improve uptake of and adherence to PMTCT and ART.

Couples and partner HTS can be conducted in facility- or community-based settings. Offering targeted home-based testing can be useful for reaching partners of PLHIV. Partner testing should be discussed with people who are on ART and they should be encouraged to bring their partners for testing at least once per year or any time they have a new partner. KPs should also be supported to test together with their partners.

As with all HTS, couples and partner HTS should be voluntary and both partners should consent to be tested together and/or to disclose their status to one another. If partners do not want to test together, they may be tested separately, and providers can offer to support disclosure after individual testing. Providers should also be aware of the potential for coercion and intimate partner violence, and should support people's decisions not to test with their partners or disclose their status.

In some cases, the results can be discordant, that is, one partner is HIV positive while the other is HIV negative. Comprehensive services for discordant couples should be provided, including ART for the HIV-positive partner, PrEP for the HIV-negative partner (until partner on ART achieves viral suppression), post-exposure prophylaxis (PEP) as needed, condoms, support groups, ongoing counselling, and regular re-testing for the HIV-negative partner.

4.6 Key Populations

Key populations (KPs) include Female Sex Workers (FSW) which includes both brothel-based and non-brothel-based female sex workers, men who have sex with men (MSM), and persons who inject drugs (PWID). These populations have limited access to health care services, including HTS, and HIV incidence and prevalence are high amongst them. These populations are particularly vulnerable to HIV infection given the high degree of stigma and discrimination they experience, and the criminalization of their behaviours. In addition, lack of confidentiality, coercion, and fear of negative repercussions, as well as lack of appropriate health care services, resources and supplies, prevent people from seeking HTS and, if HIV-positive, linking with HIV treatment and care. Like all HTS, services for key populations need to emphasize the "5Cs", namely counselling, consent, confidentiality, correct results, and connection to comprehensive prevention, treatment, care, and support services. **HTS for KPs should be provided in a non-judgmental manner.**

Community-based HTS is a critical approach for reaching key populations who are unlikely to go to a facility for HTS, particularly those who are asymptomatic. To improve access to and uptake of HIV testing, community-based HTS should be made available in locations and settings acceptable and convenient to KPs. Also, HIV self-testing may prove to be another important way to increase access to HIV testing among key populations and, hence, to prevention, treatment, care and support services. PICT among KPs is recommended, so long as it is not compulsory or coercive and it is linked to treatment and care. In addition to HTS, testing and screening for sexually transmitted infections (STIs), TB, and viral hepatitis should be offered to key populations. Intensified TB case finding, along with HTS, also is particularly beneficial among KPs. These populations are highly vulnerable to TB, particularly in countries with high burdens of both TB and HIV.

4.7 Other Special Category Populations

Other populations may be particularly vulnerable to HIV infection and should also be reached with HTS.

4.7.1 People with Disabilities (PWDs)

Persons with physical, visual, hearing, sensory, and mental impairment should be targeted with HTS because of their limited access to information, education, and other facilities. Factors that increase the vulnerability of persons with disabilities to HIV include poverty, lack of education, lack of sex education, lack of knowledge about HIV and safe sex practices, sexual abuse, substance abuse, poor access to health services, and stigma and discrimination. Provisions should be made for PWDs to access HTS in a manner that meets their specific needs, whether at the service delivery site or in places where PWDs can conveniently access services, such as institutions for special needs. Special service provisions in HTS may be needed, including ramps for persons using wheelchairs and crutches, and incorporating sign language and braille. Clients who are mentally impaired should be accompanied by a caregiver who can consent and offer support to the PWDs.

The following measures should be taken to promote HTS for PWDs:

- HTS providers should be sensitized on the unique needs of PWDs
- Implementers should determine their human resource capacity for dealing with PWDs, especially sign language interpreters, and should plan appropriately for adequate service provision
- Mainstream HTS in institutions and organizations working with PWDs.

4.7.2 Survivors of Sexual and Gender Based Violence

There is a strong link between sexual and gender-based violence (GBV) and risk of HIV infection; women and men who report a history of intimate partner violence (IPV) are more likely to report factors that increase their risk for HIV.

All persons who report sexual violence should receive HTS as soon as possible, or at the first contact. They should be immediately referred for a clinical evaluation, documentation and treatment, trauma counselling, and initiation of PEP. Health facilities should fast-track services and ensure survivors are initiated on PEP within the shortest time possible, and not later than 72 hours from the time of the sexual violence. If HTS is not immediately possible, clients should be initiated on PEP, provided with a clinical evaluation, and issued with an appointment to come for HTS within the next 3 days. Survivors who test HIV-negative should be re-tested after 4 weeks and again at 12 weeks. Survivors who test HIV-positive should be initiated on treatment, if not already, as soon as possible.

4.7.3 Orphans and Vulnerable Children (OVC)

Orphans and other vulnerable children may be at risk for HIV, particularly if one or both parents died as a result of HIV, or if they are known to have high-risk behaviours themselves. Providers should explain the benefits of HTS to caregivers of OVC, and should offer HTS for OVC with unknown HIV status. OVC who are 18 years of age or above, or who are mature minors, may give their own consent to be tested. OVC under 18 years should have the consent of their caregiver, but it should be in the best interest of the child's health and well-being. Providers and caregivers should make decisions together about testing children and should counsel and disclose the child's status at an appropriate age and manner.

4.7.4 Persons Who Are Incarcerated

Persons who are incarcerated include prisoners, and persons in juvenile and other correctional institutions. These persons may be at high risk for HIV infection due to sexual violence, unsafe sex, and other high-risk or illicit behaviours that can occur within overcrowded prisons. Furthermore, persons who are incarcerated may not have access to adequate healthcare and prevention services. HTS should not be mandatory for persons who are incarcerated, but should be offered as part of a package of care. It may be beneficial to offer HTS upon entry and release from prison or incarceration, and periodically throughout incarceration.

4.7.5 Migrants, Refugees, and Internally Displaced Populations

Migrant workers, refugees, and internally displaced persons (IDPs) may have difficulty accessing healthcare services because of fear of stigma and discrimination, language differences, lack of transportation, and legal barriers. Gender inequalities among these populations may be further exacerbated, making women and children disproportionately more vulnerable to HIV. For example, as a consequence of loss of livelihoods and a lack of employment opportunities, sex work and sexual exploitation may increase. Mass displacement may lead to the separation of family members and the breakdown of community structures, social cohesion and sexual norms that regulate behaviour. Women and children are particularly vulnerable to HIV infection as a result of sexual violence and exploitation, and rape may be used as a means of warfare. These considerations make reaching migrants, refugees, and IDPs complex. Still, the standards for high quality service delivery and linkage to adequate prevention, treatment, care, and support services should still be applied for these populations. They should not be forced to be tested, but should have equal access to HTS and follow-up services.

4.7.6 Other Vulnerable Populations

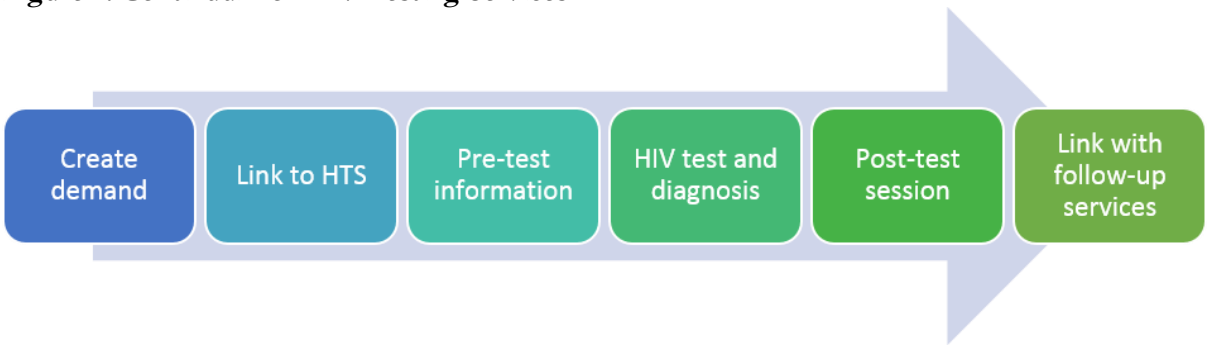
Other vulnerable populations might also be at high risk for HIV and may have difficulty accessing HTS. This may be due to their social or cultural circumstances or because of structural barriers that make it difficult for them to access healthcare services. HTS should be made available to these populations and their partners, and they should be linked to HIV prevention, treatment, care, and support services as appropriate:

- Widows and widowers
- Adults and children living on the streets
- Uniformed service personnel and their families
- People who abuse alcohol or other non-injectable drugs
- Fisher-folk
- Transport workers
- Herdsmen

Chapter 5: Pre- and Post-Test Services

HTS begins with demand creation among the target population, raising awareness and education about the importance of knowing one's HIV status, and the availability of treatment for persons who test HIV-positive. Persons at high risk for infection are linked with HTS and provided with pre-test information. The HIV test is conducted (see chapter 6), and post-test counselling is provided based on the client's results and situation. Finally, the client is linked with appropriate follow-up services (Figure 2).

Figure 2: Continuum of HIV Testing Services



5.1 Demand Creation and Linkage to HTS

HTS have been promoted through mass media, including radio, television, billboards and posters, and the internet and electronic social media. Additionally, demand for HTS has also been generated by engaging community gatekeepers and influential network leaders to communicate key messages about HTS. Knowledge about the availability of HTS is high but additional demand creation campaigns may be needed to increase healthcare and HTS utilization, particularly among certain populations such as key populations (KPs), adolescents, men, and partners of people living with HIV (PLHIV). Demand creation for new approaches and strategies, such as HIV self-testing (HIVST) and partner notification services (PNS), will be particularly important and should also be given attention.

In addition to outreach and promotion, HTS should be clearly marked so that clients know where to go to access services and can be easily linked to HTS. This applies to HTS in health facilities, and in the community and through mobile services. In some clinic settings where HTS is routinely offered, printed information and posters can help inform patients that HTS is offered.

5.2 Pre-test Information

Historically, pre-test counselling has been a key component of HTS. This was largely the case when same-day results were not available, so providers gave comprehensive information in the pre-test session, in case clients didn't return for their results. Before treatment was widely available, pre-test counselling included a heavy focus on risk assessment, preparing clients to deal with an HIV-positive result, and encouraging clients to return for their results.

Now that HIV rapid tests are widely use and initial results are delivered on the same day or even within the same hour, **intensive pre-test counselling may not be needed, and may create barriers to service delivery.** Still, clients should be given information through individual or group information sessions, and all clients should have the opportunity to speak to a provider about their individual risk and concerns.

Offering, recommending, or discussing HTS to a client or group of clients in any setting or HTS approach should include providing clear and concise information about:

- the benefits of HTS
- the process of conducing the test, including having a second reader for quality assurance
- the meaning of an HIV-positive and HIV-negative test results, including need for re-testing to verify an HIV-positive diagnosis

- the services available in case of an HIV-positive diagnosis, including where antiretroviral therapy (ART) is provided
- the potential for incorrect results if a person already on ART is tested
- a brief description of prevention options and encouragement of partner notification services and couples testing
- an explanation that test result and information shared by client is confidential
- the client's right to refuse to be tested, and explanation that declining testing will not affect the client's access to HIV-related services or other medical care
- the potential risks of testing to the client
- an opportunity to ask the provider questions

5.2.1 Special Considerations for Pregnant and Postpartum Women

Pre-test information for women who are or may become pregnant or are postpartum should also include:

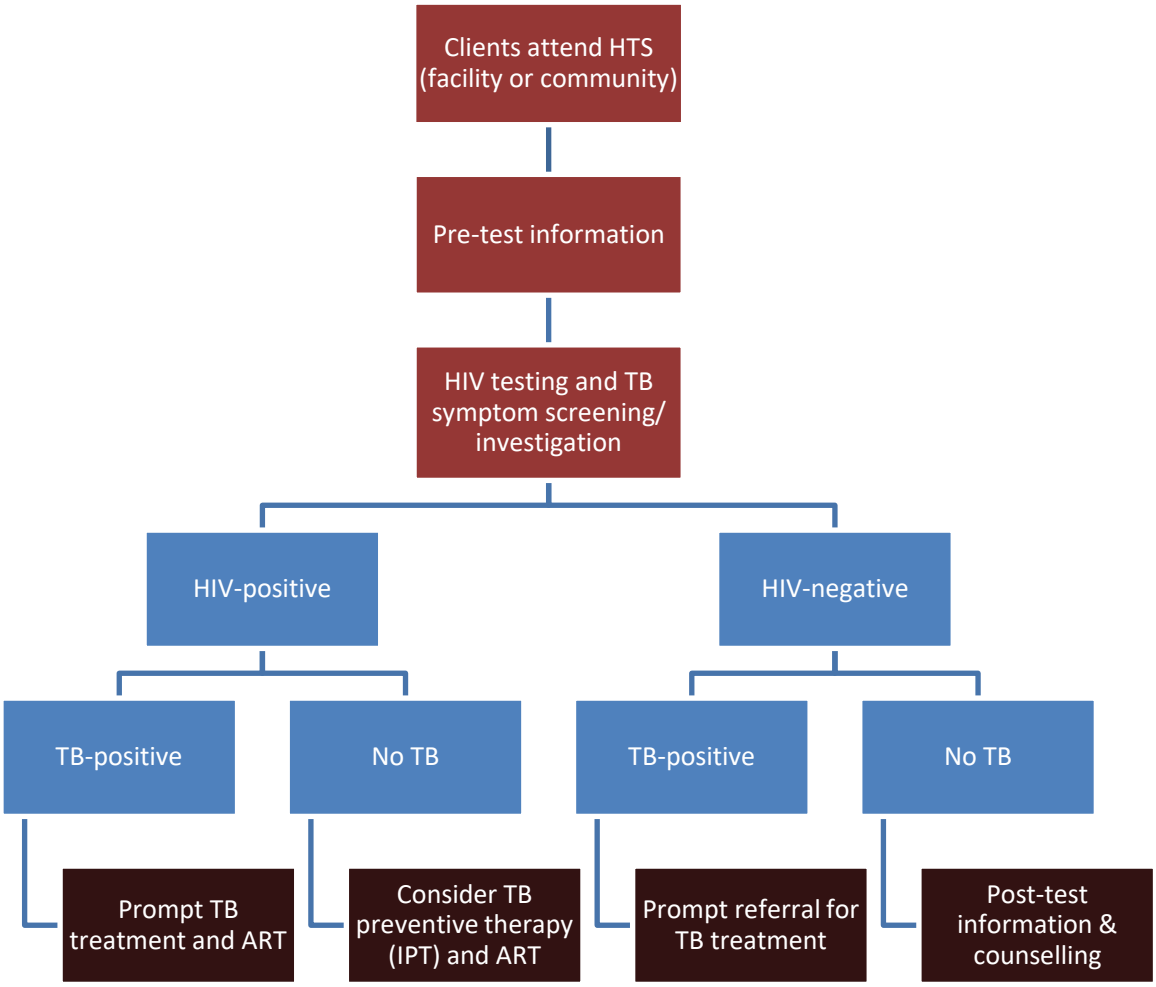
- the potential risk of transmitting HIV to the infant
- measures that can be taken to reduce mother-to-child transmission of HIV (MTCT) including the provision of ART to benefit the mother and prevent transmission to the infant
- counselling on feeding practices to reduce the risk of MTCT
- the benefits of early HIV diagnosis for mothers and infants
- encouragement for partner and/or couples testing.

5.2.2 Incorporating Intensified TB Case Finding

Tuberculosis (TB) is a common presenting illness among PLHIV. Early detection and linkage to TB treatment along with ART can save lives, and HTS provides an opportunity for intensified TB case finding.

HTS should integrate screening for TB symptoms into the pre-test session before HIV testing in all settings. All clients with TB symptoms should be investigated, and all clients diagnosed with TB should be promptly registered and started on anti-TB treatment. HIV-positive clients diagnosed with active TB should be urgently started on ART, regardless of CD4 count. HIV-positive clients who do not have TB should be considered for isoniazid preventive therapy (IPT) (Figure 3).

Figure 3: Intensified TB Case Finding Algorithm for HTS



5.2.3 Special Considerations for Couples and Partners

Pre-test information for couples should not ask about past sexual behaviour or risks, as this is unnecessary and may create problems for the couple. The HTS provider conducting the pre-test session should make it clear that couples testing is voluntary, and should ensure that neither partner was coerced into testing together. The provider should note that both testing and post-test counselling can be provided individually if either partner prefers. While it can reinforce trust among the couple to get their joint consent for couples testing, if coercion or risk of intimate partner violence (IPV) is suspected, then each partner can be consented for couples testing individually.

5.2.4 Special Considerations for Key Populations

Healthcare providers should be sensitized on issues relevant to KPs so that they can provide acceptable services, better understand the needs of KPs, and are familiar with local support and prevention services. HTS for KPs should be provided in an inclusive and non-judgmental manner. Healthcare facilities should be linked with key population networks and community-based organizations to support or provide HTS, since HTS provided by peers may increase reach, uptake, and acceptability.

5.3 Post-test Services for Clients who Test HIV-Negative

Post-test counselling should be provided for all clients who have been tested, and should be tailored to the test results they received. Persons who test HIV-negative should receive brief health information about their test results that includes the following:

- an explanation of the test result and their reported HIV status

- education on methods to prevent HIV acquisition, including the provision of male or female condoms, lubricant, and guidance on their use
- emphasis on the importance of knowing the status of sex partner(s) and information about the availability of partner and couples HTS
- referral and linkage to relevant HIV prevention services, including post-exposure prophylaxis (PEP) as indicated, and pre-exposure prophylaxis (PrEP) for people at substantial ongoing HIV risk, especially HIV discordant couples and key populations
- linkage with behavioural prevention interventions and/or recruitment for social network testing (SNT) for KPs who test HIV-negative
- a recommendation to retest based on their level of recent exposure and/or ongoing risk of exposure (see next section)
- an opportunity to ask questions and request counselling.

5.3.1 Retesting during the window period

Retesting refers to using the same testing algorithm on a second specimen from the same individual who initially tested negative. This is different from *supplemental* or *repeat testing,* which refers to further testing of the same specimen with additional assay(s) to obtain more information.

Post-test counselling messages used to include a recommendation that all HIV-negative persons retest in 3 months to rule out acute infection that is too early for rapid HIV tests to detect—in other words, the window period. However, most persons who test HIV-negative do not require retesting to verify their HIV-negative status, and additional retesting to rule out the window period may be a waste of resources. Retesting is only needed for the small minority of persons who test HIV-negative, who also report a specific risk of recent exposure. For these persons who report a specific recent exposure, for example within the last four weeks, retesting after four to six weeks can be advised.

5.3.2 Retesting in the General Population

HIV-negative persons from the "general population" with low or no risk of infection should not be advised to retest after three months, but rather they should be retested annually, or as indicated by their risk of exposure. Providers should help HIV-negative clients feel confident in their HIV test results and support them to stay HIV-negative by linking them with appropriate follow-up prevention services.

5.3.3 Retesting Persons with Ongoing High Risk

In some instances, HIV-negative clients will require more frequent retesting. Persons who are diagnosed HIV-negative but are at ongoing high risk, such as some people from key populations, may benefit from retesting every three to six months. This may help ensure early HIV diagnosis and ongoing health education about HIV prevention.

It is important to accurately identify individuals who test HIV-negative and may require retesting. Table 1 indicates HIV-negative persons with ongoing high risk who warrant retesting, and the associated time frame for this retesting.

Table 1: Retesting Recommendations for Persons who Test HIV-Negative

Who should be retested?	When should they be retested?
Persons with a known, specific recent HIV exposure (i.e. within the last 4 weeks)	Within 3 months of the specific HIV exposure incident, or 4-6 weeks after receiving their initial HIV-negative results. After ruling out HIV infection from the specific incident, resume annual retesting.
General population with low or no risk	Annually or with a new risk of exposure.
Persons from key populations (FSW, MSM, PWID, TG)	Every 3-6 months, depending on their risk.

Who should be retested?	When should they be retested?
Persons with a known HIV-positive partner	Retest every 3 months until HIV-positive partner achieves viral suppression on ART. Once viral suppression is confirmed, re-test every 6-12 months, depending on their risk. *Recommend other prevention services, including condoms. Assess eligibility and willingness for PrEP.*
Survivors of rape, or sexual or gender-based violence	If on PEP, retest per PEP guidelines. If not on PEP, retest 4 weeks after the incident and again at 3 months after the incident.
Pregnant and breastfeeding women in high incidence/prevalence areas	In third trimester or at labour and delivery. Retest after delivery at 6 weeks, 6 months, and then annually or according to their risk.
Individuals seen for a diagnosis or treatment of STIs	4 weeks after receiving their initial HIV-negative results. After ruling out HIV infection, resume annual retesting.
TB patients with a possible recent HIV exposure, or who are at higher risk of exposure	4 weeks after receiving their initial HIV-negative results. After ruling out HIV infection, resume annual retesting.
Outpatients with clinical conditions indicative of HIV infection	4 weeks after receiving their initial HIV-negative results. After ruling out HIV infection, resume annual retesting.
Individuals taking PrEP (Pre-exposure prophylaxis)	Every 3 months, or as guidance indicates
Individuals taking PEP (Post-exposure prophylaxis)	According to PEP guidelines

Reducing unnecessary retesting of HIV-negative clients

HIV testing programmes should re-train HIV testing providers to ensure they understand the need for reducing unnecessary re-testing of HIV-negative persons. For many years, HIV-negative clients were encouraged to come back and re-test in three months to "rule out the window period". The window period is a concern only for persons who may have had a recent risk of infection—within the last 1-3 months—who may have acute HIV infection, which is not detectable on rapid HIV test kits. However, most clients are not at risk of acute HIV infection, and many tests and resources are wasted on re-testing low-risk HIV negative clients. Refer to WHO guidance *Delivering HIV test results and messages for re-testing and counselling in adults* for more detail on re-testing recommendations and sample counselling messages.

5.4 Post-test Services for Clients who Test HIV-Positive

Receiving an HIV-positive test result is a life-changing event, and providers should be confident in the accuracy of the result before providing it to the client. Once the HTS provider is confident that the test result is accurate, they should provide post-test health education and counselling to the HIV-positive client or clients that includes information about the need to verify their HIV diagnosis with another test before enrolling in care and/or starting ART.

Post-test counselling should be client-centred, which means providers should engage clients in a discussion about their results and next steps to better understand their situation, and messages should be tailored to the personal needs and circumstances of each client or clients. There is a lot of information that will be given to clients testing HIV-positive, and they may have difficulty absorbing all the information at once. Follow-up sessions should be offered to reinforce messages and support newly diagnosed clients to understand and act on the information provided. Providers should give the following information and counselling to clients who test HIV-positive:

- an explanation of the test result and diagnosis; give the client time to reflect on their results and help the client cope with their emotions from receiving an HIV-positive test result
- discuss the client's immediate concerns and help the client decide who may provide immediate support, from within their social or sexual network

- provide clear information about ART and its benefits for the client's health and for preventing HIV transmission to others, and give the client information about where and how to access ART
- inform the client that they will be retested to verify their results before they begin ART, and explain where and how they will be retested (if not at the ART site)
- determine the client's preferred approach for accessing ART and facilitate active linkage—make an appointment for a specific time and date or accompany the client to the clinic of their choice to ensure enrolment into HIV clinical care; identify and address barriers to linkage, discuss same-day enrolment, and arrange for follow-up of clients who are not able to enrol in HIV care on the same day they are diagnosed
- provide information on how to prevent HIV transmission, including information on the benefits of ART for prevention, the importance of achieving viral suppression, provide male or female condoms and lubricant and give information about how to use them
- discuss disclosure of the result, including risks and benefits; offer couples counselling to support mutual disclosure
- encourage and offer partner notification services for sexual partners, children, and other family members of the client; explain the options for partner notification (passive by the client him/herself, assisted via contract, provider, or dual notification, or couples testing)
- assess the risk of intimate partner violence and discuss possible steps to ensure the physical safety of clients, particularly women, including referrals
- assess the risk of suicide, depression, and other mental health consequences and make appropriate referrals or appointments for follow-up counselling as indicated
- provide additional referrals for prevention, counselling, support, and other services as appropriate (i.e. TB diagnosis and treatment, prophylaxis for opportunistic infections, screening and treatment for sexually transmitted infections, family planning, antenatal care, etc.)
- recruitment for social network testing for key populations, as appropriate
- encourage and provide time for the client to ask additional questions or request additional counselling.

5.4.1 Retesting to Verify HIV-Positive Results

With the advent of the *"Test and Treat"* policy in Nigeria, all HIV-positive persons are now eligible to receive ART, regardless of CD4 count. In order to ensure that individuals are not needlessly placed on life-long ART (with potential side-effects, waste of resources, psychological impact of misdiagnosis), **all individuals should be retested to verify their HIV status before or at the time of starting ART**. Misdiagnosing HIV infection, irrespective of its scale, is of critical importance. Any incorrect diagnosis—whether false-positive or false-negative—has severe personal and public health consequences and should be prevented.

Retesting should be conducted by a different provider using the same testing algorithm with a new specimen. Retesting should be conducted at a different site, ideally the site where the decision about ART initiation will be made. Retesting according to this procedure aims to rule out possible technical or clerical errors, including specimen mix-up through mislabelling and transcription errors, as well as random error either by the provider or of the test device.

Retesting for verification applies to all settings, whether the original test was in a health facility or in a community-based setting. In some instances it may not be feasible to retest at a different site, for example in prevention of mother-to-child HIV transmission (PMTCT) settings or in large tertiary facilities. However, it should usually be feasible for a different provider to conduct retesting on a new specimen. Ideally retesting for verification will occur before ART initiation, but retesting should also not be a barrier to ART initiation, and so a client may be initiated at the same time as the retesting occurs.
If the HIV status is the same upon retesting, the individual's HIV-positive status should be considered verified. If the status is not the same upon retesting, the individual or their specimen should be referred for additional testing at a higher-level facility.

Frequent retesting by HIV-positive clients

Some clients may choose to retest themselves at another facility or by another provider before initiating ART. They may not believe the results of their initial test, or they may be in denial. Other clients already on ART may retest to see if they have been "cured". There are many misconceptions about the need for retesting when a client is HIV-positive. Providers should help clients feel comfortable with the accuracy of their test results, and explain that their initial HIV-positive result will be verified before initiating treatment. Providers should also help clients understand that at this point in time there is no cure for HIV, but that staying engaged in care and taking treatment regularly will keep them healthy and reduce the chances of spreading HIV to others. Clients should understand that they do not need to retest on their own as long as they are engaged in care, so as to minimize unnecessary retesting of HIV-positive clients.

5.4.2 Disclosure Scenarios

People who test HIV-negative may not need assistance or support with disclosing their HIV status to others, but maintaining privacy about testing HIV-positive, and deciding whom they should disclose to, are concerns for many people who test HIV-positive. Disclosure can help clients get emotional support to cope with a new diagnosis and can encourage access and adherence to ART. Providers should support clients to disclose to persons in their life who care about their health and well-being.

It is important to note that support to newly diagnosed clients from friends and family members may not always be forthcoming, and clients may face situations of stigma, discrimination and even violence when they disclose their status to others. Disclosure is not mandatory, and providers should assess the risk of intimate partner violence to their clients and make referrals to appropriate services as needed.

- **Disclosure to partners** who may be at risk of HIV and who need to be tested is also important for the partner's health and well-being, and should be supported through couples HIV counselling and testing or partner notification services as described in Chapter 3.
- In event where efforts to encourage the client to disclose their HIV status fail, and if the client is placing a sexual partner(s) or other persons at risk, **a service provider may disclose** that person's HIV status to their sex partner(s) or other person at risk. However, persons must be given a **reasonable opportunity** to disclose their HIV status to the sexual partner(s) on their own, before the service provider intervenes.
- In some situations, a provider may disclose a client's HIV-positive results **to another medical provider** involved in the client's care, in order to ensure the client receives appropriate medical care. Such disclosure should respect the client's right to privacy and confidentiality.

5.4.3 Considerations for HIV-Positive Key Populations

Some people from KPs may not have social networks and/or support from family members to help them deal with their HIV diagnosis. These people may need additional counselling and/or peer support services. A peer counsellor may help people understand and cope with their diagnosis and support linkage to HIV care and treatment by serving as a "peer navigator" who can assist the client with finding, choosing, and obtaining a full range of comprehensive healthcare services.

Key populations should have equitable access to the full range of comprehensive HIV care, treatment, and prevention services. Strong linkages between community- and facility-based services, and even community-based provision of some healthcare services, can help ensure this equitable access.

5.4.4 Additional Messages for HIV-Positive Pregnant Women

Post-test counselling for pregnant women who are diagnosed HIV-positive should include the following messages, in addition to those listed above:

- childbirth plans, including recommendation to deliver in the health facility;
- family planning counselling and referral;

- use of antiretroviral drugs (ARVs) for client's health and to prevent HIV transmission to the infant;
- importance of partner testing and availability of couples HIV counselling and testing;
- ensuring screening for TB and other STIs such as syphilis;
- counselling on maternal nutrition;
- counselling on and support for infant feeding options;
- HIV testing and follow-up for HIV-exposed infants (HEIs).

5.4.5 Additional Messages for HIV-Positive Adolescents

Mature minors may give their own consent for HIV testing and so may not have a parent or guardian with them when they receive their results. Still, they should be counselled about appropriate methods for disclosing to their parents or guardians, and providers should support this disclosure as requested by the client. For adolescents with a parent or guardian who is present when they receive their results, post-test counselling may also be done together. Some adolescents may also benefit from one-on-one counselling with a provider, in addition to counselling with their parent/guardian.

In addition to the post-test messages listed above, the post-test session for adolescents should include the following:

- tailored help with linkage to adolescent-friendly HIV treatment and care options
- counselling, referral, and linkage to specific psychosocial and mental health services
- information about adolescents' right to confidentiality
- opportunity to ask questions and discuss issues related to sexuality and the challenges they may encounter in relationships, marriage, and childbearing
- individualized planning on disclosure to others
- referral for small-group counselling and peer support groups.

5.4.6 Considerations for HIV-Positive Children

Informing children about their HIV diagnosis is complex, and the approach depends on the child's age and the skills of the provider. Parents and/or guardians should be involved in the process of disclosing their child's HIV status, including decision-making about when and where to disclose, and what information to provide. The intent of disclosure to a child should be to improve or promote the child's welfare, and minimize risk to his or her well-being and to the quality of the relationship between the child and the parent or guardian.

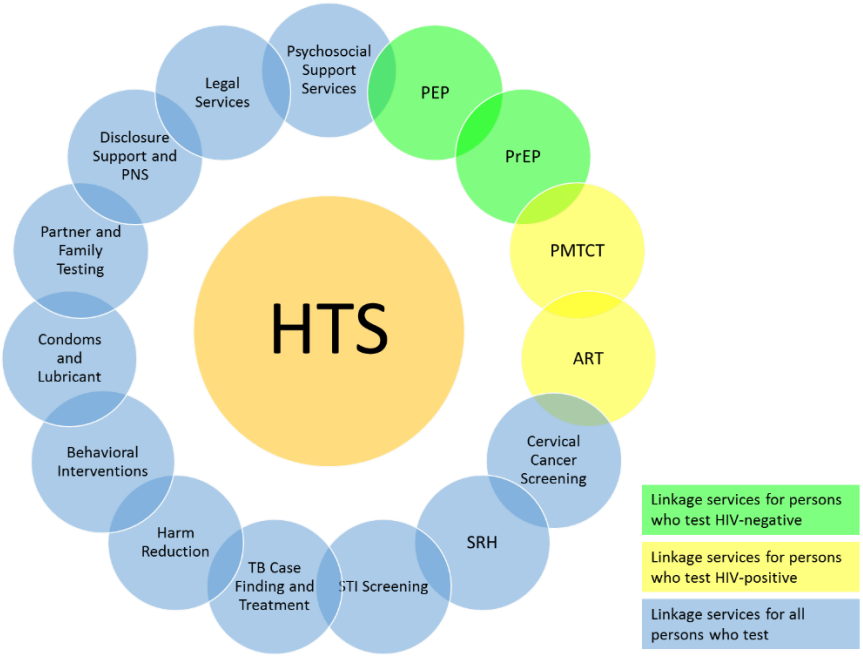
HIV testing service providers, parents, and guardians must be sensitive to the needs and emotional capacity of the child and should attempt to introduce age-appropriate information about HIV as early as possible. The aim of disclosure to children is to start to involve them in the management of their own health and reduce stigma associated with HIV. Thus there is need for 'graduated disclosure' depending on the child's level of understanding of concepts of ill health and subsequently specific HIV infection. HTS providers should offer to assist with disclosure in case difficult questions arise that parents and guardians cannot answer. HTS providers should also be available to provide ongoing support and counselling for the family as needed.

5.5 Link with Follow-up Services

Without linkage to prevention, treatment, care, and support services, HTS and learning one's HIV status have limited value. Providing immediate linkage to treatment for HIV-positive persons ensures these persons benefit from ART for their own health and for reducing the risk of transmission to others. Providing linkage to prevention, support, and other healthcare services is also important for HIV-positive persons, and HIV-negative persons, particularly those at ongoing risk including key populations and HIV-discordant couples, may benefit from linkages with pre-exposure prophylaxis (PrEP) and other prevention and support services.

Some of the possible linkage services, clients might benefit from are outlined below in Figure 4. HTS programmes should have a directory of services that are available in their geographic area for linking clients based on their HIV test results and needs. State and national referral directories should also be developed and widely shared.

Figure 4: Linkage from HTS to Follow-Up Services



Providers should initiate linkages by assessing a client's immediate concerns and needs. Providers should explain the services that are available to clients and also provide clear information about how they—or another linkage provider at the facility—will help them access the services they need. Providers should be **actively** engaged in supporting linkage to follow-up services after HTS to maximize the benefit to clients.

Best Practices for Linkage

- Help clients **identify their barriers** to accessing follow-up services, and then work with clients to **identify solutions** to these barriers
- **Escort** HIV-positive clients to clinical services, as appropriate, and support their enrolment into HIV treatment
- **Utilize peer navigators** or treatment champions who can help facilitate referrals and ease clients' fears about accessing follow-up services
- Issue clients with a **referral slip** to the facility or service where they are being referred
- Get consent from clients to **follow-up by phone or home-visit**, to see if they have initiated treatment and/or support access to any additional follow-up services that might be needed
- **Make an appointment for the client** at the facility where they are being referred
- **Give clients the name and contact information of the provider** at the referral facility, along with their appointment time
- **Build strong relationships** between community and facility sites and across facilities; providers should get to know each other and the work that other services do so that they can speak more knowledgably about the services where they are referring clients

5.5.1 Linkage to HIV Care and Treatment

Linkage to HIV care and treatment for persons who test HIV-positive remains a challenge in Nigeria. Factors that may contribute to poor linkage include clients feeling healthy, depression, lack of social or family support, fear of disclosure, stigma and discrimination in the community, legal issues, lack of transportation, poor referrals, stigmatizing or unfriendly services, and long waiting times in facilities. Providers should work to address these barriers and make it as easy as possible for PLHIV to access HIV care and treatment.

People who test HIV-positive should be immediately linked to treatment services to maximize the benefits of ART, and should be retested to verify their HIV-positive status before placing on ART. However, some people may need time to accept their HIV-positive status and seek support from partners and families before linking to treatment. Providers should seek the consent of clients to follow-up with them by phone or in the home to ensure they have successfully enrolled in treatment and for linkage to any additional follow-up services. A client is considered successfully linked to HIV care and treatment when they have enrolled in these services, and this enrolment should be tracked by HTS programmes to ensure clients are successfully linked.

Support groups for PLHIV can provide psychosocial support to newly diagnosed HIV-positive clients, which can also help facilitate linkage and adherence to HIV treatment. Where possible, HTS should have strong linkages with PLHIV support groups, and may host PLHIV support groups on-site.

5.5.2 Linkage to HIV Prevention Services

Linkage to HIV prevention services is important for people who test HIV-positive, and for those who test HIV-negative. Persons who are HIV-positive can benefit from information and services to prevent transmission to their partners, including partner notification and testing, support for condoms, and support groups. Positive Health, Dignity, and Prevention (PHDP) services should be offered to all HIV-positive persons.

HIV-negative persons at ongoing risk, such as people from key populations and partners of PLHIV, can benefit from PrEP and condoms, and post-test clubs can provide support to HIV-negative clients to access additional services and to stay HIV-negative. Although voluntary medical male circumcision (VMMC) has HIV-prevention benefits for HIV-negative men and is part of global HIV prevention strategies, since most men in Nigeria are circumcised before the age of sexual debut, VMMC is not part of Nigeria's HIV prevention strategy.

5.5.3 Linkage for HIV Discordant Couples

HIV discordant couples (where one partner is HIV-positive and the other partner is HIV-negative) should be offered a comprehensive package of services to facilitate treatment for the HIV-positive partner and prevent HIV acquisition by the HIV-negative partner. Services for discordant couples should include ART and PHDP for the HIV-positive partner, post-exposure prophylaxis (PEP) as needed, PrEP for the HIV-negative partner (until the HIV-positive partner achieves viral suppression), retesting (as outlined in section 5.3.3), condoms, family planning, and other healthcare and support services. Support groups specifically for HIV discordant couples can also help these couples deal with and manage their results and access HIV treatment and prevention services.

5.6 Alternative HTS Scenarios

There are some additional HTS scenarios that warrant special discussion.

5.6.1 Testing Only

Clients may request testing only, without counselling, but should understand that some discussion between the provider and the client will be necessary to ensure the client adequately understands the meaning of the test and the implications of their results, and to complete required data collection tools and procedures. Pre-test information for all clients can be brief, since more effective, tailored counselling messages can only be given once you know the client's results (i.e. post-test). Furthermore, extensive counselling for HIV-negative clients has been shown to be ineffective, and referrals to other prevention services should be prioritized.

5.6.2 Counselling Only

Some clients may want to learn about HTS but do not want to be tested. Others may decide after the pre-test session that they do not want to be tested, or they may need more time to decide on testing, or they may want to go home and bring their partner back for couples testing. Providers should ensure that clients have information about the benefits of testing and knowing their status, but they should also respect the feelings of clients who decline to be tested after counselling. Providers should emphasize that clients may return at any time for additional counselling or HIV testing, should they change their mind.

5.6.3 Blood Donor Screening

Persons who are donating blood should have their blood screened for HIV and other transfusion transmissible infections (TTIs) (e.g syphilis, Hepatitis B, and Hepatitis C) and, if found to be positive for any of the infections, they should receive their results and proceed for further diagnosis. Blood donor screening should be done with laboratory-based Enzyme-linked Immunosorbent Assay (ELISA) tests, but in some cases rapid diagnostic tests (RDTs) may be used as a screening test before the ELISA test. Blood that is transfused must be tested with an ELISA test.

5.6.4. Dual Rapid Testing for HIV and Syphilis for the Elimination of Mother to Child Transmission of HIV and Syphilis

Approximately 1.5 million pregnant women are seropositive for HIV, and 900,000 are infected with syphilis annually. Mother-to-child transmission (MTCT) of HIV and syphilis remain significant causes of perinatal morbidity and mortality. HIV MTCT can occur during pregnancy, delivery, or breastfeeding. Without any intervention, MTCT rates vary between 20% and 35% in breastfed infants or 15% and 20% for non-breastfed infants. However, these MTCT rates can be reduced to less than 5% upon provision of effective interventions.

Untreated maternal syphilis results in significant adverse pregnancy outcomes, such as spontaneous abortion, stillbirth, foetal death, preterm birth, low birth weight, neonatal death and congenital syphilis. In addition, maternal syphilis has been shown to increase the risk of MTCT of HIV. Prenatal syphilis screening followed by treatment early in pregnancy effectively treats the pregnant woman and prevents congenital syphilis.

The WHO has prioritized the elimination of mother to child transmission (EMTCT) of HIV and Syphilis as several countries are working towards achieving the validation of EMTCT for HIV and/or syphilis. Screening all pregnant women for HIV and syphilis at the first antenatal care visit is recommended by WHO globally. While the testing of pregnant women for HIV is relatively well-resourced, syphilis infected pregnant women often go undiagnosed and untreated. Although many countries including Nigeria have policies on antenatal syphilis screening, more than 350,000 adverse pregnancy outcomes occur annually due to untreated maternal syphilis, despite the low cost of treatment. In order to meet current targets, efforts have been made to accelerate the dual EMTCT of syphilis and HIV. The early diagnosis and treatment of both HIV and syphilis in pregnant women have are effective strategies in the prevention of both adverse outcomes of pregnancy and MTCT. Similarly, Key populations, such as men who have sex with men (MSM), transgender people, injecting drug users and sex workers would also benefit from this strategy.

Anticipated benefits and advantages of dual HIV/syphilis RDTs may include: streamlined procurement; minimized storage space; simplified training of healthcare personnel; only a single finger-prick required; receipt of test results and treatment in a shorter time period; and reduced unit cost for the reagents compared with two single RDTs for HIV and syphilis.
In 2017, Nigeria performed the Clinic Based effectiveness study of SD Bioline HIV/Syphilis Dual rapid test kits, this is the only Dual Test kits that have been pre-qualified by WHO. The aim was to determine the performance of the Duo Test for the screening of HIV and syphilis in pregnant women compared to that of the national HIV testing algorithm and laboratory-based HIV Enzyme Immunoassay (EIA) as two reference standards for HIV and the Treponema pallidum Hemagglutination assay (TPHA) as the syphilis reference standard.

The findings from the assessment of the acceptability and minimum operational characteristics of a dual HIV/syphilis RDT in Nigeria reflected similar findings in other studies assessing dual test acceptability and feasibility. The strength of the assessment was the ability to document perceptions of both pregnant women, the population likely to benefit from dual test use, and ANC staff with experience using the dual rapid test. Almost all women preferred the dual RDT and the majority were willing to wait up to 30 minutes for their test results. When trying to further assess potential factors related to pregnant women's preference of the dual test, distance to the clinic may be an indicator. Nearly half of the women noted experiencing travel times to the clinic of greater than 30 minutes; their willingness to wait up to 30 minutes for results of the dual test may be a more favorable choice than having to return the clinic at a later time.

Owing to the ease/simplicity of procedure and interpretation of test results, the RDT can serve as better alternative in replacing the more cumbersome and demanding/expensive conventional screening methods for HIV and syphilis especially in poor-resource countries. Additionally the option of using whole blood in lieu of serum as against the conventional testing methods has made dual RDTs to be more adaptable even in areas without electricity. Interestingly these kits can also withstand a wider temperature ranges that may be obtainable even in the tropics. Overall dual RDTs for simultaneous detection of both HIV and syphilis holds great potentials with possibly more promising outcomes in EMTCT of these infections even in low resource settings with minimal required operational skills

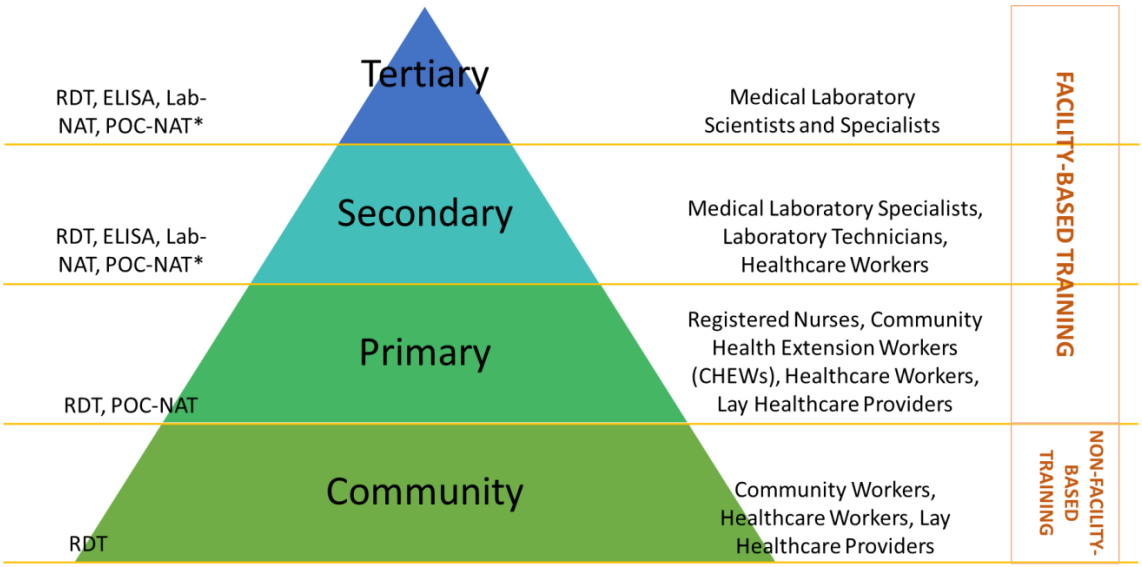
Chapter 6: Conducting the HIV Test

HIV testing may take place at multiple levels of the health-care system, and for the majority of individuals, a diagnosis for HIV can be established on the same day. For adults and children above 18 months of age, HIV is typically diagnosed through the detection of HIV antibodies using rapid diagnostic tests (RDTs). For children under 18 months of age, laboratory-based nucleic acid test (Lab-NAT) and point-of-care NAT (POC-NAT) tests are used for diagnosis of HIV infection. In some higher level facilities, Enzyme-Linked Immunosorbent Assay (ELISA) tests are also used.

HIV testing is carried out in public and private health facilities including NGOs/FBOs at the following tiers of care:

- Tertiary health facilities (Teaching Hospitals, Federal Medical Centres and Research Institutes)
- Secondary Health facilities (General Hospitals and State Specialist Hospitals)
- Primary Health Clinics, Community Health Centres, NGO standalone HTS Centres, Health Posts and Mobile Clinics

Figure 5: Facilities Providing HTS in Nigeria



*POC-NAT in Primary health centres are available by sample Referral.

6.1 Basic Principles for Performing HIV Testing

All HIV testing should be conducted in accordance with the assay manufacturer's instructions for use as indicated in the package insert. In addition, HTS sites should have SOPs and job aids for providers to help minimize pre-analytical, analytical, and post-analytical errors and improve the quality of HIV test results.

The test results of any visually read assay, such as RDTs, should be read by two independent readers within the time frame recommended in the instructions for use to ensure the accuracy of the result. Timely reading is critical—both readers must not read the test result after the maximum time specified by the manufacturer. The second reader should also be trained and proficient in performing HIV testing, but for smaller sites where there is only one trained HTS provider, a second reader may be trained specifically on reading and interpreting the results for quality assurance. Having a second reader trained just in reading and interpreting results is better than having no second reader at all. Clients should be assured that having a second reader is in their interest, for assuring the quality of the test. It may be useful to explain the process of having a second reader during the pre-test session.

6.2 Window Period

For a period of about 10 days following HIV infection, known as the eclipse period, no current available HIV test can detect any marker of HIV infection. The eclipse period ends when HIV RNA or DNA becomes detectable by nucleic acid testing (NAT) and then HIV p24 antigen, detectable by immunoassay (IA). The period before detection of HIV-1/2 antibodies is often referred to as "acute infection". The number of HIV virus particles rise rapidly during acute infection and may be associated with higher infectivity and rate of transmission. As the level of HIV-1/2 antibodies increase, the level of detectable HIV antigen decreases. Once HIV-1/2 antibodies can be detected on serological assays, this signals the end of seroconversion, and thus the end of the "window period" for diagnosis. The duration of the window period depends on three main factors: 1) the genetics of the virus, 2) the genetics and immunocompetence of the host, and 3) the assay). As testing technologies have improved, assays are able to detect antibodies sooner. Among RDTs, those using oral fluid specimens have the longest window period, which is likely because the concentration of HIV-1/2 antibodies is lower in oral fluid than in other specimen types. However, oral fluid tests have been used successfully in many settings, particularly as HIV self-tests for screening.

6.3 HIV Tests

HIV testing technologies used in Nigeria should be registered by the National Agency for Food and Drug Administration, and Control (NAFDAC). These tests are further evaluated and recommended as part of national algorithm by the National AIDS and STIs Control Programme (NASCP) of the Federal Ministry of Health (FMOH). The list of recommended rapid test kits for both professional use and self-testing, can be obtained from NASCP.

6.3.1 HIV Tests for Infants and Children Less than 18 Months

For infants less than 18 months, definitive confirmation of HIV infection can only be done with virological testing using nucleic acid testing (NAT) technologies, since HIV antibodies from the mother or infant may remain in the child's blood until 18 months of age. Currently, virological testing is most commonly performed on dried blood spot (DBS) specimens, with collection at local sites, transport to centralized laboratories, and testing occurring there. While coverage of early infant diagnosis (EID) is increasing, there continue to be challenges of access, timely return of results, and initiation of early treatment in infants (particularly when delivered outside of PMTCT programmes). Point-of-care virological testing is now available and is expected to greatly improve EID and infant treatment, but it must be prioritized. HIV testing at the time of birth may improve linkage with treatment and reduce loss to follow-up.

Because mortality is very high in the first year of life among infants infected with HIV who are not treated, prompt return of results and rapid initiation of treatment must be prioritized.

6.3.2 Rapid Diagnostic Tests

Rapid diagnostic tests (RDTs) are recommended for HTS because they are fast, simple and accurate. Results are available between 15-60 minutes (depending on the assay), and they can be performed in all settings without any need for specialised laboratory personnel or equipment. They are easy to use and can be performed with quality by trained lay and healthcare providers.

Rapid diagnostic tests for use in Nigeria should have a minimum sensitivity of >=99% and specificity of >=98% under quality-assured laboratory conditions in order to minimize misdiagnosis.

Many RDTs do not rely on cold chain for storage, but in areas with extremely warm temperatures, RDTs should be refrigerated. When in doubt, refrigerating RDTs is preferred. Facilities without backup generators should have cold boxes and ice packs for storing cold-chain dependent RDTs.

Rapid diagnostic tests cannot be used for screening blood for transfusion; enzyme-linked immunosorbent assays (ELISA) tests should be used. However, in some instances, RDTs may be used for pre-donation screening. If the results are HIV-positive, the results should be delivered to the donor and the client should not be bled.

6.3.3 Enzyme-Linked Immunosorbent Assays

ELISA tests take a longer time to process HIV test results than RDTs. They were originally developed for blood donor screening, and are more suitable for batch testing in settings where large numbers of clients are seen daily. Only trained medical laboratory scientists can perform this test.

6.3.4 HIV Self-Tests

HIV self-tests generally use the same rapid testing technology as provider-delivered HIV RDTs, but they are developed and packaged specifically for self-test use. Self-tests can use either oral fluid or whole blood specimens. They perform as accurately as provider-delivered RDTs, as long as they meet quality, safety and performance standards. They should include instructions for use that provide detailed and easy-to-interpret guidance on how to perform and interpret the HIV self-test. These might also include links to a video demonstration of someone conducting an HIV self-test. Watching a demonstration of someone else performing an HIV self-test can lead to better performance by the self-test user.

Persons using HIV self-tests should understand the meaning of the self-test results, and where and how to access follow-up services including additional testing if the self-test result is HIV-positive.

Anyone distributing HIV self-tests should ensure the assays have been nationally approved for self-test use.

6.3.5 Recency Tests

A select number of emerging testing technologies allow for the ability to detect early HIV infection, for example HIV infection that occurred within the last six months. These tests are only beginning to be evaluated for wide scale use, but may show a lot of promise for breaking the chain of HIV transmission, since early detection of HIV infection may allow you to know where the infection came from and to reach out and also offer HIV testing to those person(s). As FMOH studies and approves these tests for use, further guidance will be given on how to use them, and appropriate counselling messages for persons in whom recent infection is identified. More details on the evaluation of recency tests in Nigeria can be found in Chapter 10.2.

6.4 HIV Rapid Testing Strategy

In most settings in Nigeria, HIV testing should be done following a **serial testing algorithm** (Figure 6). A **parallel testing algorithm** (Figure 7) may be used in certain areas of very high HIV prevalence (above 5%), but is rare. The **test for triage strategy** (Figure 8) may also be rare, but can be used in areas with low HIV-prevalence or for HIV self-testing.

6.4.1 Serial Testing Strategy

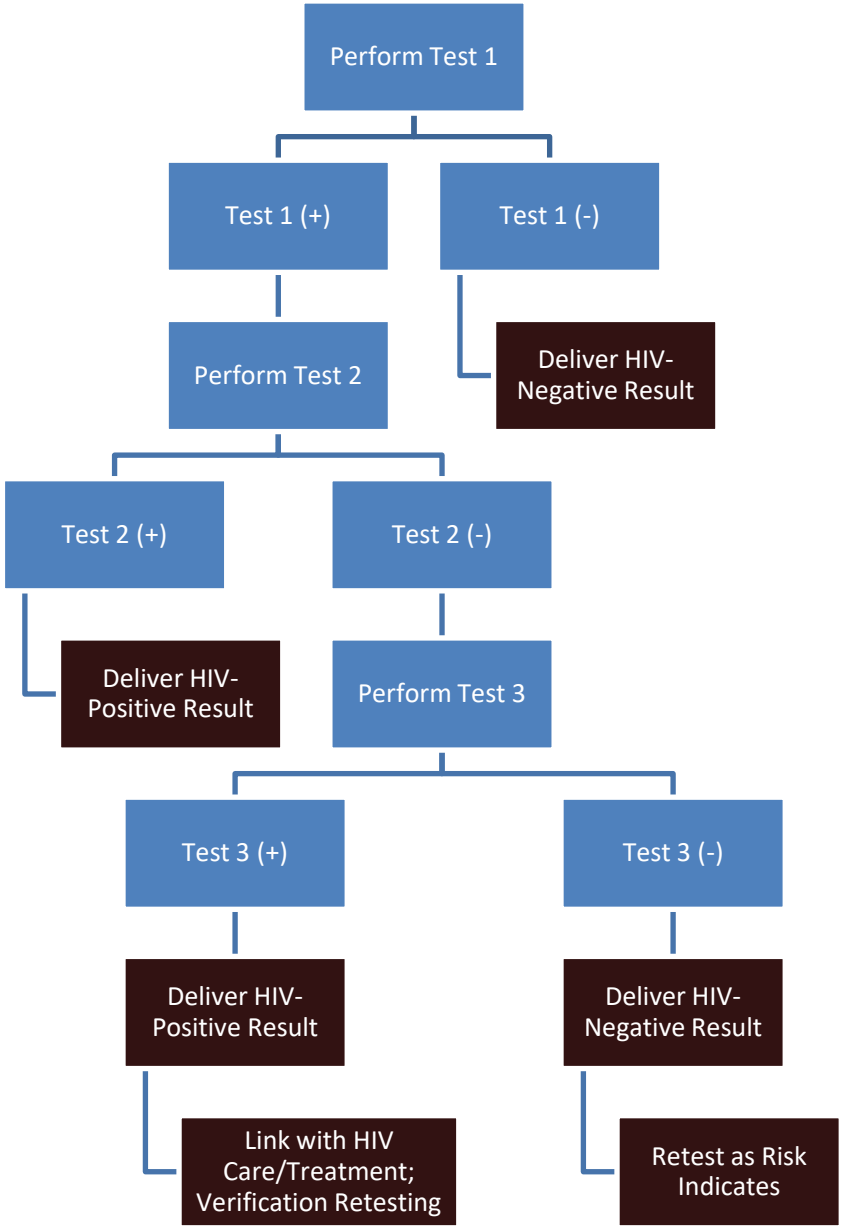
A serial testing strategy is more cost- and time-effective in low prevalence settings, since most people will only require one test to rule out HIV infection. Following this strategy, an initial sample is taken, and it is tested using a highly sensitive RDT (Test 1). If Test 1 is nonreactive, then the HIV-negative test result is delivered to the client—no additional testing is necessary. However, if Test 1 is reactive (+), a second, more specific RDT is conducted (Test 2) using the same sample. If Test 2 is also reactive (+), then an HIV-positive test result is delivered to the client. All persons who test HIV-positive should be retested prior to starting ART to verify their HIV-positive status.

If Test 1 is reactive (+) and Test 2 is non-reactive (-), then this may indicate a problem with the test or the test performer, or it may be an indication of acute HIV infection. At this time, a third tie-breaker test is still recommended to resolve this discrepancy (Test 3). If the third tie-breaker test (Test 3) is reactive (+), then the client should be given an HIV-positive test result, and referred to a care and treatment facility where they should be retested to verify their HIV-positive status.

If Test 3 is nonreactive (-), then the client should be given an HIV-negative test result, and referred for retesting based on their risk as outlined in Section 5.3

In some settings it may not be feasible to conduct all three assays on the same day in the same facility, for a variety of reasons. Where the third line assay is unavailable, any individual with an initially reactive result on Test 1 (i.e. Test 1+) or different results on Test 1 and Test 2 (i.e. Test 1+, Test 2-), should be referred to a higher-level facility with a record of their test results, for additional testing (Figure 6).

Figure 6: Serial Testing Strategy



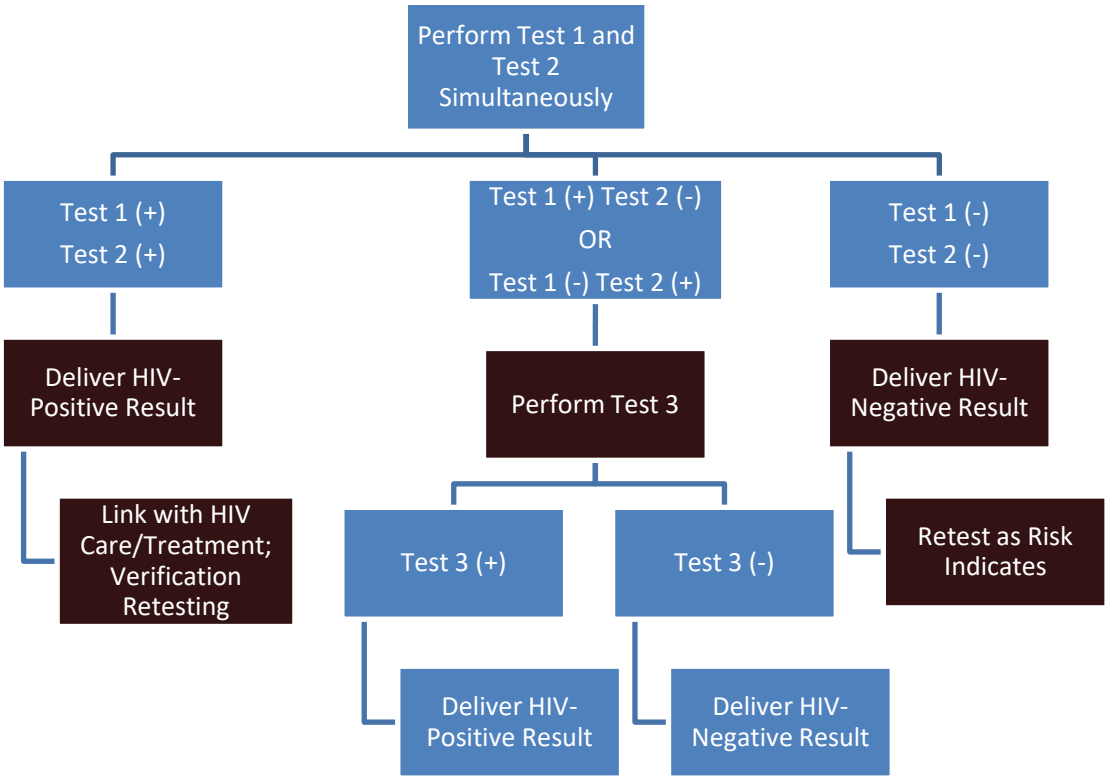
6.4.2 Parallel Testing Strategy

A parallel testing strategy may be used in high prevalence settings where there is higher likelihood of the first test being HIV-positive, and where client volume is high. Following this strategy, the sample is taken, and it is tested using both Test 1 and Test 2 at the same time. If both Test 1 and Test 2 are reactive (+ +), then the client is given an HIV-positive test result, and should be referred to care and treatment where they will receive a verification retest. If Test 1 and Test 2 are both nonreactive (- -), then the client is given an HIV-negative test result, and should be retested as their risk indicates.

If Test 1 and Test 2 do not agree (i.e. + -, or - +), then the provider should conduct the third line test (Test 3), or refer the client to a higher level facility for more accurate testing, if a third line test is not available. If Test 3 is conducted and it is reactive (+), then the provider should deliver an HIV-positive

test result, and if Test 3 is nonreactive (-), the provider should deliver an HIV-negative test result (Figure 7).

Figure 7: Parallel Testing Strategy



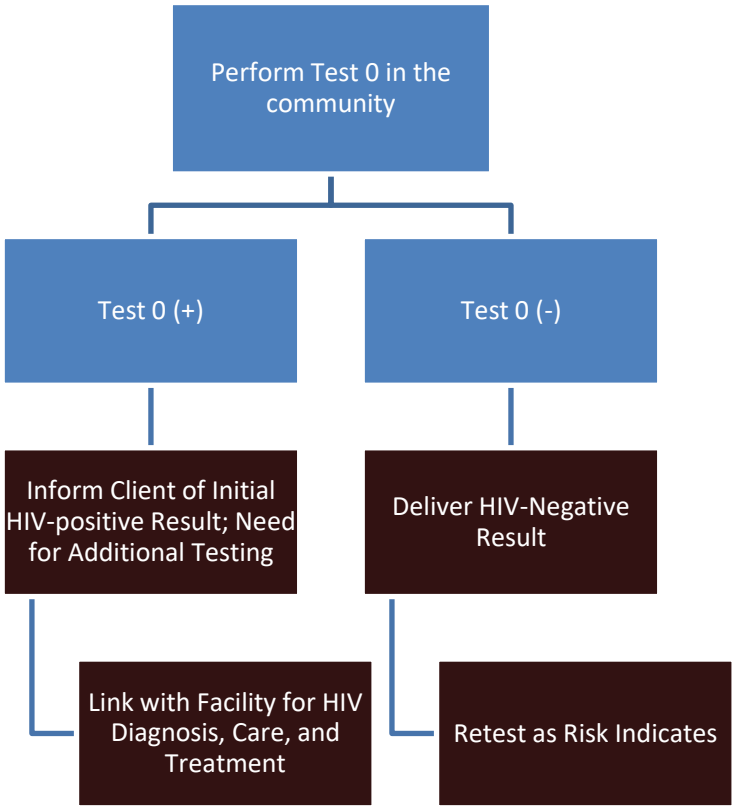
6.4.3 Test for Triage Strategy

Test for triage (Figure 8) is an approach to support community-based HTS that is conducted by lay providers or self-testing. In this approach a single HIV RDT is conducted, either by a trained provider or by the client him or herself (using an appropriate test kit). This kind of screening test is referred to as Test 0 in the algorithm below, and does not replace Test 1 in the national testing algorithm. If the single RDT is reactive (+), then the client should be linked to a facility for further testing, where the validated national testing algorithm is performed, beginning with Test 1 as described above. If the individual is confirmed to be HIV-positive with the national algorithm, then that person should be linked to HIV care and treatment.

If the Test 0 is nonreactive (-), then the client's test result is HIV-negative.

The test for triage strategy may be used in community-based or mobile/outreach settings as a method for simplifying the scope of work for lay providers, reducing logistics, improving access to HTS, and facilitating scale-up of HTS. The approach is most common for HIV self-testing, where the self-test is a screening test (Test 0) that does not provide a definitive diagnosis. A reactive self-test requires additional testing according to the validated national diagnostic testing algorithm.

Figure 8: Test for Triage Strategy



6.6 National HIV Testing Algorithm

The HIV testing algorithm describes the specific assays to be used in the HIV testing strategy. These are referred to as the "first line" or "screening" test, "second line" or "confirmatory" test, and "third line" or "tiebreaker" test. The specific assays that are used in Nigeria are tested and carefully selected by NASCP/FMOH. The assays must be used in the order that they are indicated in the testing algorithm. **Diverting from the order of tests in the algorithm has the potential to lead to misdiagnosis.**

At this time, the first, second, and third line tests used in Nigeria are listed below:

First Line	Determine
Second Line	Unigold
Third Line / Tiebreaker	Stat-Pak

In some settings, Double-Check Gold and Sure-Check are also used as a third line/tiebreaker test.

The FMOH may update this testing algorithm as new tests are approved for use in Nigeria. Training for HTS providers includes training for all three HIV rapid tests, which providers must perform with proficiency before they are certified. As new tests are incorporated into the testing algorithm, FMOH will ensure HTS providers are appropriately trained.

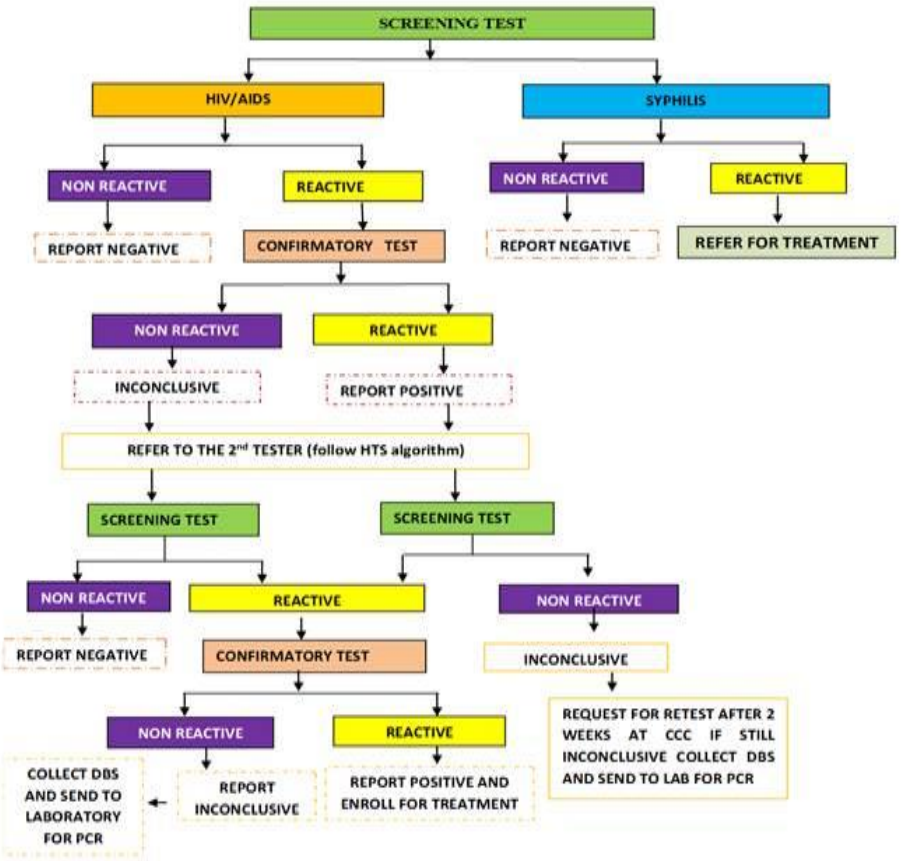
It may also be beneficial to have two HIV testing algorithms in case of any stock outs. At present, if an HTS programme experiences a stock out of the first line test (Determine), they should not proceed to test with the second or third line test, but rather refer to a higher level facility.

6.7 The Dual HIV/Syphilis Rapid Diagnostic Test for ANC

POCTs are thus an important tool for the prevention of mother-to-child transmission of HIV and the elimination of congenital syphilis. Having an algorithm to ensure quality testing using the Dual Rapid test at ANC settings at different level of health care in Nigeria is the priority of Federal Ministry of Health and

all relevant stakeholders. The Country has decided to consider the introduction of the Duo Test-Kits into the existing testing algorithm for PMTCT as follows:

Dual HIV/Syphilis Rapid Diagnostic Tests (RDT) Algorithm for ANC



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Chapter 7. Quality Assurance for HTS

Ensuring correct HIV test results is a priority and a crucial component of the 5Cs for HTS. Misdiagnosis of HIV must be prevented, and robust quality management systems should be established to deliver high-quality and accurate reporting of HIV status. Quality assurance (QA) is not a one-off activity or something that is undertaken by only one person. Rather, QA is an integral part of the ongoing roles and responsibilities of every staff member who is engaged in HTS. QA systems should be in place not only for ensuring the accuracy of test results, but also to ensure the quality of pre-test information and post-test counselling. The goal is to ensure high quality service delivery and to continuously improve the efficiency and reliability of services by reporting and resolving inadequacies and concerns. All HTS programmes, regardless of where they take place, should have the following elements in place:

- Ensure all staff involved in HTS have read and understand these HIV testing guidelines and other HTS-related policies
- Provide HTS following the **nationally approved testing algorithm**, and using only nationally **approved test kits in the correct order;** follow the instructions provided by the manufacturer for performing the test
- Adhere to **quality management systems** established by national, state, and local programmes
- Ensure all staff are **trained (and certified)** in accordance with the national HTS training curriculum and that they receive ongoing supportive supervision
- Work to achieve **registration, certification, and accreditation** of HTS sites, as applicable
- Establish appropriate tools and procedures for **documentation and record keeping**
- Use **universal precautions** and laboratory safety measures to protect staff and clients from infection or injury
- Participate in accurate **forecasting and quantification** of HTS kits and supplies, and utilize national, state, and local **procurement systems** to avoid stock-outs of test kits and other consumables
- **Monitor HTS performance** by evaluating quality through EQA procedures, using data for decision-making, communicating the need for improvements, and receiving and acting on feedback.

FMOH, through the National External Quality Assessment Laboratory (NEQAL) supports the Rapid Testing Continuous Quality Improvement (RTCQI) programme, which is a proven framework for ensuring high quality HTS delivery. RTCQI incorporates many of the elements listed above, and is being expanded to new sites as capacity and resources allow.

7.1 Nationally Approved Algorithm and Test Kits

Approval of HIV testing algorithms and test kits is coordinated by NASCP. Only test kits that have been evaluated and approved by NASCP after being registered by NAFDAC are permitted for use in HTS sites in Nigeria. The nationally approved testing algorithm must be adhered to in order to ensure the accuracy of the HIV test result. If an HTS site experiences stock outs of the first line test, they should refer the client to a higher level facility for testing.

HIV tests should be always performed according to information inserts provided by the manufacturer inside the kit. These inserts will have the most up-to-date information about test kit performance and protocols. SOPs for conducting HTS will be issued and updated by NASCP regularly in order to support standardization of HTS performance.

7.1.1 Adopting New Technologies

National AIDS and STIs Control Programme (NASCP) will provide leadership in the adoption of new HIV testing technologies as they become available. They will analyse the literature associated with new technologies, review the safety, quality, and performance of the assay, conduct an independent evaluation of the performance and operational characteristics, and provide recommendations for their use. Once the process of evaluating new technologies is finalized, and a new technology is introduced into the national

algorithm, NASCP will facilitate re-training for HTS providers on how to conduct the new technology and will integrate this technology into existing training for new providers.

7.1.2 Post-Market Surveillance

Once a testing technology is available for use in Nigeria, its quality, safety, and performance will continue to be monitored by NASCP through post market surveillance to ensure that it continues to meet standards. This is in addition to any post-market evaluation activities conducted by the manufacturers themselves. The post-market surveillance activities carried out by NASCP will include both proactive approaches to identify problems before they are used, and reactive approaches, when a problem has been identified during use of the testing technology.

- **Proactive** post-market surveillance occurs through lot verification testing both before and after tests have been distributed to sites for use.
- **Reactive** post-market surveillance occurs when sites report complaints or adverse events, or when errors in test performance are identified Actions will be taken to correct the problem and prevent the problem from happening again.

7.2 Quality Management Systems

National and state quality improvement teams (QIT) implement quality management systems and oversee QA at different tiers of HTS delivery. This ensures that laboratory services and SOPs are well integrated into HTS as an important part of the overall system. The quality management system is the overall programme that is put in place to ensure that the accuracy of results and pre- and post-test services. It monitors all parts of HTS, detects and reduces errors, improves consistency between testing sites, and improves efficiencies. All sites conducting HTS should implement a quality management system that incorporates both internal quality control (IQC) and external quality assurance (EQA) measures.

7.2.1 Internal Quality Control

Internal Quality Control measures are those that can be taken at the site level to ensure the quality of HTS delivery. This includes ensuring that the temperature of the testing area is adequate, and that sufficient supply of test kits and required consumables are on hand. Providers should ensure that any EQA specimens have been run (see below) and that the results are acceptable. Where possible, results should be read by a second reader to double check and ensure the accuracy of the results. The second reader should make a blinded rereading—that is, they should not know what result the first reader assigned to the test. If the two readers interpret the test results the same way, then the HIV status is reported as it is. If the two readers do not agree, HIV testing should be repeated using a new specimen and a new test device. It should be very rare for two readers to disagree on the result, and if prevalence of disagreement is above 1% then there may be a problem with the testing provider or the kit itself.

Additionally, most RDTs have a control line to check whether the test procedure is working. Providers should ensure the presence of the control line every time they conduct a test, to ensure the test is performing properly.

7.2.2 External Quality Assurance

As part of EQA, all sites performing HIV testing should run controls on specimens of known HIV status on a regular basis. HTS sites without laboratory storage facilities should use dried tube specimens (DTS) as controls, and laboratories with adequate storage facilities should use control specimens of known HIV status. Controls should be performed according to the standard operating procedures (SOPs) for performing HIV testing:

- on a weekly basis, preferably at the beginning of the week
- for any new HTS provider (including trained staff members who have not conducted HIV testing for some time)
- for each new lot of test kits
- for each new shipment of test kits

- when any environmental conditions (i.e. temperature) fall outside the range recommended by the manufacturer.

EQA can help identify site-level problems with test kits, such as improper storage or performer error, or manufacturing problems with the kits themselves. Sites should document the results every time they run controls, and should indicate agreement or disagreement with the control results. Any disagreements should be followed by corrective actions and/or reporting to a higher level facility for assistance.

HIV testing service sites should also participate in proficiency testing (PT), coordinated by the FMOH through the NEQAL, at least three times per year. HTS sites will receive HIV proficiency sample panels from the NEQAL or state QIT, and should perform PT on the samples per standard operating procedures and the manufacturer's instructions. HTS providers conducting the proficiency test will be blinded to the result of the controls; that is, they will conduct the test, record the results on a standard proficiency test reporting form, and will send in these results to the NEQAL or state QIT. The NEQAL and QIT will assess agreement or disagreement with the known results of the controls, and will provide feedback to the sites within a reasonable time frame so that corrective actions may be taken, as needed. HTS sites with consistent errors on PT will receive additional supportive supervision from the NEQAL or state QIT.

7.3 Training and Certification of Staff

All HTS providers should complete the nationally approved comprehensive HTS training course and should demonstrate competency at the end of the course in order to receive their certification. The training includes hands-on practice implementing the required SOPs for performing individual assays and follow national testing algorithms.

Sites should be adequately staffed with trained HTS providers in order to meet their anticipated demand. All HTS providers should receive ongoing supportive supervision and mentoring, including group debrief sessions with other HTS providers, and one-on-one support meetings with a supervisor, at least quarterly. HTS providers should have opportunities for continuous capacity development, including in-service refresher trainings and other opportunities for skills building, at least annually. Every two years HTS providers should receive a competency assessment (mentoring, supervision, and proficiency test) to be re-certified as an HTS provider. Ensuring the psychological and physical well-being of HTS staff is critical.

7.4 Registration, Certification, and Accreditation of HTS Sites

All sites performing HTS should be registered with FMOH, SMOH, or the appropriate State agency, to assist with proper forecasting and quantification, and also management of high-quality HTS delivery. HTS sites should strive to achieve highest quality service delivery daily in accordance with the national standards set forth in these guidelines. As FMOH develops capacity and institutes systems for certification and accreditation of HTS sites, then sites should also strive to be certified and accredited. Sites participating in RTCQI will be assessed quarterly and annually using the stepwise process for improving the quality of HIV rapid testing (SPI-RT) and Monitoring and Evaluation (M&E) checklists.

7.5 Documentation and Record Keeping

To assure the quality and integrity of the test results that are given to clients, HTS sites must minimize the risk of transcription errors. Every HTS client should be assigned a unique client identifier so that the results from each of their specimens can be tracked. Each specimen collected from an individual should be assigned a unique specimen identifying number.

All HTS sites should have a standardized logbook that captures client level testing information, including the rapid diagnostic test kit names, the lot number, expiration dates, and each individual test result. Logbooks should be harmonized across different testing programmes, and providers should be trained in how to use the logbook. The logbook should be reviewed by a supervisor on a regular basis to note any irregularities, and corrective actions should be taken as needed.

Furthermore, sites should have processes in place for detecting and documenting problems when they arise. Quality Control (QC) reports, logbooks, and other data sources should be regularly reviewed and corrective actions taken, as needed.

7.6 Standard Safety Precautions

Standard precautions and laboratory safety measures must be followed when conducting HIV testing for the safety of the client, the provider, and the environment. All staff should be trained on biological and chemical safety measures, and a safety champion at each site can help ensure safety measures are followed and take corrective actions as needed. HTS sites should have universal precautions outlined in SOPs, and they should be available on-site, understood and adhered to by all HTS providers. Such SOPs should address:

- Good laboratory practices
- Universal precautions for ensuring staff and client safety
- Proper waste disposal
- Good record management
- Incident/Accident register
- Access to Post Exposure Prophylaxis (PEP)

Furthermore, HTS sites should be clean and comfortable, with adequate lighting, and free of any potential hazards. Sharps, such as lancets and needles, must be placed in a specially designed sharps disposal container. Used test kits and blood-contaminated materials should be placed in a separate biohazard bags, and a separate waste bin for non-contaminated waste should also be available. All containers and testing surfaces should be decontaminated with 10% bleach at the end of the day or any time there is a spill or contamination. Sites should prevent needle-stick injuries and other occupational exposures, and should use appropriate personal protective equipment.

7.7 Forecasting, Quantification, and Procurement Systems

Stockouts of HIV test kits are one of the major factors for poor quality and client dissatisfaction with HTS. Lack of the first-line assay (Test 1) may lead some sites to want to use of a less sensitive assay instead (Test 2 or Test 3 instead of Test 1), but this is a deviation from the national algorithm and can give a false result. Rather than diverting from the testing algorithm, HIV testing should not be done and the client should be referred to another HTS site. Furthermore, the lack of single-use specimen transfer devices (i.e. capillary tubes) may lead to an incorrect specimen volume added, which will increase the risk of an inaccurate results. And finally, inadequate supply of any consumable item used for HTS, such as lancets, alcohol swabs, or specimen transfer devices, can severely disrupt HTS services.

Therefore, all HTS sites should have a system in place to track consumption of test kits, reagents, and consumables. These data, along with any projections about a change in consumption in coming months, should be reported to the federal central medical stores on a regular basis. These data will be used to make projections about future test kit orders, which will be done well in advance so as to minimize the risk of stock outs. When stocks are received, HTS sites should take note of expiry dates and use test kits with the nearest expiration date first, regardless of when they were received.

Regardless of where testing takes place, it is critical to have appropriate equipment available and fully functional. For testing services using primarily RDTs, it is important to have timers, and in high-temperature areas, refrigerators for storing the RDTs.

7.8 Monitoring and Improving HTS Performance

HIV testing service sites should conduct IQC and EQA to monitor and improve the quality of HTS delivery. Sites should seek feedback from clients through periodic client exit interviews. Feedback might focus on convenience of opening hours, friendliness of the testing environment, and satisfaction with the post-test counselling. Clients should also have an opportunity to voice complaints or suggestions in an anonymous manner, such as a suggestion box. Data from all these quality management systems should be

used to make changes to programmes, as indicated. Sites that observe challenges with QA procedures should engage NASCP for assistance. Ensuring high quality HTS delivery is of the utmost priority.

QA is not a one-time occurrence. HTS providers and managers should continually monitor and evaluate their programme and improve the quality of their services. They should involve stakeholders at every level, including clients and PLHIV.

Table 2: Roles and responsibilities for all staff to ensure the quality of HIV testing services

Level	Where	Counselling	Testing	Records	Supplies
Community	Outside of facilities (home-based, mobile, outreach)	• Monitor performance • Conduct supportive supervision meetings • Provide job aids • Perform client exit interviews	• Ensure proper storage and supply • Conduct test per manufacturer instructions • Adhere to SOPs • Conduct IQC • Participate in PT for EQA	• Use proper data collection and reporting forms • Collect and report data • Review reports regularly and make adjustments • Ensure secure data storage	• Ensure sufficient test kits and supplies • Submit accurate forecasting and consumption plans
Primary	Community health centres, NGO standalone HTS centres, health posts and mobile clinics				
Secondary	General hospitals and state specialist hospitals	• Monitor performance • Conduct supportive supervision meetings • Provide job aids • Perform client exit interviews • Provide supportive supervision of counselling in community, primary, and secondary level • Suggest corrective actions	• Ensure proper storage and supply • Conduct test per manufacturer instructions • Adhere to SOPs • Conduct IQC • Participate in PT for EQA • Provide supportive supervision of testing processes in community, primary, and secondary level • Suggest corrective actions	• Use proper data collection and reporting forms • Collect and report data • Review reports regularly and make adjustments • Ensure secure data storage • Submit PT for EQA and QA aggregate data monthly	• Ensure sufficient test kits and supplies • Submit accurate forecasting and consumption plans • Order test kits/supplies from national level • Distribute EQA specimens and PT panels
Tertiary	Teaching hospitals, federal medical centres, and research institutes				

Level	Where	General Roles/Responsibilities
National	FMOH / SMOH	• Evaluate and validate national testing algorithms • Perform lot verification testing for post-market surveillance of test kits • Produce and distribute EQA specimens and PT panels • Evaluate data (PT, EQA) from all zones and Local Government Authorities (LGAs) on a monthly basis, provide feedback to sites • Develop and distribute SOPs and job aids • Conduct training on HIV testing and quality assurance using standardized hands-on curriculum
		• Ensure readiness for testing site accreditation (laboratories, clinical facilities) or registration (stand-alone sites, community programmes) • Establish national HIV testing policy that includes QA • Establish national QA coordination team and Quality Improvement Teams (QIT) • Allocate resources for QA • Procure, store, and distribute test kits and testing supplies • Conduct site assessment and monitoring visits to ensure adherence to SOPs and QA standards, including supportive supervision
	Regulatory bodies/FMOH	• Set national regulatory standards for all test kits (NAFDAC, Standard Organization of Nigeria or SON) • Set standards for accreditation, certification, and registration of testing sites (Medical Laboratory Science Council of Nigeria or MLSCN) • Respond to field safety notices arising from post-market surveillance (NAFDAC, MLSCN, SON)

7.9 Quality Assurance for Pre-test Information and Post-test Counselling

Just as it is important to ensure the accuracy of test results being reported to clients, it is also important to make sure clients receive information and counselling that is accurate, unbiased, and client-centred. Pre-test information prepares clients to receive HTS and their test results, and post-test counselling is critical for facilitating linkages with follow-up services based on the client's results. In order to ensure high-quality pre-test information and post-test counselling, the following elements should be in place:

- Adequate pre- and in-service training, ongoing capacity building, and mentoring
- Regular (at least quarterly) peer support meetings with other HTS providers to debrief, discuss challenging cases, and prevent burnout
- One-on-one meetings with an HTS supervisor for support and mentorship, to discuss performance and any challenging cases
- Provision of clear and concise job aids with key information
- Self- and peer-assessment tools, and provider reflection forms
- External supportive supervision through the use of a standardized checklist by local, state, and national officers
- Mystery client survey
- Observed practice

Chapter 8: Human Resources

HTS providers are the backbone of high quality HTS delivery.

8.1 Qualifications

There are three categories of HTS providers in Nigeria. These categories are supervisors, Basic HTS providers, and community-based/Lay HTS providers.

8.1.1 HTS Supervisors

Supervisors should have a basic degree or diploma in health sciences, nursing, social or behavioural science, education, or theology. They should have some management experience, and understand basic principles of adult education. Supervisors should be trained as HTS providers, and have some experience providing and/or managing HTS.

8.1.2 Basic HTS Providers

Basic HTS providers should have passed and received a Senior School Certificate Exam or a General Certificate Exam, or its equivalent. HTS providers should have good communication skills, and should demonstrate empathy and compassion towards others.

8.1.3 Community-based/Lay HTS Providers

Community-based/Lay HTS providers should have a junior secondary school certificate, a first school leaving certificate, or should be a certified community health worker or volunteer. They should also have good communication skills, and should demonstrate empathy and compassion toward others.

Regardless of their educational background, candidates for HTS training can be assessed based on their level of interest, interpersonal skills, personal values, and demonstration of capacity to apply good counselling techniques and discretions.

Persons performing an HIV rapid test who fit into one of the categories above should be trained on how to accurately conduct a rapid HIV test. Other medical laboratory personnel are also eligible to conduct HIV rapid testing.

Additionally, all staff and volunteers who work in HTS sites, including the receptionists, drivers, data entry personnel, secretaries and cleaners should receive basic introductory training on HTS.

8.2 Training

All persons who provide HTS must complete and successfully pass a nationally approved comprehensive HTS training course. The course shall include hands-on practice for how to implement the required SOPs and perform individual assays in the national testing algorithm. Providers shall only be certified to pass the course once they have demonstrated proficiency in conducting HTS.

In addition to training on specific test procedures and testing algorithms, the training also includes:

- How to keep testing records as standardized logbooks or testing registers
- An understanding of the importance of QA)
- An understanding of the importance of EQA systems, including proficiency testing (PT), and the role of providers within these systems
- How to respond to site supervisory visits and any recommended corrective actions.

NASCP maintains an approved list of master trainers who can conduct nationally approved HTS trainings. Any organization wishing to host an HTS training should liaise with NASCP/FMOH to source trainers and ensure the appropriate requirements are met.

A representative of the HTS Unit of NASCP should be present at such trainings to ensure quality and strict adherence to the National guideline on HTS.

8.3 Mentoring

All HTS providers should receive ongoing supportive supervision and on-the-job mentoring for one month before they can be certified and see HTS clients on their own. This mentoring should include the opportunity for the new providers to observe a more skilled provider conduct HTS sessions, as well as the chance for them to be observed when they are providing HTS. Clients should consent to have both providers conduct the HTS session, and constructive feedback should be provided to the new providers.

Ongoing supportive supervision for HTS providers should include group debriefing sessions with other HTS providers, and one-on-one support meetings with a supervisor, at least quarterly. HTS providers should have opportunities continuous capacity development, including in-service refresher trainings and other opportunities for skills building, at least annually. Every two years HTS providers should receive a competency assessment (mentoring, supervision, and proficiency test) to be re-certified as an HTS provider. Ensuring the psychological and physical well-being of HTS staff is critical.

8.4 Certification

HIV testing service providers will be certified by NASCP once they complete all required elements of the HTS training package, including hands-on experience conducting rapid diagnostic tests (RDTs) and one month of on-the-job mentoring. Additionally, to be certified as an HTS supervisor, these persons must also have a minimum of 5-years of counselling experience, and must have passed a nationally approved supervisor training with demonstrated proficiency.

Certification of HTS providers and supervisors is at the discretion of NASCP, who maintains a master list of all certified HTS providers in Nigeria. Certification may be withdrawn if at any time NASCP determines that a provider is negligent or knowingly not adhering to the policies and procedures outlined in this guideline.

8.5 Staffing for Results

Sites should be adequately staffed with trained HTS providers in order to meet their anticipated demand and programme objectives, and to provide high-quality service delivery. Sites should ensure that all clients receive their HIV rapid test results within a timely manner (i.e. within 60 minutes), and should staff their sites accordingly.

8.6 Preventing Burnout

All HTS providers need formal support, stress management and mentoring strategies to prevent or mitigate the effects of burnout as a result of providing HTS. "Burnout" occurs when providers are overworked or feel particularly challenged by the situations their work puts them in. It can manifest as physical, emotional, psychological and spiritual symptoms, and is commonly experienced by people working in helping professions due to the high degree of empathy they bring to their work.

Support for HTS providers to prevent burnout includes:

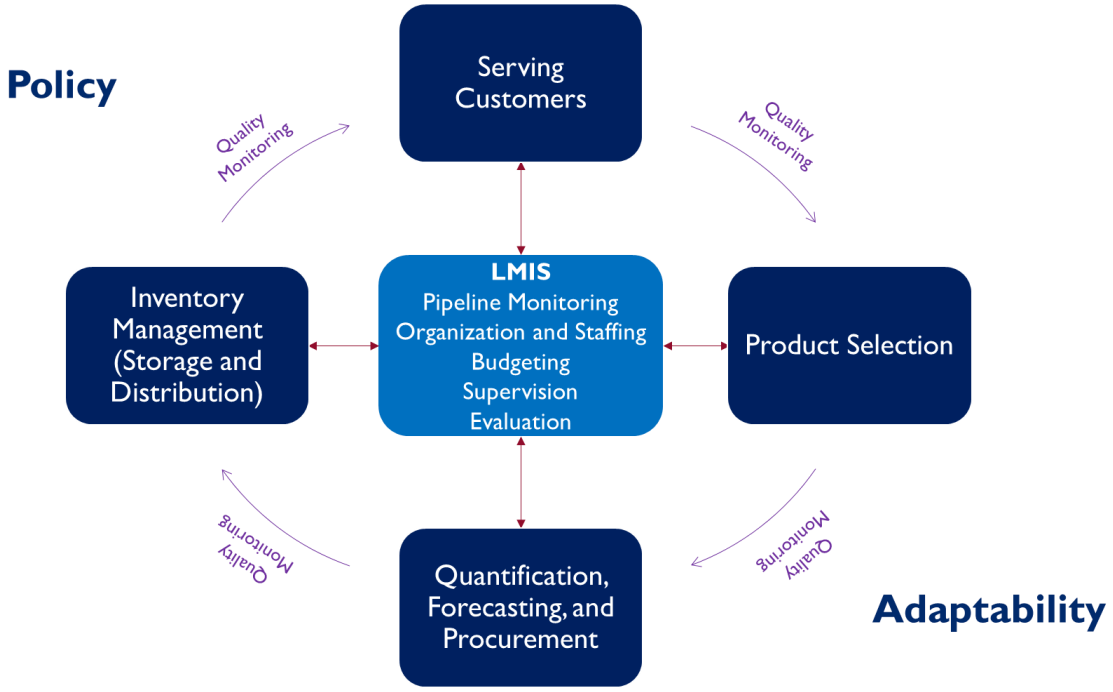
- Ensuring that HTS providers have clearly outlined roles and responsibilities, and that they are compensated appropriately for their work.
- Ensuring that HTS providers do not work more than can be reasonably expected for their rate of compensation; provide adequate days off for rest and recovery, and vacation time per the agency's employee policies.
- Ensuring that HTS providers counsel and test a minimum of 10 clients and a maximum of 15 clients per day.
- Supporting HTS providers to receive periodic health screening, especially for TB and other infectious diseases
- Screening for hepatitis B, and offering the hepatitis B immunization to persons who are hep-B negative.

- Facilitating healthcare for openly HIV-positive HTS providers, including access to preventive service such as TB preventive therapy, medications to prevent opportunistic infections, and other medical and psychosocial support
- Understanding that some HTS providers might be HIV-positive but may not wish to share this information—providers have the same right to privacy and confidentiality of their health information that all clients do, and they should not feel shamed or stigmatized in the workplace
- HTS providers are encouraged to go through the process of HTS so that they understand the process and are more empathetic towards clients, but since HTS is voluntary, participation in HTS cannot be required
- Measures must be taken to reduce the risk of occupational transmission of blood-borne diseases
- Supervisors or more experienced HTS providers should provide one-on-one support and mentoring for less experienced providers
- Peer review meetings should be held once a month, and at least quarterly; these meetings are an opportunity for providers to debrief, discuss challenging cases, share experiences, and be updated on new developments in HTS and HIV/AIDS
- Providers should be encouraged to form their own support groups and to assist one another in an informal environment where both social and work-related activities can be discussed. This mutual support will help in minimising stress and burn-out.

Chapter 9: Logistics Management

Logistics management is the process of managing, coordinating, sourcing, procuring, warehousing, distributing and rationally using supplies. The logistics management process must be adhered to in order to ensure that HTS commodities are available and ready for use by all who need them in a sustainable and reliable manner. The logistics cycle is outlined below:

Figure 9: Logistics Management Cycle in Nigeria



HIV test kits selection and testing protocol will be in conformity with the prevailing national HIV testing algorithm. Forecasting, quantification, budgeting, financing, procurement and distribution of test kits should be evidence-based.

9.1 Quantification and Forecasting

Quantification refers to the estimation of the quantity of commodities (and their costs) required for a specified period (forecasting), and planning when commodities should be delivered (supply planning) so as to ensure reliable supplies. Quantification is typically done at the national level (for the national country needs) and may be done at the state level (for state needs). National quantification for HTS commodities should be harmonized based on the national programme needs, and aligned to the state HIV prevalence. At national level, the NASCP laboratory quantification team works with the Procurement and Supply Chain Management (PSM) Technical Working Group (TWG) to undertake quantification bi-annually based on country targets and consumption data from the facilities. This will inform the quantities of commodities to be procured, and funding need to fill consumption needs. NASCP then shares the report of national quantification with the states and other stakeholders.

Beyond quantifying for commodities, the PSM TWG should quantify the commodity logistics tools required by their facilities, and budget for their printing and distribution. This will ensure that facilities are able to record and report on RDTs.

9.2 Procurement

All test kits for the public sector should be procured centrally at the national level. However, where central/national procurement is not feasible, state government and other service providers must procure only test kits on the national testing algorithm as approved by the FMOH.

Rapid test kits that do not require refrigeration are more appropriate for use at HTS sites. Test kits with long shelf life should be used in remote areas and sites performing smaller numbers of tests.

9.3 Distribution

The FMOH shall distribute test kits to public health sector facilities and shall maintain an emergency or buffer stock of rapid HIV test kits for distribution when needed. However, where central/national logistics is not feasible, states and other service providers must only distribute test kits on the national testing algorithm to all facilities within their area of jurisdiction.

In addition, Global Health Supply Chain-Procurement and Supply Chain Management (GHSC-PSM) will maintain adequate stock of rapid HIV test kits for back-up distribution when needed. GHSC-PSM and the Logistics Management Coordination Unit (LMCU) will also provide bi-monthly reports to NASCP of the stock balances in its warehouses, a list of HTS commodities received, list of HTS commodities issued/distributed to facilities, and the status of any on-going or planned procurements. This is to assist NASCP in planning and HTS programme management.

A regular audit of the supply chain management systems for HIV test kits will be undertaken to prevent stock-outs, overstocking and pilferages as well to identify operational weaknesses that may require strengthening. The above system will also apply to other HTS related supplies including the commodity data tools, consumables, and QA materials, among others.

9.4 Warehousing

It is highly recommended that RDTs which can be stored at ambient temperature (2-30 degrees centigrade) be used at HTS sites. However, where the climatic conditions make this unattainable, the test kits should be refrigerated or stored in an air conditioned room.

Cold chain dependent tests kits must not be stored or used at sites without reliable power supply.

Every facility providing HTS should have a designated officer in charge of ensuring that HIV test kits are stored properly and used before their expiry date.

Where available, HIV test kits should be stored in household refrigerators but not in the freezer compartments. Where refrigeration is not possible, the manufacturer's storage instructions should be followed. An inventory system should be developed in accordance with national logistics guidelines to track usage and projection of needs. Storage facilities for HIV test kits and other consumables should take into account special requirements of the test kits and capacities of the sites.

9.5 Logistics Management Information Systems (LMIS)

An effective logistics system is supported by timely logistics data that will enable HTS managers to account for and ensure adequate supplies of HIV test kits. Three essential data elements are required to effectively manage a logistics system, and must therefore be captured by the LMIS:

- **Stock on hand**: data on the usable quantities of stock held at the central and facility level
- **Consumption/usage**: data on the quantities of products given to clients/patients during a particular period.
- **Losses and adjustments**: Losses are the quantity of stock removed from the system for reasons such as expiration, damage, etc.; adjustments are made when commodities are transferred from one service delivery point to another.

9.6 Quality Logistics Management

Quality logistics management aims at ensuring commodity security; where commodities are in the right conditions and are available at the testing points when needed. Cost efficiency is also achieved when expiry

of commodities is minimized through quality logistics management. Measures to ensure quality logistics management include:

- Utilization of a "pull" system where commodities are supplied based on the reports from the facilities who based their orders on their consumption and stocks
- Timely and accurate reporting at all levels: Consumption data from the various Testing points in the health facility will be analysed by the laboratory or facility in-charge, and together with the stock at the facility, are used to form the basis for the facility's order for more supplies. This report will be sent to the sub county level for onward transmission to the county level and then the national level, preferably by electronic reporting. All the counties will be expected to compile electronically the aggregated consumption, stock and orders from their various facilities and then rationalize the facility orders based on the provided data. These rationalized facility orders should be transmitted electronically to the national level where harmonized commodity allocation and distribution will be done.
- Commodity audits: regular comparison of service and commodity data should be done to evaluate the utilization and reporting for HTS commodities. These audits will also help to identify stock outs, expiries and pilferages; and provide corrective actions
- Use of standardized national inventory management and commodity reporting tools will ensure data is collected and reported routinely
- States should undertake regular supportive supervision exercises that check on commodity management. They should also conduct data review meetings involving the LMCUs and facility data, so as to check on data quality and improve data use at county level
- Inventory management SOPs should be adhered to.

Chapter 10: Monitoring and Evaluation

Monitoring and evaluation (M&E) for HTS includes data collection, analysis, reporting, and use. Strategic information from HTS programmes can be used for the effective management and improvement of HTS, for tracking progress toward achieving programme targets, and for tailoring service delivery approaches to maximize HTS coverage and uptake in order to achieve the UNAIDS 90-90-90 HIV goals.

Whereas monitoring involves the regular, routine assessment of ongoing activities, evaluation is episodic and examines large scale impact and achievements to answer specific management and epidemiologic questions that will guide future actions, planning, and decision making regarding HTS. Both monitoring and evaluation are critical components of Nigeria's national HIV and AIDS framework.

10.1 Routine Programme Monitoring

Up-to-date monitoring of HTS allows for prompt identification and resolution of the challenges and successes of the HTS programme. M&E allows programme managers to observe trends, which can guide priority setting and resource allocation at the local, state, and national level. M&E data can be used to answer critical questions about Nigeria's HIV epidemic at the service delivery, LGA, state national, and international context. These data also form the basis for research. It is critical to ensure the quality of HTS programme data at all levels.

The FMOH provides national HTS M&E tools, including forms, registers, and summary reports on key indicators, to be used by all programmes offering HTS. Furthermore, FMOH will provide guidance and training on how to complete these forms and registers, and the process of reporting. All data shall be submitted into the National Health Management Information System (NHMIS), and feed into the District Health Information Management System (DHIS) platform, a web-based data repository that contains facility-level aggregate data and is housed in the Department of Health Planning, Research and Statistics (DHPRS) of the FMOH.

- All HTS programmes should produce monthly, quarterly and annual reports summarizing data for key M&E indicators (Table 3)
- Quarterly reports shall be discussed in review meetings of the National Task Team for HTS to identify achievements, challenges, best practices, and new strategies for epidemic control
- Annual reports shall be produced by FMOH for summarizing the achievements of the national programme, and presented at the annual review meeting.

10.1.1 Data Management

Data from HTS delivery points should be treated with the same level of confidentiality that all medical records are given. Only authorized officers should be permitted to handle client-level data. A standardized system of assigning codes or reference numbers to clients for identification purposes should be developed and used by each HTS programme. Results of all HIV tests should be systematically recorded in a laboratory logbook, as well as the details of all the HIV test kits used. Records must be kept confidential and in a lockable storage location that can only be accessed by authorized persons.

- **Data Entry and Transfer**: At each HTS site, the data collection forms should be completed and forwarded to the Local Government Area (LGA), where the data are collated and in turn forwarded to the SMOH. At the state level, all HTS data should be collated, analysed and forwarded to the FMOH.
- **Data Analysis and Reporting**: Data collected are analysed at the national level and findings contribute to programme planning and implementation. Data are analysed at National Agency for the Control of AIDS (NACA) and fitted into the DHIS. The FMOH conducts data validation at each level of service, and the management, partners and stakeholders are informed of the service statistics of HTS in the country on a quarterly basis, for example through the meetings of the National Task Team for HTS.

10.1.2 National HTS Indicators

The FMOH determines what indicators should be collected by HTS programmes using the required data collection and reporting forms and registers, and communicates this information with HTS programmes. FMOH also builds capacity of HTS providers to collect and report on these key indicators. Indicators for the national HTS programme include those that measure coverage, quality of service, quantum of service provided, and outcome (see Table 3). Other details on these indicators can be found in the HTS Indicator Reference Guide.

Table 3: Required National HTS Indicators

Ref. No.	Indicator	Periodicity of reporting	Description	Disaggregation
HTS 1	Number of people who **tested HIV-negative** and received their results	Monthly	Number of people who received HTS and received HIV-negative test results.	**Sex**: Male/Female; **Age**: 1-4, 5-9, 10-14, 15-19, 20-24, 25-49, 50+; **Service Delivery Modality**: CT site, TB site, FP site, STI site, Other Outpatient, Stand-alone site, Outreach site (pregnant women), Outreach site (others)
HTS 2	Number of people who **tested HIV-positive,** and received their results	Monthly	Number of people who received HTS and received HIV-positive test results.	**Sex**: Male/Female; **Age**: 1-4, 5-9, 10-14, 15-19, 20-24, 25-49, 50+; **Service Delivery Modality**: CT site, TB site, FP site, STI site, Other Outpatient, Stand-alone site, Outreach site (pregnant women), Outreach site (others)
HTS 3	Number of people who tested for HIV and received their results **more than once within the present year** (i.e. all re-testers)	Monthly	Number of people who received HTS who had previously tested at least once in the last 12 months.	**Sex**: Male/Female; **Age**: 1-4, 5-9, 10-14, 15-19, 20-24, 25-49, 50+; **Service Delivery Modality**: CT site, TB site, FP site, STI site, Other Outpatient, Stand-alone site, Outreach site (pregnant women), Outreach site (others)
HTS 4	Number of people testing HIV-positive that were identified as **known HIV-positive** during post-test counselling. (i.e. HIV-positive re-testers)	Monthly	Number of people who received HTS who had previously tested HIV-positive at this site or another site, at any time in the past. *Note*: This is not meant to capture re-testing for verification purposes.	**Sex:** Male/Female; **Age:** 1-4, 5-9, 10-14, 15-19, 20-24, 25-49, 50+; **Service Delivery Modality:** CT site, TB site, FP site, STI site, Other Outpatient, Stand-alone site, Outreach site (pregnant women), Outreach site (others)
HTS 5	Number of **couples** counselled, tested, and received results together	Monthly	Number of couples (i.e. 2 or more persons) who received all elements of HTS together, including their results.	**N/A**
HTS 6	Number of couples counselled, tested for HIV together, and received **discordant results**	Monthly	Number of couples who received all elements of HTS together, where one partner received HIV-positive results and the other partner received HIV-negative results.	**N/A**

Ref. No.	Indicator	Periodicity of reporting	Description	Disaggregation
HTS 7	Total number of **index contacts** tested for HIV and received their results **NOTE: ***index contacts*** may include children of PLHIV, sex partners of PLHIV, or social/sexual contacts of key populations	Monthly	Number of partners or children of PLHIV, or social/sexual contacts of KPs who received HTS and received their test results.	**N/A** *(No disaggregation required, but programmes may wish to disaggregate by type of contact—child, sex partner, KP contact—for their own programme use. See suggested indicators in Table 4 for more possible disaggregation.)*
HTS 8	Total number of index contacts who **tested HIV-positive** **NOTE: ***index contacts*** may include children of PLHIV, sex partners of PLHIV, or social/sexual contacts of key populations	Monthly	Number of partners or children of PLHIV, or social/sexual contacts of KPs, who received HTS and received HIV-positive test results.	**N/A** *(Programmes may wish to disaggregate by type of contact—child, sex partner, KP contact—for their own programme use. See suggested indicators for more possible disaggregation.)*
HTS 9	Number of HTS clients clinically **screened for TB**	Monthly	Number of people who received HTS who were also screened for TB signs and/or symptoms, per national guidelines.	**N/A**
HTS 10	Number of HTS clients identified with **presumptive TB**	Monthly	Number of people who received HTS and were screened for TB, who showed one or more sign or symptom of TB infection.	**N/A**
HTS 11	Number of HTS clients clinically **screened for STI**	Monthly	Number of people who received HTS and were screened for any STI.	**N/A**
HTS 12	Number of HTS clients **screened for syphilis**	Monthly	Number of people who received HTS and were screened for STIs, who showed one or more sign or symptom of syphilis infection.	**Syphilis Screening Result:** Positive, Negative
HTS 13	Number of HTS clients **tested for Hepatitis**	Monthly	Number of people who received HTS and were tested for Hepatitis B and/or Hepatitis C.	**Type of Hepatitis:** B, C **Hepatitis Test Results**: Positive, Negative

Ref. No.	Indicator	Periodicity of reporting	Description	Disaggregation
HTS 14	Number of **donated blood units screened** for HIV, HBV, HCV, and syphilis, using ELISA	Monthly	Number of donated blood units that were screened for HIV, HBV, HCV, and syphilis using ELISA tests.	**N/A**

10.1.3 HTS Programme Data Use

HTS providers and programme managers should understand and use HTS data from their programmes to improve their services and reach populations most in need. Further, it is the responsibility of managers at facility, LGA, state, and national levels to analyse and use this data to monitor quality of services, trends, and allocate resources. HTS providers and managers at all levels should be actively engaged in M&E processes.

In addition to the required national HTS indicators, sites may collect and aggregate additional data elements in order to inform their own HTS programme, and to make adjustments to meet programme goals and objectives. In the boxes below are some select HTS data elements and disaggregation that HTS programmes within Nigeria may already be collecting, although this list is not exhaustive.

Additional Data Elements Collected

1. Number of KPs who received HTS and received their results (disaggregated by KP type, sex, age, test result)
2. Number of PLHIV (index clients) who were **enrolled in and accepted partner notification services**(disaggregated by sex, age, service delivery modality)
3. Number of **partners of PLHIV** who received HTS and received their test results(disaggregated by sex, age, test result)
4. Number of **children of PLHIV** who received HTS and received their test results(disaggregated by sex, age, test result)
5. Number of **social or sexual contacts of KP** who received HTS and received their test results(disaggregated by KP type, sex, age, test result)
6. Number of people testing HIV-positive who are successfully linked with retesting at facility to verify HIV-positive results
7. Number of people testing HIV-positive who are **successfully enrolled in HIV care and treatment** services
8. Number of clients who received HTS and received their results, who had previously tested using a self-test and are seeking further diagnosis

Additional HTS Data Disaggregation

Disaggregation of HTS data is important to assess whether the right populations are accessing HTS. The national HTS indicators provide the required disaggregation for submission to FMOH. However, HTS programmes may wish to use the following disaggregation to describe uptake and utilization of HTS:

- **Age**: <1 (for EID), 1-9, 10-14, 15-19, 20-24, 25-49, 50+
- **Sex**: male, female
- **Test result**: HIV-positive, HIV-negative
- **Service delivery modality**:
  - **facility-based**, including inpatient, paediatric, malnutrition, PMTCT (ANC only), TB, other PITC (including OPD and STI), co-located HTS, standalone HTS, index partner testing (partner notification services)
  - **community-based**, including home-based, mobile outreach, standalone HTS, other community testing, and index partner testing (partner notification services)
  - **other**, for example, HIV self-testing, couples HTS
- **Retesting status**: new testers, type of re-testers (HIV-negative re-tester at on-going risk; HIV-negative re-tester with known specific risk exposure; HIV-positive re-tester to verify diagnosis before starting ART)
- **Population**: key populations (men who have sex with men, sex workers, persons who inject drugs, transgender, people who are incarcerated), discordant couples, partners of PLHIV, infants, children, adolescents, TB clients/patients, hepatitis patients
- **Geographic area**: national, state, LGA, facility

10.1.4 Adjusting for Retesting in HTS Coverage Estimates.

There are three main types of retesting that are recommended:

1. retesting people at on-going risk for HIV infection (for example, retesting pregnant women in settings of high HIV incidence/prevalence in their third trimester and in the breastfeeding/postnatal period, and retesting among populations at high ongoing risk for HIV infection, for example, key populations, at least annually);
2. retesting to rule out acute infection associated with a specific risk exposure in the last 4 weeks (window period);
3. retesting to verify HIV-positive diagnosis before initiating care and/or ART.

The required national HTS indicators should be reported as the **number of individuals who have been tested,** rather than the number of tests performed. Where possible, sites should de-duplicate HTS programme records so that they are **not reporting data for the same individual twice** (i.e. double reporting). Using unique client identifiers or electronic medical systems are two ways of tracking retesting to reduce duplication in reporting. Another approach is to record information about prior testing in the HTS register.

Population-based surveys should also ask if a person has ever tested for HIV as a means of assessing re-testing rates and minimizing risk of reporting the same person twice. Surveys can be particularly helpful for determining testing coverage among hard-to-reach populations, and for assessing self-testing rates.

10.2 Evaluation Activities

Process and outcome evaluations should be periodically conducted to assess current programme success and inform future revisions of the National HTS Guidelines and strategic plans.

It is important to gain knowledge and improve services as HTS continue to scale-up. The needed insight will be obtained through several targeted operational research and public health evaluation which will be conducted periodically. Some of the areas to explore or questions to answer will include:

- Factors that are affecting HTS uptake
- Preferences in utilization of services by clients and why
- Rates and reasons for low partner notification and what can be done to improve the situation
- Factors affecting return of clients for their test results
- Rate of discordant results amongst couples
- Correlation of STIs incidence to HIV positivity in various health facilities and geographic settings
- Factors affecting HTS uptake through the various service models (health facility, community-based, self-testing, partner notification, etc.)
- Innovative strategies to increase access to HTS and support achievement of the UNAIDS 90-90-90 targets
- Piloting the identification of early HIV infection in priority population using Recent Assay Technique (Rapid Incidence Assay Technique)
- Efficacy and cost-effectiveness of "batch testing"
- Identification of barriers to access and bottlenecks to paediatric HIV testing
- Effect of *Bandason's tool* in determining what children should be prioritized for HTS in health facility settings
- Effect of innovative strategies to improve case finding and improve linkage to treatment
- Effect of RTCQI programme on the quality of HIV testing in Nigeria

Piloting recency testing in Nigeria

New technologies are available to assess whether HIV infection has occurred recently (i.e. within the last six months), which can help explain HIV transmission dynamics and estimate HIV incidence. WHO states, "assays for detection of recent HIV infection may have one of three testing objectives: 1) estimation of HIV incidence at a population level; 2) use in clinical intervention trial settings (e.g. identifying suitable study populations and monitoring trends throughout the study); and 3) for detection of recent HIV infection at the individual level to prioritize contact tracing and appropriate care".

Identification of patients who are at the early stage of infection using HIV recency assays has the potential to increase HIV case detection in priority populations, support partner notification services by prioritizing clients with recent infection for HIV prevention, treatment, care, and support services.

Recency testing in Nigeria will not only identify new HIV-positive individuals in need of treatment, but will also identify HIV-negative partners of PLHIV (i.e. discordant couples) who are eligible for PrEP and for monitoring sero-conversion.

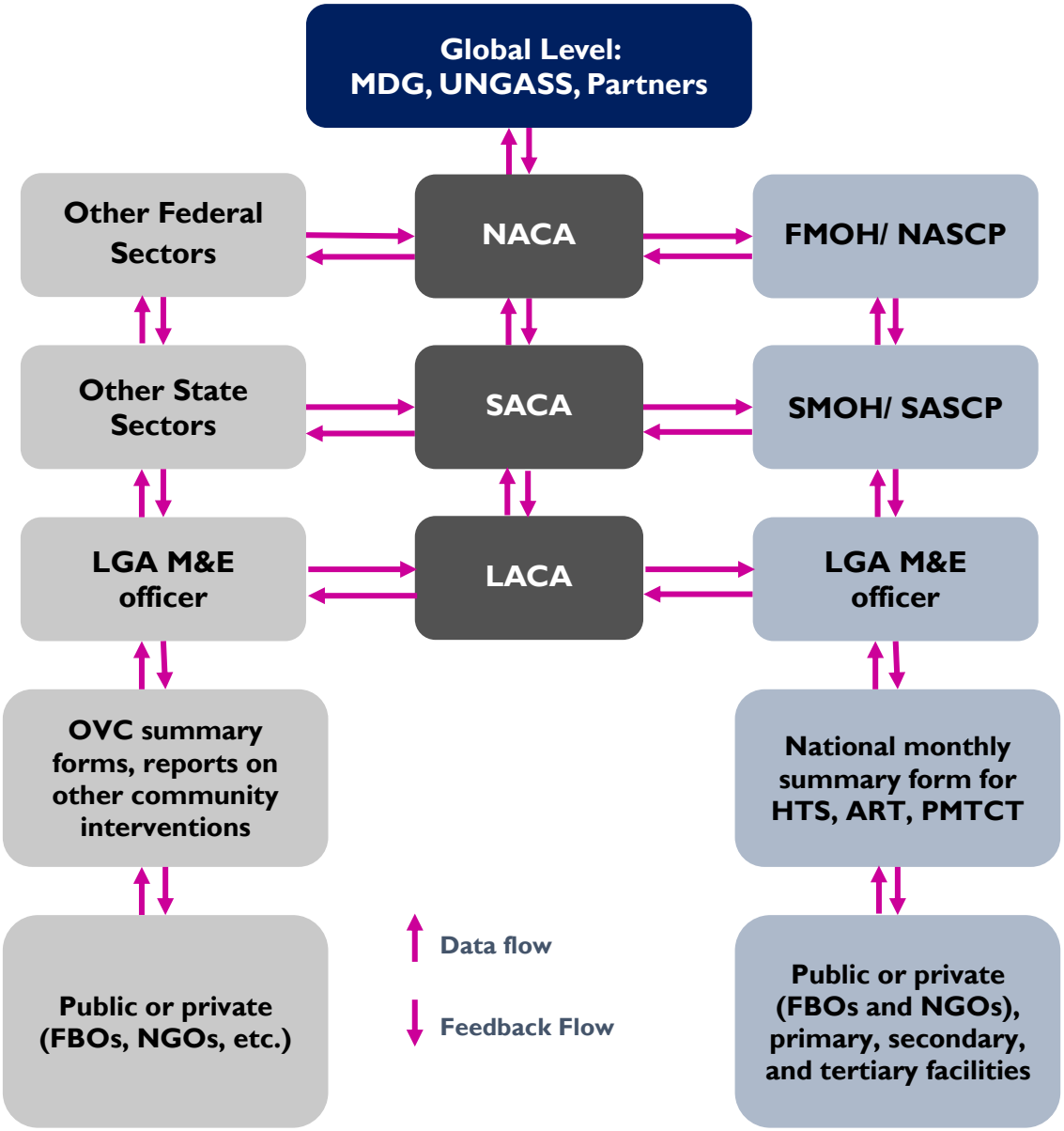
A pilot of recency testing is currently being planned, targeting key populations, adolescent girls and young women (AGYW), and HIV-positive pregnant women. Individuals from these target populations who test HIV-positive will also be tested using the rapid incidence assay technique. Persons who are found to have early infection will then be prioritized for tailored HIV prevention counselling, and partner notification services.

The pilot will provide programmatic evidence to inform national scale-up of this approach, for improving overall HIV case detection and linkage to treatment and prevention services.

10.3 One M&E Framework

The global strategy for HIV and AIDS control now demands that there be ***one*** country level M&E system, ***one*** national coordinating body and ***one*** national strategic plan (the "three ones"). Accordingly, HTS M&E framework is aligned with the multi-sectoral M&E framework, as outlined in Figure 10.

Figure 10: One M&E Framework



Chapter 11: Coordination and Scale-Up

Coordination of HTS is multi-faceted and multi-level, with responsibilities spanning national, state, and lower level structures. At each level, various bodies are responsible for various functions as listed below (Table 5). Development partners and the private sector also play a key role in supporting the national HTS programme with procurement, technical guidance, capacity building, and many other duties.

Table 5: HTS Responsibilities and Coordination in Nigeria

Level	Body/ Institution	Roles and responsibilities
NATIONAL	National Agency for the Control of AIDS (NACA)	• Strategic guidance on the HIV response • Multi-sectoral coordination • Advocacy and resource mobilization • Procurement • HTS promotion activities
	National AIDS and STI Control Program (NASCP)/FMOH	• Development and dissemination of policy documents • Technical assistance and capacity building of state • Implementing partner coordination • Leadership of national technical working groups • Monitoring trends of the HIV epidemic • Performance monitoring and reporting (national and international) • Development of M&E tools and indicators • Development of training curricular • Technical guidance on procurement and supply chain management • Carrying out coordinating and disseminating research • Advocacy and resource mobilization • HTS promotion activities • Quantification, procurement, forecasting, supply plan, distribution, warehousing
	National Task Team on HTS (NTT-HTS)	• Advise the Honourable Minister of Health on all HTS issues • Advise government on policy formulation on HTS • Support the FMOH in the coordination of HTS service delivery in the country • Assist government in the review of national guidelines, training manuals and other documents on HTS • Advise on minimum standards for HTS for all forms of HTS • Advise and assist government to develop scale-up plans for HTS to ensure equitable access to HTS nationwide • Support FMOH in the development and review of proposals and work plans for HTS • Provide technical assistance to FMOH in the development of the national HTS monitoring and evaluation framework, in harmony with the Nigeria National Response and Information Management System (NNRIMS) and the National Health Management Information System (NHMIS) • Advise government on statutory requirements for HTS counsellors in relation to professional structures, cadres, remunerations, accreditation mechanisms and development of standardized career curricula • Network with other national task teams on the HIV and AIDS programme • Membership of the National Task Team on HTS membership will be reviewed every four (4) years

Level	Body/ Institution	Roles and responsibilities

	National Public Health Reference Laboratory (NPHRL)	• National quality assurance
		  • EQA through PT and DTS validation
		  • Test kit validation
		  • Post-market surveillance
		  • Evaluating new testing technologies
		• Supplemental and specialized testing (i.e. Early Infant Diagnosis, P-24 antigen, Polymerase Chain Reaction)
		• Development of training material for HIV testing
		• Technical assistance and capacity building of states in HIV testing
		• Performance monitoring and reporting on QA indicators

	Global Health Supply Chain-Procurement and Supply Management	• Forecasting, quantification and data management of HTS commodities • Warehousing and distribution of HTS commodities
	Department of Health Planning, Research, and Statistics	• Development of data collection and reporting systems • Data warehousing and management • Registration of M&E tools • Data quality audits
STATE	SMOH/Hospital Management Board (HMB)	• Management of service delivery • Human resource management • Training of healthcare workers • Monitoring of LGA HIV epidemic trends and programme performance • Warehousing and distribution of HTS commodities • Printing and distributions of M&E tools and national IEC materials • Development and revision of key M&E indicators • Infrastructure support • Data quality audits • HTS promotion activities • Participate in EQA
	State AIDS and STI Control Program (SASCP) and State Agency for the Control of AIDS (SACA)	• Reporting through DHIS • Supervision of service delivery • Data quality audit • Participate in EQA • HTS promotion activities
Local Government Authority (LGA)/ Local AIDS Control Agency (LACA)		• Community mobilization and advocacy • Provision of quality HIV services • Data collection and reporting • HTS promotion activities
HEALTH FACILITY		• Provision of quality HTS • Performance monitoring and reporting • Commodity management and reporting • Human resource management • Data quality audit • Participate in EQA • HTS promotion activities

11.1 Supporting Scale-up

The Federal Government of Nigeria has put in place multiple strategies to ensure a supportive policy environment, and to increase demand for and access to HTS in Nigeria.

11.1.1 National HIV and AIDS Policy

The National HIV and AIDS Policy recognise that all Nigerians have a fundamental right to know their HIV status. It stipulates that HTS be provided and made available and accessible to everyone.

11.1.2 Multi-sectoral Co-ordination of HIV/AIDS Activities

The National Agency for the Control of AIDS provides a multi-sectoral framework for the coordination of the national HIV/AIDS programme, and NASCP coordinates the health sector response, which includes HTS.

11.1.3 Local Resource Mobilisation Efforts

Local resources (private sector, individuals, and communities) should be mobilized for HIV/AIDS impact mitigation at all levels of the society.

11.1.4 Mainstreaming HIV/AIDS in All Sectors

All public and private sector services are encouraged to integrate HIV/AIDS programming into their plans. Where possible, HTS should also be integrated, with strong linkages to HIV prevention, treatment, care, and support services.

11.1.5 Strengthening Civil Society

The National Agency for the Control of AIDS and NASCP work hand in hand with civil society organizations and utilize every opportunity to uplift and support civil society engagement in HIV/AIDS planning and programme implementation.

11.1.6 Integration with Basic Healthcare

All health facilities in Nigeria are encouraged to adopt HTS as a routine healthcare service for all patients. In certain areas with lower prevalence integration of HTS into routine healthcare may be more targeted, and priority may be given to maternal, newborn, and child health (MNCH services) (ANC, labour and delivery, post-natal care, paediatrics, and malnutrition Clinics), TB, STI, and other HIV-related services.

HTS: 001

HIV TESTING SERVICES: CLIENT INTAKE FORM

State: _____ **LGA:** _____ **Facility Name:** _____

Referred From :_____**(Self, TB, STI, FP, OPD, Ward, Blood Bank, others)**

Setting :_____**(CT, TB, STI, FP, OPD, Ward, Outreach, Standalone HTS, others)**

Client's Name _____ Age _____ Date of Visit *(DD/MM/YYYY)* _____

Client's Telephone Number _____

Client's Descriptive Address _____

_____

Client's Code _____ Sex _____ First Time Visit [No] [Yes]

(For Client's Code, use serial No. /month/year. For example, 0001/06/15 implies client 001 in June 2015)

State of Residence _____ LGA of Residence _____

Marital Status _____ No. of own children <5 years [ ] (If Married) No. of Wives/Co-wives [ ]

Type of Session: [Individual] [Couple] [Previously Self Tested]

Index Testing: Is client identified from an index client [Yes] [No] *if yes* [Biological] [Sexual] [Social] Indicate index client ID:

Pre-Test Information

MARK with "X" where it applies, [0] = No, [1] = Yes

Knowledge Assessment		**HIV Risk Assessment**	
Previously tested HIV negative	[0] [1]	Ever had sexual intercourse	[0] [1]
Client pregnant *(Test and ensure linkage to PMTCT program)*	[0] [1]	Blood transfusion in last 3 months	[0] [1]
Client informed about HIV transmission routes	[0] [1]	Unprotected sex with casual partner in last 3 months	[0] [1]
Client informed about risk factors for HIV transmission	[0] [1]	Unprotected sex with regular partner in the last 3months	[0] [1]
Client informed on preventing HIV transmission methods	[0] [1]	STI in last 3 months	[0] [1]
Client informed about possible test results	[0] [1]	More than 1 sex partner during last 3 months	[0] [1]
Informed consent for HIV testing given	[0] [1]	*(calculate the sum of the 6 answers above)* **Risk score:**	

Clinical TB screening		**Syndromic STI Screening**	
Current cough	[0] [1]	*Female*: Complaints of vaginal discharge or burning when urinating?	[0] [1]
Weight loss	[0] [1]	*Female*: Complaints of lower abdominal pains with or without vaginal discharge?	[0] [1]
Fever	[0] [1]	*Male*: Complaints of urethral discharge or burning when urinating?	[0] [1]
Night sweats	[0] [1]	*Male*: Complaints of scrotal swelling and pain	[0] [1]
(calculate the sum of the 4 answers above) **TB screening score:**		Complaints of genital sore(s) or swollen inguinal lymph nodes with or without pains?	[0] [1]
If score >=1, test for sputum AFB or refer to TB service		*(calculate the sum of the 3 answers above)* **STI screening score:** *If score >=1, follow syndromic STI management guidelines or refer*	

Post Test Counseling

HIV Test Result			Risk reduction plan developed	[0] [1]
	Negative	**[ ]**	Post test disclosure plan developed	[0] [1]
	Positive	**[ ]**	Will bring partner(s) for HIV testing	[0] [1]
Have you been tested for HIV before within this year?	Not previously tested	[0] [1]	Will bring own children <5 years for HIV testing	[0] [1]
	Previously tested negative	[0] [1]	Provided with information on FP and dual contraception	[0] [1]
	Previously tested positive in HIV Care	[0] [1]	Client/Partner use FP methods (other than condom)	[0] [1]
	Previously tested positive not in HIV Care	[0] [1]	Client/Partner use condoms as (one) FP method	[0] [1]
HIV Request and Result form signed by tester(s)		[0] [1]	Correct condom use demonstrated	[0] [1]
HIV Request and Result form filled with CT Intake Form		[0] [1]	Condoms provided to client	[0] [1]
Client received HIV test result		[0] [1]	Client referred to other services	[0] [1]
Post test counseling done		[0] [1]		

If client tests HIV negative, has an HIV Risk Assessment Score of 1 and above, or there is evidence of an STI syndrome, recommend re-testing after 3 months

Syphilis Testing			**Hepatitis Testing**	
Syphilis Test Result	**Non-Reactive**	**[ ]**	**Hepatitis B Virus Test Result**	**Negative [ ] Positive [ ]**
	Reactive	**[ ]**	**Hepatitis C Virus Test Result**	**Negative [ ] Positive [ ]**

Comments:

Completed by:_____ ***Designation:***_____ ***Sign:***_____ ***Date:***_____

Request and Result Form HTS 002

Facility/Site Name: _____ **Sample Collection Date:** _____

Unit: _____ Date (*DD/MM/YYYY*)

Client Name:_____ **Client Code.**_____

Sex (Tick): **Male** ☐ **Female** ☐ **Age:** ……..

SEROLOGY REQUEST:

☐ **Initial HIV Test:**
Negative: ☐ **Positive:** ☐

☐ **Confirmatory HIV Test *(Positive Results Only):***
Negative: ☐ **ositive:** ☐

☐ **Syphilis Test:**
Reactive: ☐ **Non reactive:** ☐

☐ **Hepatitis B Test:**
Negative: ☐ **Positive:** ☐

☐ **Hepatitis C Test:**
Negative: ☐ **Positive:** ☐

Requested by: _____ _____ _____
Name (in capital) Signature Date (DD/MM/YYYY)

Tested by: _____ _____ _____
Name (in capital) Signature Date (DD/MM/YYYY)

Checked by: _____ _____ _____
Name (in capital) Signature Date (DD/MM/YYYY)

Request and Result Form HTS 002

Facility Name: _____ **Sample Collection Date:** _____
Date (*DD/MM/YYYY*)

Client Name:_____ **Client Code.**_____

Sex (Tick): **Male** ☐ **Female** ☐ **Age:** ……

SEROLOGY REQUEST:

☐ **Initial HIV Test:** ☐ **Confirmatory HIV Test *(Positive Results Only):***

Negative: ☐ **Positive:** ☐ **Negative:** ☐ **ositive:** ☐

☐ **Syphilis Test:**

Reactive: ☐ **Non reactive:** ☐

☐ **Hepatitis B Test:**

Negative: ☐ **Positive:** ☐

☐ **Hepatitis C Test:**

Negative: ☐ **Positive:** ☐

Requested by: _____ _____ _____
Name (in capital) Signature Date (DD/MM/YYYY)

Tested by: _____ _____ _____
Name (in capital) Signature Date (DD/MM/YYYY)

Checked by: _____ _____ _____
Name (in capital) Signature Date (DD/MM/YYYY)

HIV TESTING SERVICES REGISTER

State:______________ LGA:______________ Facility/Site Name:_________________________ Setting:________________ Month:_____________ Year:___________

CT, TB, STI, FP, OPD, Ward, Outreach, Standalone HTS, others

S/N	Date (DD/MM/YY)	Client's Code (E.g. 001/06/15 implies client 001 in June 2015)	Pre-test information session (Mark 'X' in the box)				Tested	
			Individual	Self Tested	Group	Couple	Yes	No
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
Total of this page								

S/N	TESTED AND RECEIVED HIV NEGATIVE TEST RESULT (Mark "X" in the box)																							
	Male												Female											
	Age Group (years)												Age Group (years)											
	1-4	5-9	10-14	15-19	20-24	25 - 29	30 - 34	35 - 40	40 - 44	45 - 49	50 - 64	65+	1-4	5-9	10-14	15-19	20-24	25 - 29	30 - 34	35 - 40	40 - 44	45 - 49	50 - 64	65+
1																								
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3																								
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15																								
Total of this page																								

S/N	TESTED AND RECEIVED HIV POSITIVE TEST RESULT (Mark "X" in the box)																							
	Male												Female											
	Age Group (years)												Age Group (years)											
	1-4	5-9	10-14	15-19	20-24	25 - 29	30 - 34	35 - 40	40 - 44	45 - 49	50 - 64	65+	1-4	5-9	10-14	15-19	20-24	25 - 29	30 - 34	35 - 40	40 - 44	45 - 49	50 - 64	65+
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3																								
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S/N	TESTED FOR HIV AND RECEIVED THEIR RESULTS MORE THAN ONCE WITHIN THE PRESENT YEAR (Mark "X" in the box)																							
	Male												Female											
	Age Group (years)												Age Group (years)											
	1-4	5-9	10-14	15-19	20-24	25 - 29	30 - 34	35 - 40	40 - 44	45 - 49	50 - 64	65+	1-4	5-9	10-14	15-19	20-24	25 - 29	30 - 34	35 - 40	40 - 44	45 - 49	50 - 64	65+
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S/N	KNOWN POSITIVES IDENTIFIED DURING POST TEST COUNSELLING (Mark "X" in the box)																							
	Male												Female											
	Age Group (years)												Age Group (years)											
	1-4	5-9	10-14	15-19	20-24	25 - 29	30 - 34	35 - 40	40 - 44	45 - 49	50 - 64	65+	1-4	5-9	10-14	15-19	20-24	25 - 29	30 - 34	35 - 40	40 - 44	45 - 49	50 - 64	65+
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S/N	Mark "X" in the boxes													Index contact Testing	
	TB CLINICAL SCREENING DONE			STI CLINICAL SCREENING DONE			SYPHILIS TEST RESULT		HEPATITIS TEST RESULT				Discordant Couples		
	YES		NO	YES		NO	R	NR	HEP B		HEP C		Mark X for the negative couple	Indicate code for client linked to an index	Index Contact tested HIV Positive (Mark X)
	Score 0	Score 1+		Score 0	Score 1+				Neg	Pos	Neg	Pos			
1															
2															
3															
4															
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Code for Not Tested: 1. Client Refusal 2. Test kits Stock out 3. Confidentiality Issue 4. Staff burn out 5. Disclosure of known positive status 6. Others

Codes for type of Index contact: 1= Biological 2= Sexual 3= Social

Completed by:______________________________ Designation:________________________ Sign:____________________ Date:____________________

HTS MONTHLY SUMMARY FORM

HTS 007

Reporting Period: **Month** _____ **Year**_____

State:_____ **LGA:**_____ **Facility Name:**_____

Data elements (All data elements exclude women attending ANC)	Age group (years)	In-patients		Out-patients										Stand alone		Outreach				Total		Source of Data
				CT site		TB site		FP site		STI site		Others				Pregnant Women	Others					
		M	F	M	F	M	F	M	F	M	F	M	F	M	F		M	F	M	F	
Number of people who tested HIV negative and received their results	1 - 4																				HTS Register
	5-9																				
	19 - 14																				
	15 - 19																				
	20 - 24																				
	25 - 29																				
	30 - 34																				
	35 - 39																				
	40 - 44																				
	45 - 49																				
	50 - 64																				
	65+																				
Total number of people who tested HIV negative and received results																						
Number of people who tested HIV positive and received their results	1 - 4																				HTS Register
	5-9																				
	19 - 14																				
	15 - 19																				
	20 - 24																				
	25 - 29																				
	30 - 34																				
	35 - 39																				
	40 - 44																				
	45 - 49																				
	50 - 64																				
	65+																				
Total number of people who tested HIV positive and received results																						
Total number of people who tested for HIV and received results (Sum of all HIV positives and Negatives above)																						HTS Register
Number of people tested for HIV and received their results more than once within the present year	1 - 4																				
	5-9																				
	19 - 14																				
	15 - 19																				
	20 - 24																				
	25 - 29																				
	30 - 34																				
	35 - 39																				
	40 - 44																				
	45 - 49																				
	50 - 64																				
	65+																				
Total Number of people tested for HIV and received their results more than once within the present year																						
Number tested HIV Positive that were identified as previously Known HIV positive during post - test	1 - 4																				HTS Register
	5-9																				
	19 - 14																				
	15 - 19																				
	20 - 24																				
	25 - 29																				

HTS MONTHLY SUMMARY FORM

HTS 007

Reporting Period: **Month** _____ **Year**_____

State:_____ **LGA:**_____ **Facility Name:**_____

Data elements *(All data elements exclude women attending ANC)*	*Age group (years)*	In-patients		Out-patients										Stand alone		Outreach			Total		Source of Data
				CT site		*TB site*		*FP site*		*STI site*		*Others*				*Pregnant Women*	*Others*				
		M	F	M	F	M	F	M	F	M	F	M	F	M	F		M	F	M	F	
Number of people who tested HIV negative and received their results	1 - 4																				HTS Register
	5-9																				
	19 - 14																				
	15 - 19																				
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	45 - 49																				
	50 - 64																				
	65+																				
Total number of people who tested HIV negative and received results																					
Number of people who tested HIV positive and received their results	1 - 4																				HTS Register
	5-9																				
	19 - 14																				
	15 - 19																				
	20 - 24																				
	25 - 29																				
	30 - 34																				
	35 - 39																				
	40 - 44																				
	45 - 49																				
	50 - 64																				
	65+																				
Total number of people who tested HIV positive and received results																					
Total number of people who tested for HIV and received results (Sum of all HIV positives and Negatives above)																					
Number of people tested for HIV and received their results more than once within the present year	1 - 4																				HTS Register
	5-9																				
	19 - 14																				
	15 - 19																				
	20 - 24																				
	25 - 29																				
	30 - 34																				
	35 - 39																				
	40 - 44																				
	45 - 49																				
	50 - 64																				
	65+																				

Total Number of people tested for HIV and received their results more than once within the present year																		
Number tested HIV Positive that were identified as previously Known HIV positive during post –test counselling	1 - 4																	**HTS Register**
	5-9																	
	19 - 14																	
	15 - 19																	
	20 - 24																	
	25 - 29																	
	30 - 34																	
	35 - 39																	
	40 - 44																	
	45 - 49																	
	50 - 64																	
	65+																	
Total Number of people tested HIV postive that were identified as known HIV positive during post-test counselling																		
No of couples counselled, tested for HIV and received result																		**HTS Register**
No of couples counselled, tested for HIV and received discordant result																		
Total Number of Index contact Tested for HIV																		**HTS Register**
Total Number of Index contact Tested HIV Positive																		
Number of HTS clients clinically screened for TB																		**HTS Register**
Number of HTS clients identified as presumptive TB cases																		**HTS Register**
Number of HTS clients clinically screened for STI																		
Number of HTS clients tested negative for syphilis																		**HTS Register**
Number of HTS clients tested positive for syphilis																		
Number of HTS clients tested negative for Hepatitis B																		**HTS Register**
Number of HTS clients tested positive for Hepatitis B																		
Number of HTS clients tested negative for Hepatitis C																		**HTS Register**
Number of HTS clients tested positive for Hepatitis C																		**HTS Register**
Number of people tested HIV positive who are successfully enroled in HIV Care																		**Referral Register**
Number of donated blood units																		**Blood Screening & Processing Register**
Number of donated blood units screened for HIV, HBV, HCV and syphilis using ELISA																		**Blood Screening & Processing Register**

Completed by: Name_____ **Designation:** _____ **Signature:** _____ **Date:** _____

Verified by: Name_____ **Designation:** _____ **Signature:** _____ **Date:** _____

HTS 003

DAILY HIV AND SYPHILIS TESTING WORKSHEET

State:_____ LGA:_____ MONTH_____ YEAR_____

Facility/Site Name_____ Units (TB, CT, FP, Lab, STI and others specify):_____

						INITIAL HIV TEST									SYPHILIS TEST			CONFIRMATORY HIV TEST (POSITIVES ONLY)													
							SCREENING TEST		CONFIRMATORY TEST		TIE BREAKER				SCREENING TEST			SCREENING TEST		CONFIRMATORY TEST		TIE BREAKER								
						Name of the Test Kit																									
						Lot Number																									
						Expiry Date																									
							RESULT (Mark "X")		RESULT (Mark "X")		RESULT (Mark "X")		FINAL HIV RESULT (Mark "X")		RESULT (Mark "X")		Name of Tester	RESULT (Mark "X")		RESULT (Mark "X")		RESULT (Mark "X")		FINAL HIV RESULT (Mark "X")		Name of Tester	Comments				
S/N	DATE	LAB No.	CLIENT'S CODE	AGE	SEX	PURPOSE (Use code)	R	NR	R	NR	R	NR	POS	NEG	R	NR		R	NR	R	NR	R	NR	POS	NEG						
						Control																									
						Control																									
1																															
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															
13																															
14																															
15																															
			Total Used																												
			Losses/ Wastage																												
			Day Total																												
			Total Quantity Used																												

CODES FOR PURPOSE OF TESTING

1. HTS 2. PMTCT

3. TB 4. CLINICAL DIAGNOSIS

5. CONFIRMATION FOR SELF TESTED CLIENT

6. VALIDATION FOR PREVIOUSLY KNOWN POSITIVE

7. DONOR SCREENING

Daily Summary of Total Test Kits Used

HIV TEST	HTS	PMTCT	TB	CLINICAL DIAGNOSIS	CONFIRMATION FOR SELF-TESTED CLIENT	DONOR SCREENING	VALIDATION FOR PREVIOUSLY KNOWN POSITIVE	TOTAL
Screening Test								
Confirmatory Test								
Tie-Breaker								

Supervisor's Name:_____ Designation: _____ Signature: _____ Date: _____

CLIENT REFERRAL FORM

- Referring organizations: please fill out Part A and ask client to take it to the receiving organization.
- Please fill out one form per service needed.
- Receiving organization: please fill out Part B and either return it directly to the referring organization or ask the client to return it to the referring organization at next visit.

Part A: Referral Slip: To be filled out by the organization making the referral (referring organization)

Date (DD/MM/YYYY):	Client name:	**Age:**
	Client Code:	
	Client Address (Descriptive):	**Sex:**
	Client phone number:	

Referred from (unit/department/health facility):

Name of person referring client/designation

Name, Address & Phone number of referring organization:

Referred to (unit/department):

Name of contact person:

Name, Address & Phone number of the receiving organization:

Services needed: *(Indicate code from categories of services below)*	Signature:
Comments:	

CLIENT REFERRAL FORM

Part B: Services provided: *To be filled out by the organization providing the service(s)*

Name & address of organization providing the service(s):

Date:	Client name:		
List services provided here	Service completed as requested? Y/N	Type of follow up needed	Follow up date

Additional comments:

Name of Service provider _____

Signature:_____Phone no.:_____

Categories of services

1. Adherence Counseling	6. TB Services	11. PEP Services	16. Education/	20. Psychosocial

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REFERRAL REGISTER

State:_____ LGA: _____ Facility/Site Name: _____ Setting: _____ Month: _____ Year: _____

DOCUMENT ALL REFERRALS (INCLUDING HIV POSITIVE CLIENTS) IN THIS REGISTER

S/N	Date	Client Code	Name	Client Address (Descriptive)	Phone No	Age (years)	Sex (M /F)	Known Postive in HIV care		REFERRAL		SERVICES			
								Yes	No	From	To	Requested (CODE)	Provided Yes/No	Date Completed	Type of Follow up needed
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															

Codes for Services

1. Adherence counseling and Treatment support	6. TB services	11. PEP services	16. Education/ schooling	21. Social services
2. Antiretroviral therapy	7. HIV Testing Services	12. Family planning	17. Home-based care	22. Spiritual support
3. PMTCT services	8. Prevention services (including peer counseling and information services)	13. Pharmacy	18. Legal support	23. Oncology
4. Clinical care	9. Child care	14. Food support	19. Nutrition counseling	24. Financial, material and microfinance support and services
5. STI services	10. PLHIV support	15. OB/GYN services	20. Psychosocial support	25. Others (specify in appropriate column)

Completed by: Name_____ Designation:_____ Sign:_____ Date:_____

Reviewed by Referral Focal Person_____ Sign:_____ Date:_____

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